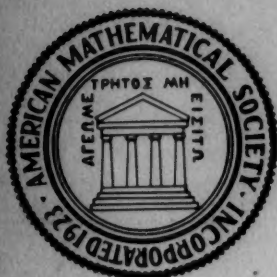


36  
M-Z  
ROOM USE ONLY

# Mathematical Reviews



## EDITORIAL COMMITTEE

P. T. Bateman  
E. R. Berlekamp  
C. M. Percy

J. L. Selfridge, *Executive Editor*

## Annual Index – 1980

## Author Index M – Z Key Index

### TABLE OF CONTENTS

Author Index M–Z.....	405–765
Key Index .....	767–792
Abbreviations of Names of Journals .....	J1–J17
Journals in Translation .....	J18
Transliteration of Cyrillic .....	C1

Index of Mathematical Papers Volume 12  
Published by the American Mathematical Society  
Providence, Rhode Island USA  
ISSN 0025-5629



# MATHEMATICAL REVIEWS

Published by

AMERICAN MATHEMATICAL SOCIETY

**Editorial Committee:** P. T. Bateman, E. R. Berlekamp,  
C. M. Pearcy

**Editors:** A. A. Armendáriz, W. Bouwsma, L. C. Eggan,  
E. Gerlach, P. D. F. Ion, S. Ivanov, J. S. Joel, J. E. Kister,  
F. J. Papp, M. Rabindranathan, P. B. Smith, S. Zdravkovska  
**Editorial Consultants:** F. D. Bateman, F. J. Beutler,  
J. W. Brown, I. Cesari, C. L. Dolph, J. L. Goldberg,  
A. Greenspoon, A. S. Gupta, F. Harary, A. E. Heins,  
D. J. Lewis, R. J. Muirhead, M. S. Ramanujan, A. Ramm,  
J. F. Riordan, R. A. Scott, N. Starr, V. K. Wong

**Executive Editor:** J. L. Selfridge

**Managing Editor:** W. B. Woolf

**Manager, Editorial Assistants:** D. J. Kimball

**Head Librarian:** Janice Seidler

**Editorial Associate:** Bogdan D. Dudzik

**Administrative Assistant:** Jane Z. Ophoff

**Office Manager:** Frances E. Bryant

**System Analyst:** Rilla J. Thedford

**Production Manager:** Juan Rodríguez-Padró

**Information Processing Supervisor:** Carol E. Roberts

**Reviewer Data Supervisor:** Tamra Higley

## General Information

Journal references in *Mathematical Reviews* are given in the following form: *Rückschritte der Math.* (6) 5(56) (1960/61), no. 2, 18–53 (1962), where, after the abbreviated title, one has: (series number) volume number (volume number in first series, if given) (nominal date), issue number if necessary, first page–last page (imprint date). If only one date is given, this will usually be interpreted as the nominal date and will follow the volume number. If no volume number is given, the year will be used in its place. The symbol \* precedes the title of a book or other non-periodical that is being reviewed as a whole. If an issue of a journal needs to be reviewed as a whole (e.g., when it is a collection of articles dedicated to an individual) and an ad hoc title is devised for this purpose then the latter will appear in braces { }.

References to reviews in *Mathematical Reviews* before Volume 20 (1959) are by volume and page number, e.g., MR 15, 122;

from Volume 20 to Volume 58 (1979), by volume and review number, e.g., MR 20 #4185 or MR 23 #A513; from 1980 on, by issue and review number, e.g., MR 80a:46017. References to reviews in *Jahrbuch über die Fortschritte der Mathematik* and *Zentralblatt für Mathematik* are by volume and page number for the period before 1972 (e.g., Jbuch 50, 173; Zbl 29, 323) and by volume and review number since 1972 (e.g., Zbl 218:46017). Reviews reprinted from *Applied Mechanics Reviews*, *Computing Reviews*, *Electrical & Electronics Abstracts*, *Mathematics of Computation*, *Operations Research*, *Physics Abstracts*, *Referativnyi Zhurnal Matematika* (Mehanika, etc.), *Statistical Theory and Method Abstracts*, or *Zentralblatt für Mathematik* are identified in parentheses following the reviewer's name by AMR, CR, EEA, MC, OR, PA, RŽMat (RŽMeh, etc.), STMA, Zbl, respectively.

## Sponsored by

AMERICAN MATHEMATICAL SOCIETY  
AMERICAN STATISTICAL ASSOCIATION  
ANNALS OF MATHEMATICS  
AUSTRALIAN MATHEMATICAL SOCIETY  
BIOMETRIC SOCIETY  
CALCUTTA MATHEMATICAL SOCIETY  
CANADIAN MATHEMATICAL CONGRESS  
DANSK MÅTEMATISK FORENING  
EDINBURGH MATHEMATICAL SOCIETY  
INDIAN MATHEMATICAL SOCIETY

INDUSTRIAL MATHEMATICAL SOCIETY  
INSTITUTE OF MATHEMATICAL STATISTICS  
ISLENZKA STAERDFRAEDAFELAGID  
ISRAEL MATHEMATICAL UNION  
LONDON MATHEMATICAL SOCIETY  
MATHEMATICAL ASSOCIATION OF AMERICA  
MATHEMATICAL SOCIETY OF JAPAN  
MATHEMATICAL SOCIETY  
OF THE REPUBLIC OF CHINA  
NORSK MATEMATISK FORENING

PACIFIC JOURNAL OF MATHEMATICS  
POLSKIE TOWARZYSTWO MATEMATYCZNE  
REAL SOCIEDAD MATEMÁTICA ESPAÑOLA  
SOCIEDADE BRASILEIRA DE MATEMÁTICA  
SOCIÉTÉ MATHÉMATIQUE DE FRANCE  
SVENSKA MATEMATIKERSAMFUNDET  
UNIÓN MATEMÁTICA ARGENTINA  
UNIONE MATEMATICA ITALIANA  
WISKUNDIG GENOOTSCHAP TE AMSTERDAM

**Editorial Office:** University of Michigan, Ann Arbor, Michigan. Editorial correspondence should be addressed to MATHEMATICAL REVIEWS, 611 Church Street, Ann Arbor, Michigan 48104, U. S. A.

**Subscription information:** Subscription prices for 1980 (old vols. 59 and 60) of *Mathematical Reviews* and the annual index (*Index of Mathematical Papers*, Volume 12) are \$1120 list, \$840 institutional member, \$130 individual member, \$65 reviewer. Combination paper and microform (microfiche or microfilm) subscription prices are \$1344 list, \$1008 institutional member. Microfiche of each issue will be mailed the fastest way before the camera copy is sent to the printer.

**Back number information:** Back number prices per volume: for Volumes 1–30, \$180 list, \$135 member; for Volumes 31–40, \$280 list, \$210 member; for Volumes 41–50, \$420 list, \$315 member; for Volumes 51–52, \$564 list, \$423 member; for Volumes 53–54, \$640 list, \$480 member; for Volumes 55–56, \$740 list, \$555 member; for Volumes 57–58, \$788 list, \$591 member. Back volumes are also available on 16mm posi-

tive or negative microfilm. Only current subscribers are eligible to purchase back volumes on microfilm. Write to the American Mathematical Society for a detailed price list.

*Mathematical Reviews* is published monthly. The issue year 1980 includes an author index for issues 80a–80f mailed with issue 80f, and an annual author and subject index mailed separately at the end of the year. Cumulative author indexes exist for Volumes 1 through 20, Volumes 21 through 28, and Volumes 29 through 44. Beginning with 1973, annual indexes are published under the title *Index of Mathematical Papers*.

Subscriptions and orders should be addressed to the American Mathematical Society, P. O. Box 1571, Annex Station, Providence, R. I. 02901. All orders must be accompanied by payment. Other correspondence should be addressed to P. O. Box 6248, Providence, R. I. 02940.

view  
by  
re  
and  
for  
and  
(17)  
ing  
one  
my  
Me  
1  
EA

IE  
LA  
CA

AM

our  
ica

in  
an  
er  
21  
in

the  
POL  
nce

Ma, J.

Si

Ma, N

41

Ma, Si

Ma, Y

ini

V.

M

M

Ma, Y

Ma

(1)

Ma

(F

Fe

03

H

L

03

(1

(1

Ma

P

cl Ma

Ma

by

(1

Ma

cl

Ma

cl

Ma

Ma

(1

Ma

m

eq

15

(V

ar

E

Ma

V

P

0

po

Ma

A

vi

B

Ma

si

B

Ma

co

S

S

Ma

n

Ma

R

B

Ma

A

5

Ma

2

N

Ma

Ma

n

1

Ma

- Ma, Jan Ch'ang** Covariance algebras of operator-valued measures. *Bull. Inst. Math. Acad. Sinica* 6 (1978), no. 1, 15–35. (H. Araki) **80b:46076** 46L10 (43A10)
- Ma, Michael** (with Levin, Deborah A.; Fillet, Arne W.; McKay, Vincent) Gaussian matrix elements of the free-particle Green's function. *J. Comput. Phys.* 28 (1978), no. 3, 416–425. (From the text) **80c:81107** 81F20
- Ma, Shang Keng** Alternative approach to the dynamic renormalization group. *Phys. Rev. B* (3) 19 (1979), no. 9, 4824–4837. (Victor Wong) **80f:82027** 82A25
- Ma, Ym Chow** (with Redekopp, Larry G.) Some solutions pertaining to the resonant interaction of long and short waves. *Phys. Fluids* 22 (1979), no. 10, 1872–1876. (Alberto Valli) **80b:76006** 76B15 (35Q20)
- The perturbed plane-wave solutions of the cubic Schrödinger equation. *Stud. Appl. Math.* 60 (1979), no. 1, 43–58. (Fritz Schwarz) **80c:81012** 81C05 (35Q20, 76C99)
- On the multi-soliton solutions of some nonlinear evolution equations. *Stud. Appl. Math.* 60 (1979), no. 1, 73–82. (Author's summary) **80c:35009** 35Q20 (76B25)
- Ma, Yin Cheong** See **Ma, Jan Ch'ang**
- Maaß, Hans** Über eine Spezialschar von Modulformen zweiten Grades. *Invent. Math.* 52 (1979), no. 1, 95–104. (J. Spilker) **80f:10031** 10D12
- See also **Siegel, Carl Ludwig** **80c:01066**
- Maaß, Wolfgang** High  $\alpha$ -recursively enumerable degrees. *Generalized recursion theory, II* (Proc. Second Symp., Univ. Oslo, Oslo, 1977), pp. 239–269, *Studies in Logic and Foundations of Math.*, 94, North-Holland, Amsterdam, 1978. (Barry Cooper) **80b:03059** 03D60 (03D30)
- Fine structure theory of the constructible universe in  $\alpha$ - and  $\beta$ -recursion theory. *Higher set theory* (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1977), pp. 339–359, *Lecture Notes in Math.*, 669, Springer, Berlin, 1978. (Stephen G. Simpson) **80g:03044** 03D60 (03E45)
- Inadmissibility, tame r.e. sets and the admissible collapse. *Ann. Math. Logic* 13 (1978), no. 2, 149–170. (S. S. Wainer) **80a:03060** 03D60
- (with Petzold, J.) On the stability of motion of a radiating electron. *J. Phys. A* 11 (1978), no. 7, 1211–1219. (Anton Z. Capri) **80a:81019** 81C05 (45J05)
- Maass, Hendrik** Stabilité de l'homologie de GL<sub>n</sub>. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 15, 707–708. (S. Moran) **80f:20056** 20J05
- el Mabrouk, B.** See **El Mabrouk, B.**
- Maibuchi, Toshiki** Almost homogeneous torus actions of varieties with ample tangent bundle. *Tohoku Math. J.* (2) 30 (1978), no. 4, 639–651. (T. Oda) **80k:14050** 14L30 (14J40, 32C10)
- Mac, E.** (with Hsu, J. P.) Fundamental length, bubble electrons and nonlocal quantum electrodynamics. (Italian and Russian summaries) *Nuovo Cimento B* (11) 49 (1979), no. 1, 55–67. (Authors' summary) **80d:81074** 81E10
- Maizak, K.** (with Čirkov, M. K.) The relationship between discrete communications channels with finite memory and probabilistic automata. (Russian) *Vysl. Tehn. i Voprosy Kibernet.* No. 15 (1978), 112–118. (R. Shirladze) **80g:60076** 68D25 (94A40)
- MacCallum, Malcolm** Anisotropic cosmologies. *Rend. Sem. Mat. Univ. Politec. Torino* 36 (1977/78), 27–34. (1979). (Editors) **80c:83058** 83F05 (58F05)
- MacCamy, Richard C.** Memory effects in one-dimensional problems of continuum mechanics. *Contemporary developments in continuum mechanics and partial differential equations* (Proc. Internat. Symp., Inst. Mat., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977), pp. 347–362, *North-Holland Math. Studies*, 30, North-Holland, Amsterdam, 1978. (V. P. Madan) **80d:73024** 73B99 (35Q99)
- (with Gurtin, Morton E.) Population dynamics with age dependence. *Nonlinear analysis and mechanics: Heriot-Watt Symposium, Vol. III* (Heriot-Watt Univ., Edinburgh), pp. 1–35, *Res. Notes in Math.*, 30, Pitman, London, 1979. (H. A. DeKleine) **80f:92016** 92A15
- (with Mizel, Victor J.) Nonlinear vector-valued hereditary equations on the line. *Volterra equations* (Proc. Helsinki Symp., Integral Equations, Otaniemi, 1978), pp. 206–219, *Lecture Notes in Math.*, 737, Springer, Berlin, 1979. (V. Lakshmikantham) **80j:45021** 45N05
- (with Gurtin, Morton E.) Some simple models for nonlinear age-dependent population dynamics. *Math. Biosci.* 43 (1979), no. 3–4, 199–211. (K. E. Swick) **80g:92020** 92A15
- (with Weiss, Philip) Numerical solution of Volterra integral equations. *Nonlinear Anal.* 3 (1979), no. 5, 677–695. (E. N. Houstis) **80j:65041** 65R20
- (with Gurtin, Morton E.; Murphy, Lea F.) On optimal strain paths in linear viscoelasticity. *Quart. Appl. Math.* 37 (1979/80), no. 2, 151–156. (R. R. Huilgol) **80g:73038** 73F99 (49A99)
- MacCamy, Maria** A stabilization procedure by means of shooting methods. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 1, 104–111. (Richard Brown) **80g:34010** 34A50 (65L10)
- MacCormack, Robert W.** An efficient explicit-implicit-characteristic method for solving the compressible Navier-Stokes equations. *Computational fluid dynamics* (Proc. SIAM-AMS Symp. Appl. Math., New York, 1977), pp. 130–155, *SIAM-AMS Proc.*, XI, Amer. Math. Soc., Providence, R.I., 1978. (A. Jami) **80m:76061** 76N10 (65N05)
- Macdonald, A. R. G.** The most recently discovered prime number. *Math. Gaz.* 63 (1979), no. 426, 268–270. (Editors) **80j:10008** 10A25 (10–03)
- Macdonald, I. D.** (with Duncan, J.) Some factorable nil rings of characteristic two. *Proc. Roy. Soc. Edinburgh Sect. A* 82 (1978/79), no. 3–4, 193–199. (Kazuo Kishimoto) **80c:16008** 16A22
- See also **Neumann, B. H.** **80c:20049**
- MacDonald, John L.** Categorical shape theory and the back and forth property. *J. Pure Appl. Algebra* 12 (1978), no. 1, 79–92. (Harold Hastings) **80j:55013** 55P55 (03C60, 54C56, 54F43)
- MacDonald, Norman** ★Time lags in biological models. *Lecture Notes in Biomathematics*, 27, Springer-Verlag, Berlin-New York, 1978. vii + 112 pp. ISBN 3-540-09092-4 (Robert J. Mulholland) **80j:92010** 92A15 (00A69, 34K15)
- Macdonald, P. D. M.** See **Biomathematics and cell kinetics**, **80f:92009**
- Macdonald, Roderick N. S.** Representable dualities between finitely closed subcategories of modules. *Canad. J. Math.* 31 (1979), no. 3, 465–475. (Wolfgang Grözl) **80f:16041** 16A90
- MacDonald, Sheila Oates** See **Oates-Williams, Sheila**
- MacDonnell, Joseph** A family of unifacial surfaces. *Internat. J. Math. Ed. Sci. Tech.* 10 (1979), no. 2, 159–164. (O. Bottema) **80c:51011** 51N05
- MacDowell, Samuel W.** Algebraic approach to supergravity in superspace. *Phys. Lett. B* 80 (1978/79), no. 3, 212–216. (Nicholas M. J. Woodhouse) **80i:83028** 83C45 (22E65, 81M05)
- MacFarlane, A. J.** (with Liggatt, P. A. J.) Point splitting in a curved space-time background. I. Gravitational contribution to the axial anomaly. *Gen. Relativity Gravitation* 10 (1979), no. 4, 321–334. (George Leibbrandt) **80c:81066** 81E10 (53B50)
- The SU(N+1)<sub>c</sub> model or CP<sup>N</sup> model as a non-linear realization of SU(N+1) symmetry. *Nuclear Phys. B* 152 (1979), no. 1, 145–152. (K. T. Mahanthappa) **80g:81083** 81G40 (22E70)
- MacFarlane, Alstair G. J.** (with Postlethwaite, Ian) ★A complex variable approach to the analysis of linear multivariable feedback systems. *Lecture Notes in Control and Information Sciences*, 12, Springer-Verlag, Berlin-New York, 1979. iv + 177 pp. ISBN 0-387-09340-0 (Ljubomir Lilov) **80j:93073** 93C45 (93C30)
- The development of frequency-response methods in automatic control. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 250–265. (Vadim Komkov) **80b:93001** 93–03
- (with Scott-Jones, D. F. A.) Vector gain. *Internat. J. Control* 29 (1979), no. 1, 65–91. (Authors' summary) **80b:93128** 93D99
- Mac Gillivray, H. J.** Group index of variability, lognormal model. *Nederl. Akad. Wetensch. Proc. Ser. B* 81 (1978), no. 3, 290–301. (Author's summary) **80c:62033** 62F10 (62P99)
- MacGillivray, A. D.** The existence of an overlap domain for a singular perturbation problem. *SIAM J. Appl. Math.* 36 (1979), no. 1, 106–114. (Denise Huet) **80d:34074** 34E15
- Mac, Ernst** See **Blackmore, John T.**, **80f:01020** and **Duhem, Pierre**, **80m:01045**
- Mac, Jaroslav** (with Ward, Joseph D.) Approximation by compact operators on certain Banach spaces. *J. Approx. Theory* 23 (1978), no. 3, 274–286. (G. Mühlbach) **80j:47054** 47D15 (41A65)
- On the existence of best simultaneous approximation. *J. Approx. Theory* 25 (1979), no. 3, 258–265. (Charles K. Chui) **80j:41059** 41A65
- Best simultaneous approximation of bounded functions with values in certain Banach spaces. *Math. Ann.* 240 (1979), no. 2, 157–164. (Jean Tzimbario) **80c:41016** 41A28 (41A65)
- Machado, Hilton V.** Convergence of successive approximations—nonexpansive mappings. *Proceedings of the Ninth Brazilian Mathematical Colloquium* (Poços de Caldas, 1973), Vol. 1 (Portuguese), pp. 49–62, *Inst. Mat. Pura Apl., São Paulo*, 1977. (From the introduction) **80i:47076** 47H09 (54H25)
- Machado, J. A.** (with Shapiro, Jeffrey H.; Yuen, Horace P.) Optical communication with two-photon coherent states. II. Photoemissive detection and structured receiver performance. *IEEE Trans. Inform. Theory* 25 (1979), no. 2, 179–192. (Carl W. Helstrom) **80f:94005** 94A05 (81K05)
- Machala, František** Homomorphismen und Pseudohomomorphismen der Ternärringe und Homomorphismen schwacher Pseudoebenen. (Russian and Czech summaries) *Časopis Pěst. Mat.* 104 (1979), no. 2, 154–169, 200. (D. Klucký) **80j:51002** 51A10
- Über projektive Erweiterung affiner Klingenbergscher Ebenen. *Czechoslovak Math. J.* 29(104) (1979), no. 1, 116–129. (David A. Drake) **80b:50017** 05B30 (51A45)
- Machamer, Peter K.** Aristotle on natural place and natural motion. *Isis* 69 (1978), no. 248, 377–387. (Giulio Cesare Giacobbe) **80j:01007** 01A20
- Machida, Hajime** (with Noshita, Kohji; Masuda, Etsuo) On the expected behaviors of the Dijkstra's shortest path algorithm for complete graphs. *Inform. Process. Lett.* 7 (1978), no. 5, 237–243. (From the introduction) **80c:68022** 68C05 (68–04, 68E10)
- Infante Macias, R.** See **Infante Macias, R.**
- Macias, Roberto A.** (with Segovia, Carlos) On the decomposition into atoms of distribution on Lipschitz spaces. *Proceedings of the Eleventh Brazilian Mathematical Colloquium* (Poços de Caldas, 1977), Vol. 1 (Portuguese), pp. 247–259, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Richard Rochberg) **80d:46053** 46E30
- (with Segovia, Carlos) A maximal theory for generalized Hardy spaces. *Harmonic analysis in Euclidean spaces* (Proc. Symp. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 1, pp. 235–244, *Proc. Symp. Pure Math.*, XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (C. N. Linden) **80c:30036** 30D55 (30D60, 46E99)
- Maciejko, R.** Yang-Mills equations in Maxwell form. *J. Math. Phys.* 19 (1978), no. 12, 2491–2493. (Author's summary) **80c:81068** 81E10
- Maciejowski, J. M.** Model discrimination using an algorithmic information criterion. *Automatica—J. IFAC* 15 (1979), no. 5, 579–593. (Author's summary) **80m:68008** 68J10 (94A15)
- MacIntyre, Angus** (with Baur, Walter; Cherlin, Gregory) Totally categorical groups and rings. *J. Algebra* 57 (1979), no. 2, 407–440. (D. V. Belegradek) **80c:03034** 03C60 (20E99)
- See also **Colloquium: Logic**, **80a:03003**
- Mack, G.** Conformal invariant quantum field theory. *New developments in quantum field theory and statistical mechanics* (Proc. Cargèse Summer Inst., Cargèse, 1976), pp. 241–264, *NATO Adv. Study Inst. Ser., Ser. B: Physics*, 26, Plenum, New York, 1977. (R. F. Bijl) **80g:81047** 81E10
- Confinement of static quarks in two-dimensional lattice gauge theories. *Comm. Math. Phys.* 65 (1979), no. 1, 91–96. (Etang Chen) **80b:81105** 81G20 (53C10)
- Mack, R. B.** (with Kleinman, Ralph E.) Scattering by linearly vibrating objects. *IEEE Trans. Antennas and Propagation* 27 (1979), no. 3, 344–352. (Magdi M. Shourci) **80c:78015** 78A45
- Mack, Y. P.** (with Rosenblatt, Murray) Multivariate  $k$ -nearest neighbor density estimates. *J. Multivariate Anal.* 9 (1979), no. 1, 1–15. (Luc P. Devroye) **80k:62057** 62G05
- MacKay, R. J.** (with Kalbfleisch, John D.) Remarks on a paper by J. Cornfield and K. Detre: "Bayesian life table analysis" [*J. Roy. Statist. Soc. Ser. B* 39 (1977), no. 1, 86–94; MR 58 #18812]. *J. Roy. Statist. Soc. Ser. B* 40 (1978), no. 2, 175–177. (V. Susarla) **80b:62036** 62F15
- (with Kalbfleisch, John D.) On constant-sum models for censored survival data. *Biometrika* 66 (1979), no. 1, 87–90. (Bruce W. Turnbull) **80m:62100** 62N05
- Mackenroth, Uwe** Dualität und Approximation bei konvexen Optimierungsproblemen. *Z.*



- Angew. Math. Mech.* 58 (1978), no. 10, 459-460. (Siegfried Schaible) 80a:90112 90C25
- Discretisierung eines parabolischen Kontrollproblems mit Anfangs- und Endbedingungen. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978), Section 1*, pp. 369-382. *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (Jifi V. Outrata) 80g:93043 93C20 (49B22, 65K10)
- Mackens, Wolfgang (with Lorenz, Jens) Toeplitz matrices with totally nonnegative inverses. *Linear Algebra Appl.* 24 (1979), 133-141. (Donald Kershaw) 80b:15029 15A48
- Mackenzie, J. D. Question-begging in noncumulative systems. *J. Philos. Logic* 8 (1979), no. 1, 117-133. (Paul Ernest) 80f:03030 03B99 (03A05)
- How to stop talking to tortoises. *Notre Dame J. Formal Logic* 20 (1979), no. 4, 705-717. (From the text) 80h:03046 03B99
- Mackenzie, K. A. Rigid cohomology of topological groupoids. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 3, 277-301. (A. K. Seda) 80i:22011 22A99 (18G99, 20L05, 57T10)
- Mackey, George W. Unitary group representations in physics, probability, and number theory. *Mathematics Lecture Note Series*, 55. Benjamin/Cummings Publishing Co., Inc., Reading, Mass., 1978. xiv + 402 pp. ISBN 0-8053-6702-0 (-6703-9) (L. Corwin) 80i:22001 22-02 (10D40, 28Dxx)
- Harmonic analysis as the exploitation of symmetry—a historical survey. *History of analysis (Proc. Conf., Rice Univ., Houston, Tex., 1977)*. *Rice Univ. Stud.* 64 (1978), no. 2-3, 73-228. (J. Dieudonné) 80j:01019 01A55 (01A60, 01A65, 10-03, 12-03, 22-03, 42-03, 43-03, 60-03, 81-03)
- Mackey, K. E. (with Barnes, B. H.) A generalized measure of independence and the strong product of graphs. *Networks* 8 (1978), no. 2, 135-151. (Authors' summary) 80a:05161 05C99 (94A15)
- Macko, Donald (with Haimes, Yacov Y.) Overlapping coordination of hierarchical structures. *IEEE Trans. Systems Man Cybernet.* 8 (1978), no. 10, 745-751. (Authors' summary) 80b:93003 93A05
- Mackowiak, Tadeusz Some examples of irreducibly confluent mappings. *Colloq. Math.* 38 (1977/78), no. 2, 193-196. (A. Lelek) 80a:54060 54F20
- Some kinds of the incoherence. *Comment. Math. Prace Mat.* 20 (1977/78), no. 2, 405-408. (Donald E. Bennett) 80b:54046 54F55 (54F20)
- Continuous selections for  $C(X)$ . (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 6, 547-551. (B. J. Pearson) 80a:54025 54C65
- Continua irreducible about a closed set. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 8, 715-718. (Donald E. Bennett) 80a:54035 54F20
- Monotone retracts of an arcwise connected continuum. *Colloq. Math.* 40 (1978/79), no. 2, 227-233. (B. J. Pearson) 80b:54045 54F50 (54C15)
- Mac Lane, Saunders (with Birkhoff, Garrett) *Algebra*. Second edition. Macmillan, Inc., New York; Collier-Macmillan Publishers, London, 1979. xv + 586 pp. ISBN 0-02-374310-7 (Editors) 80d:00002 00A05
- Selected papers. Edited by Irving Kaplansky. With contributions by Alfred Putnam, Roger Lyndon, Kaplansky, Samuel Eilenberg and Max Kelly. Springer-Verlag, New York-Heidelberg, 1979. xiii + 556 pp. (1 plate). ISBN 0-387-90394-1 (H.-J. Hoehne) 80b:01064 01A75 (01A65, 01A70)
- MacLellan, Edwin J. (with Schotch, Peter K.; Jensen, Jorgen B.; Larsen, Peter F.) A note on three-valued modal logic. *Notre Dame J. Formal Logic* 19 (1978), no. 1, 63-68. (A. Rose) 80b:03026 03B50 (03B45)
- MacLennan, Carol G. (with Hasegawa, Akira; Kodama, Yuji) Nonlinear behavior and turbulence spectra of drift waves and Rossby waves. *Phys. Fluids* 22 (1979), no. 11, 2122-2129. (Ian Lerche) 80j:76017 76C20 (76W05)
- MacMahon, Percy Alexander *Collected papers*. Vol. I. Combinatorics. Edited and with a preface by George E. Andrews. With an introduction by Gian-Carlo Rota. *Mathematicians of Our Time*. MIT Press, Cambridge, Mass.-London, 1978. xxix + 1438 pp. (1 plate). ISBN 0-262-13121-8 (Dominique Foata) 80b:01065 01A75 (05-02)
- MacMillan, R. H. (with Lockwood, E. H.) *Geometric symmetry*. Cambridge University Press, Cambridge-New York, 1978. x + 228 pp. ISBN 0-521-21685-0 (H. S. M. Coxeter) 80c:51016 51M20 (51F20)
- MacPherson, Robert Characteristic classes for singular varieties. *Proceedings of the Ninth Brazilian Mathematical Colloquium (Poços de Caldas, 1973), Vol. II (Portuguese)*, pp. 321-327. *Inst. Mat. Pura Apl., São Paulo*, 1977. (J. S. Joel) 80g:57031 57R20 (14F12, 14F45, 32C10)
- (with Fulton, William) Defining algebraic intersections. *Algebraic geometry (Proc. Sympos., Univ. Tromsø, Tromsø, 1977)*, pp. 1-30. *Lecture Notes in Math.*, 687, Springer, Berlin, 1978. (S. L. Kleiman) 80g:14011 14C17 (14C15, 14N10)
- Macrae, K. I. Fermions and bosons in a unified framework. I. Physical foundations. *Phys. Rev. D* (3) 18 (1978), no. 10, 3737-3760. (From the summary) 80a:8119a 81G99 (17A70)
- Fermions and bosons in a unified framework. II. Interacting models. *Phys. Rev. D* (3) 18 (1978), no. 10, 3761-3776. (From the summary) 80a:8119b 81G99 (17A70)
- Fermions and bosons in a unified framework. III. Mathematical structures and physical questions. *Phys. Rev. D* (3) 18 (1978), no. 10, 3777-3791. (From the summary) 80a:8119c 81G99 (17A70)
- Macri, Patricia (with Gualardo, Francesco) Some approximation problems for  $C^\infty$  functions. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 1, 115-123. (Margherita Galbati) 80b:32021 32C05 (58C05)
- MacStigh, G. P. (with Currie, P. K.) The stability and dissipation of solutions for shearing flow of nematic liquid crystals. *Quart. J. Mech. Appl. Math.* 32 (1979), no. 4, 499-511. (Authors' summary) 80b:76008 76A99
- Macusk, V. A. The Chapman-Enskog method for a chemically reacting gas mixture with internal degree of freedom. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 4, 1043-1048, 1071. (Author's summary) 80b:82039 82A40
- (with Rykov, V. A.) The Chapman-Enskog method for reacting gas mixtures with different velocities and temperatures. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1230-1242, 1357. (Nina B. Maslova) 80c:82031 82A40 (35C20, 45K05)
- MacWilliams, F. Jessie (with van Lint, Jacobus H.) Generalized quadratic residue codes. *IEEE Trans. Inform. Theory* 24 (1978), no. 6, 730-737. (Ian Blake) 80a:94032 94B15
- (with Odlyzko, Andrew M.; Sloane, Neil J. A.; Ward, Harold N.) Self-dual codes over GF(4). *J. Combin. Theory Ser. A* 25 (1978), no. 3, 288-318. (Raymond Hill) 80f:94016 94B05 (05B05)
- Decomposition of cyclic codes of block lengths  $3p$ ,  $5p$ ,  $7p$ . *IEEE Trans. Inform. Theory* 25 (1979), no. 1, 112-118. (Author's summary) 80d:94019 94B15
- A table of primitive binary idempotents of odd length  $n$ ,  $7 < n < 511$ . *IEEE Trans. Inform. Theory* 25 (1979), no. 1, 118-121. 80b:94026 94B15
- (with van Lint, Jacobus H.; Sloane, Neil J. A.) On pseudo-random arrays. *SIAM J. Appl. Math.* 36 (1979), no. 1, 62-72. (J.-M. Goethals) 80b:05011 05B15
- Mączyński, Maciej J. A generalization of A. Horn and A. Tarski's theorem on weak  $\alpha$ -distributivity. *Demonstratio Math.* 11 (1978), no. 1, 215-223. (J. D. Maitland Wright) 80g:06014 06D10 (06E99)
- Mañan, Sudhir (with Ghosal, A.) Isomorphs of a class of queueing systems. *Internat. J. Math. Math. Sci.* 2 (1979), no. 1, 103-110. (U. Narayan Bhat) 80d:60132 60K25
- Mañan, V. P. Influence of an elastic end support on the stability of viscoelastic (Voigt) column. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* 23 (1978), no. 6, 847-852. (Author's summary) 80b:73030 73F99
- Madatjan, H. A. See Solov'ev, N. A. 80b:68114
- Madame, Monique Comportement des solutions d'une classe d'équations paraboliques non linéaires dégénérées du type de l'équation des milieux poreux. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 13, A643-A645. (Author's summary) 80c:35050 35K55 (06E99)
- Madden, Daniel J. Arithmetic in generalized Artin-Schreier extensions of  $k(x)$ . *J. Number Theory* 10 (1978), no. 3, 303-323. (M. Fried) 80d:12009 12A90 (14H05)
- Madden, Paul Why the Edgeworth process assumption isn't that bad. *Rev. Econom. Stud.* 45 (1978), no. 2, 279-283. (From the introduction) 80b:50030 90A14 (90A10)
- Maddox, I. J. (with Kuttner, Brian) Bounded sequences and Nörlund means. *J. London Math. Soc.* (2) 19 (1979), no. 2, 329-334. (D. C. Russell) 80g:40011 40G05 (40D25)
- On strong almost convergence. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 2, 345-350. (M. Stieglitz) 80b:40004 40F05 (40D25, 46A45)
- Madehuch, O. Introduction to solid-state theory. Translated from the German by B. C. Taylor. Springer Series in Solid-State Sciences, 2. Springer-Verlag, Berlin-New York, 1978. xi + 486 pp. ISBN 3-540-08516-5 (Victor Wong) 80i:82001 82-01
- Mader, W. On  $n$ -connected subsets of a graph. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II*, pp. 739-741. *Colloq. Math. Soc. János Bolyai*, 11, North-Holland, Amsterdam, 1978. (Maria Ferro) 80d:05033 05C38
- A reduction method for edge-connectivity in graphs. *Advances in graph theory (Cambridge Combinatorial Conf., Trinity College, Cambridge, 1977)*. *Ann. Discrete Math.* 3 (1978), 145-164. (László Lovász) 80d:05036 05C40
- Über die Maximalzahl kantendisjunkter  $A$ -Wege. *Arch. Math. (Basel)* 30 (1978), no. 3, 325-336. (Rudolf Halin) 80a:05121 05C35
- Über die Maximalzahl kreuzungsfreier  $H$ -Wege. *Arch. Math. (Basel)* 31 (1978/79), no. 4, 387-402. (Rudolf Halin) 80b:05038 05C38
- Zur Struktur minimal  $n$ -fach zusammenhängender Graphen. *Abh. Math. Sem. Univ. Hamburg* 49 (1979), 49-69. (Rudolf Halin) 80j:05080 05C38 (05C35)
- Madigonsky, Walter (with Fiorito, Ralph; Überall, Herbert) Resonance theory of acoustic waves interacting with an elastic plate. *J. Acoust. Soc. Amer.* 66 (1979), no. 6, 1857-1866. (Authors' summary) 80j:73019 73D99
- Madlener, K. (with Avenhaus, J.) Subreursive Komplexität bei Gruppen. II. Der Einbettungssatz von Higman für entscheidbare Gruppen. (English summary) *Acta Inform.* 9 (1977/78), no. 2, 183-193. (George Hutchinson) 80d:03044 03D40 (20F10)
- (with Avenhaus, J.) Algorithmische Probleme bei Einrelatorgruppen und ihre Komplexität. *Arch. Math. Logik Grundlag.* 19 (1978/79), no. 1-2, 3-12. (Leif Larsen) 80b:03055 03D40 (20F10)
- Madore, J. (with Duff, M. J.) Einstein-Yang-Mills pseudoparticles and electric charge quantization. *Phys. Rev. D* (3) 18 (1978), no. 8, 2788-2797. (P. K. Smead) 80b:81072 81E10 (53C10)
- (with Richard, J. L.; Stora, R.) An introduction to the twistor programme. *Phys. Rep.* 49 (1979), no. 2, 113-130. (B. N. Frolov) 80f:83047 83D05 (32L05, 58A99)
- Madorskij, V. M. (with Silaev, N. V.) A hyperlinear process for the solution of nonlinear equations. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1978, no. 5, 46-50, 142. (B. T. Poljak) 80b:65080 65J15 (47H17)
- (with Silaev, N. V.) Determination of an initial approximation for a superlinear process. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 3, 16-20, 140. (C. Ilioi) 80b:65043 65H05
- Madrahimov, A. E. The law of large numbers for a linear combination of order statistics. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 4, 11-16, 87. (S. A. Book) 80m:60036 60F05 (62G30)
- Madson, Niel K. (with Rodrigue, Garry H.; Karush, Jack I.) Odd-even reduction for banded linear equations. *J. Assoc. Comput. Mach.* 26 (1979), no. 1, 72-81. (Robert Todd Gregory) 80b:65040 65F05
- Madson, Richard W. A  $k$ -stage test procedure using  $p$ -values. *J. Statist. Comput. Simulation* 8 (1978/79), no. 2, 117-131. (Author's summary) 80b:62049 62G10
- Madsen Barbosa, Ruy Cycle index of symmetric group—direct proofs and determinantal form. (Portuguese summary) *Naturalia* 4 (1978), 55-60. (Author's summary) 80g:20007 20B30
- (with Foss, Aparecido Rubens) A note on binary, ternary and quaternary compositions with distinct partitions. (Portuguese. English summary) *Naturalia* 4 (1978), 61-63. (P. Bundschuh) 80m:10007 10A45
- Maduch, Marian On three-valued implicative systems. *Studia Logica* 37 (1978), no. 4, 351-385 (1979). (A. Rose) 80m:03054 03B50
- Madych, W. R. (with Fink, A. M.) On certain bounded solutions of  $g + u = f$ . *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 235-242. (B. Wood) 80f:45001 45A05 (45M05)
- Maehashi, Toshiyuki (with Maeda, Sadahiro) Real submanifolds of constant mean curvature in complex projective space. *Kumamoto J. Sci. (Math.)* 13 (1978/79), no. 2, 55-62. (Bang-yeon Chen) 80b:53053 53C40 (32C05)
- Maeda, Hajime (with Kodama, Shinzo) Qualitative analysis of a class of nonlinear compartmental systems: nonoscillation and asymptotic stability. *Math. Biosci.* 38 (1978), no. 1-2, 35-44. (N. Onuchic) 80g:34029 34C10 (34D05)
- Systems structure and low-dimensional models of large-scale linear systems.

- (Japanese) *Systems and Control* 22 (1978), no. 11, 655-664. (Kunihiko Ichikawa) 80c:93015 93A15  
(with Kodama, Shinzo) Some results on nonlinear compartmental systems. *IEEE Trans. Circuits and Systems* 26 (1979), no. 3, 203-204. (Authors' summary) 80c:93008 92A15 (93C99)
- Maeda, Masao** On the eigenvalues of Laplacian. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 24* (1977), 29-33. (Harold Donnelly) 80c:58043 58G25 (53C40)  
Volume estimate of submanifolds in compact Riemannian manifolds. *J. Math. Soc. Japan* 30 (1978), no. 3, 533-551. (David A. Hoffman) 80m:53042 53C40  
The integral of the mean curvature. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 25* (1978), 17-21. (L. A. Santaló) 80c:53102 53C65
- Maeda, Michie** The cylindrical measures on some Banach space. *Natur. Sci. Rep. Ochanomizu Univ.* 29 (1978), no. 1, 1-8. (Werner Linde) 80b:28015 28C15 (60B11)  
A remark on the  $p$ -radonifying maps. *Natur. Sci. Rep. Ochanomizu Univ.* 29 (1978), no. 1, 9-10. (S. V. Kisiljakov) 80c:47024 47B10  
On type  $(r, 1)$  cylindrical measures on Banach spaces with Schauder bases. *Natur. Sci. Rep. Ochanomizu Univ.* 29 (1978), no. 2, 107-110. (Werner Linde) 80b:28031 28C20 (46G99)
- Maeda, Norimichi** Transversal filters with nonuniform tap spacings. *IEEE Trans. Circuits and Systems* 27 (1980), no. 1, 1-11. (Author's summary) 80m:94015 94A12
- Maeda, Sadahiro** (with Maebashi, Toshiyuki) Real submanifolds of constant mean curvature in complex projective space. *Kumamoto J. Sci. (Math.)* 13 (1978/79), no. 2, 55-62. (Bang-yen Chen) 80c:53053 53C40 (32C05)
- Maeda, Shigeru** (with Ikeda, Mineo) On symmetries in a discrete model of mechanical systems. *Math. Japon.* 23 (1978/79), no. 2, 231-244. (Authors' summary) 80a:70019 70G25 (58F05)  
On quadratic invariants in a discrete model of mechanical systems. *Math. Japon.* 23 (1978/79), no. 6, 587-605. (Philip Huddleston) 80c:70025 70H99 (53B20)
- Maeda, Toru** A unique decomposition for knot-like groups. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 3, 567-602. (Mauricio Gutiérrez) 80b:57003 57M05 (20F38)
- Maeda, Yoshiaki** (with Koriyama, Akira; Omori, Hideki) On Lie algebras of vector fields on expansive sets. *Japan. J. Math. (N.S.)* 3 (1977), no. 1, 57-80. (I. Vaisman) 80c:57019 57R25 (58A05)
- Maelljuna, Makoto** A nonuniform estimate in the local limit theorem for densities. I. *Yokohama Math. J.* 26 (1978), no. 1, 83-89. (Sujit K. Basu) 80f:60027a 60F05  
A nonuniform estimate in the local limit theorem for densities. II. *Yokohama Math. J.* 26 (1978), no. 2, 119-135. (Sujit K. Basu) 80f:60027b 60F05  
Non-uniform estimates in the central limit theorem. *Yokohama Math. J.* 26 (1978), no. 2, 137-149. (Reinhard Michel) 80a:60027 60F05  
(with Basu, Sujit K.) An  $L_p$  version of the local limit theorem for densities. *Keio Math. Sem. Rep. No. 4* (1979), 1-6. (Roy V. Erickson) 80m:60024 60F05  
(with Hatori, Hirohisa; Mori, Toshio) Convergence rates in the law of large numbers when extreme terms are excluded. *Z. Wahrsch. Verw. Gebiete* 47 (1979), no. 1, 1-12. (H. H. Stratton) 80b:60036 60F15  
(with Basu, Sujit K.) A local limit theorem for attractions under a stable law. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 1, 179-187. (M. U. Gafurov) 80j:60028 60F05
- Mackawa, Sadao** (with Hinamoto, Takao; Tomita, Shogo) Canonical minimal realization problem for bilinear systems. *Systems-Comput.-Controls* 8 (1977), no. 3, 1-8 (1979). (Arie Feuer) 80d:93027 93B20  
(with Hinamoto, Takao) Concise representations for bilinear systems. *Internat. J. Control* 29 (1979), no. 4, 707-715. (Authors' summary) 80c:93026 93B05
- Mackawa, Takayoshi** Linear representations of any dimensional Lorentz group and computation formulas for their matrix elements. *J. Math. Phys.* 20 (1979), no. 4, 691-711. (R. L. Ingraham) 80f:22012 22E45 (81C40)  
Note on the linear representations of any dimensional Lorentz group and their matrix elements. *J. Math. Phys.* 20 (1979), no. 7, 1460-1463. (R. Delbourgo) 80c:22018 22E43 (20C35)
- Meergolz, I. D.** Итерационные методы расчета статических полей в неоднородных, анизотропных и нелинейных средах. (Russian) [Iteration methods for computing static fields in inhomogeneous, anisotropic and nonlinear media] "Naukova Dumka", Kiev, 1979, 210 pp. (Publisher's summary) 80d:78021 78A30 (65P05)
- Meirgolis, M. D.** (with Satyr, A. V.) Properties of a first-order gradient-free algorithm for the minimization of functionals. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 8* (1979), 604-607, 686. (From the introduction) 80g:49039 49D99 (49D07)
- Maess, Gerhard** A projection method solving general linear algebraic equations. *Rostock. Math. Kolloq. No. 12* (1979), 77-85. (L. W. Ehrlich) 80c:65040 65F20
- Maestri, Piero** (with Barsi, Ferruccio) Arithmetic codes in residue number systems. (French and German summaries) *Digital Process.* 4 (1978), no. 2, 121-135. (Authors' summary) 80a:94036 94B40 (94B35)  
(with Barsi, Ferruccio) Arithmetic codes in residue number systems with magnitude index. *IEEE Trans. Comput.* 27 (1978), no. 12, 1185-1188. (Stefan Dodunekov) 80c:68006 68A05 (94B40)
- Maffezzoni, C.** (with Fiorina, M.) Detection of impulse jumps in a noisy linear system from output observation. *Recent theoretical developments in control (Proc. Conf., Univ. Leicester, Leicester, 1976)*, pp. 637-664. Academic Press, London, 1978. (Ju. A. Nikolaev) 80c:93053 93E10
- Maffioli, F.** (with Camerini, P. M.) Heuristically guided algorithm for  $k$ -parity matroid problems. *Discrete Math.* 21 (1978), no. 2, 103-116. (K. Ecker) 80c:68070 68C05 (05B35, 68E10)
- Magari, Il'jaev, G. G.** (with Din' Zung) Bernstein- and Favard-type problems and the mean  $E$ -dimension of some classes of functions. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 4, 783-786. (J. Musielak) 80m:46024 46E30 (26A33)  
The problem of an intermediate derivative. (Russian) *Mat. Zametki* 25 (1979), no. 1, 81-96, 158. (H. Triebel) 80c:46044 46E35
- Magas, S. L.** (with Bondarenko, N. A.) A method of placing geometric objects. (Russian) *Mathematical methods of cybernetics (Russian)*, pp. 49-55, *Inst. Kibernet. Akad. Nauk Ukrain. SSR, Kiev*, 1978. (Z. Nádeník) 80c:52011 52A40
- Magdziarz, Janusz** (with Kotkowski, Bogdan; Waszak, Aleksander) Some remarks on Minkowski functional. *Funct. Approx. Comment. Math.* 6 (1978), 109-110. (V. K. Balakrishnan) 80m:46002 46A15 (52A05)
- Magenes, Enrico** (with Lions, Jacques-Louis) Guido Stampacchia (1922-1978). (Italian) *Boll. Un. Mat. Ital. A (5)* 15 (1978), no. 3, 715-756. (Editors) 80c:01016 01A70  
See also *Proceedings: International Meeting on Recent Methods in Nonlinear Analysis*, 80c:49001
- Mägerl, G.** A unified approach to measurable and continuous selections. *Trans. Amer. Math. Soc.* 245 (1978/79), 443-452. (K. Jacobs) 80d:28023 28B20 (28A05, 54C65)
- Magerramov, E. H.** Extremal problems in definite classes of entire functions of two variables. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 2, 42-47. (P. Agranović) 80c:32005 32A15
- Maggiolo-Schettini, Andrea** (with Ehrig, Hartmut; Kreowski, Hans-Jörg; Rosen, Barry K.; Winkowski, Józef) Deriving structures from structures. *Mathematical foundations of computer science, 1978 (Proc. Seventh Sympos., Zakopane, 1978)*, pp. 177-190. *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (V. Ju. Meitus) 80d:68036 68C01 (18B20)
- Maggo, P. L.** (with Mehta, O. P.) On procedure steps of complementary solutions for particular type of double-suffixed difference equations. *Math. Ed. (Siam)* 13 (1979), no. 1, A13-A16. (R. Kodnár) 80j:39003 39A10  
(with Das, Ghansham) On the concept of duality in sequencing theory. *Pure Appl. Math. Sci.* 9 (1979), no. 1-2, 55-64. (Józef Grabowski) 80f:90069 90B35
- Maghout, Khaled** Un problème de rangement. (English summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 285-287. *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (R. A. Melter) 80j:05037 05B30 (05C45)
- Magid, Andy R.** Separately algebraic group laws. *Amer. J. Math.* 100 (1978), no. 2, 407-409. (Amassa Fauntleroy) 80d:14024 14L15
- Magidor, Menachem** (with Kanamori, Akihiro) The evolution of large cardinal axioms in set theory. *Higher set theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1977)*, pp. 99-275. *Lecture Notes in Math.*, 669, Springer, Berlin, 1978. (J. L. Bell) 80b:03083 03E55  
On the existence of nonregular ultrafilters and the cardinality of ultrapowers. *Trans. Amer. Math. Soc.* 249 (1979), no. 1, 97-111. (A. Kanamori) 80j:03068 03E05 (03E35, 03E55)
- Magiera, R.** (with Franz, J.) On sequential plans for the exponential class of processes. (Polish summary) *Zastos. Mat.* 16 (1978/79), no. 2, 153-165. (Harry I. Cohn) 80d:62064 62L05 (62M09)
- Magill, K. D., Jr.** Green's  $\beta$ -relation for polynomials. *Semigroup Forum* 16 (1978), no. 2, 165-182. (Editors) 80a:54073 54H15  
Semigroups of continuous selfmaps for which Green's  $\mathcal{Q}$  and  $\mathcal{J}$  relations coincide. *Glasgow Math. J.* 20 (1979), no. 1, 25-28. (Carroll O. Wilde) 80c:54010 54C05  
(with Subbiah, S.) Semigroups with exactly three regular  $\mathcal{Q}$ -classes. *Semigroup Forum* 17 (1979), no. 3, 279-281. (A. I. Bakirov) 80d:54043 54F25 (54H15)  
(with Baird, Bridget B.) Green's  $\mathcal{A}$ -relation and climbing mountains. *Semigroup Forum* 18 (1979), no. 4, 347-370. (Anne C. Baker) 80m:22003 22A20 (20M99)
- Maglevannyi, I. I.** Equations of electrodynamics in noninertial frames of reference. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1978, no. 7, 97-104. (Author's summary) 80a:78009 78A25 (58A10)
- Maglioli-Deffino, Paola** (with Paparoni, Eva) A transmission problem in an angle. (Italian. English summary) *Boll. Un. Mat. Ital. B (5)* 15 (1978), no. 3, 939-955. (P. C. Fife) 80d:35046 35J25
- Maguarade, L. G.** See *Studies in mathematical logic and the theory of algorithms*, 80c:03006
- Maguon, Bernard** Structure des polynômes invariants sur l'algèbre de Lie d'un groupe symplectique inhomogène. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 15, A981-A984. (Author's summary) 80c:22021 22E47 (15A72, 17B10)
- Magnicki, N. A.** Asymptotic behavior of solutions of differential equations with a small parameter in a Banach space. (Russian) *Ž. Vyš. Mat. i Mat. Fiz.* 19 (1979), no. 3, 774-776, 799-800. (Author's summary) 80d:34081 34G10  
Linear Volterra integral equations of the first and third kinds. (Russian) *Ž. Vyš. Mat. i Mat. Fiz.* 19 (1979), no. 4, 970-988, 1083. (C. Corduneanu) 80a:45005 45D05
- Magnon-Ashtekar, Anne** (with Ashtekar, Abhay) On conserved quantities in general relativity. *J. Math. Phys.* 20 (1979), no. 5, 793-800. (John Madore) 80b:83014 83C40 (53B50)  
(with Ashtekar, Abhay) Energy-momentum in general relativity. *Phys. Rev. Lett.* 43 (1979), no. 3, 181-184. (Authors' summary) 80d:83029 83C35  
(with Ashtekar, Abhay) Erratum: "Energy-momentum in general relativity" [Phys. Rev. Lett. 43 (1979), no. 3, 181-184; MR 80d:83029]. *Phys. Rev. Lett.* 43 (1979), no. 9, 649. (Editors) 80i:83024 83C99 (53C80)
- Magnus, Alfred** Nonspherical principal series representations of a semisimple Lie group. *Mem. Amer. Math. Soc.* 19 (1979), no. 216, vi+52 pp. (Juan Tirao) 80c:22013 22E45
- Magnus, Alphonse** (with Hautot, André) Calculation of the eigenvalues of Schrödinger equations by an extension of Hill's method. *J. Comput. Appl. Math.* 5 (1979), no. 1, 3-15. (Authors' summary) 80c:65174 65L15
- Magnus, Kurt** See *Dynamics of multibody systems*, 80b:70001
- Magnus, R. J.** Universal unfoldings in Banach spaces: reduction and stability. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 1, 41-55. (D. R. J. Chillingworth) 80c:58023 58C27 (57R45, 58C28, 58E07)
- Magnus, Wilhelm** (with Winkler, Stanley) ★Hill's equation. Corrected reprint of the 1966 edition. Dover Publications, Inc., New York, 1979. viii+129 pp. ISBN 0-486-63738-7 (Editors) 80c:34001 34-02
- Magó, Gyula A.** A network of microprocessors to execute reduction languages. I. *Internat. J. Comput. Inform. Sci.* 8 (1979), no. 5, 349-385. (Author's summary) 80c:68065 68F10  
(with Stanat, D. F.) Minimizing maximum flows in linear graphs. *Networks* 9 (1979), no. 4, 333-361. (Authors' summary) 80c:90050 90B10 (68C25)
- Magomedov, G. A.** (with Palamodov, V. P.) Generalized analytic functions of several variables. (Russian) *Mat. Sb.* 106(148) (1978), no. 4, 515-543. (Wolfgang Tutschke) 80c:32005 32A30 (30G20, 35J45)
- Magri, Franco** A simple model of the integrable Hamiltonian equation. *J. Math. Phys.* 19



- (1978), no. 5, 1156-1162. (Alexander A. Pankov) **80a:35112** 35Q99 (58F05)
- Magro, Gaetano (with Esposito, Rosa; Lo Re, Pia Maria; Parlato, Lucio) Homology cycles with coefficients. (Italian. English summary) *Ricerche Mat.* **28** (1979), no. 1, 143-157. (Jack Weinstein) **80m:55004** 55N10 (55N22)
- Magrupova, D. A. The matrix-diagonal method for solving a class of transport problems of linear programming. (Russian) *Voprosy Kibernet. (Tashkent)* No. 102 (1978), 65-74, 159. (Author's summary) **80f:90085** 90C08
- Maguregui, Javier A modified Newton algorithm for functions over convex sets. *Nonlinear programming, 3 (Proc. Sympos., Special Interest Group Math. Programming, Univ. Wisconsin, Madison, Wis., 1977)*, pp. 461-473, Academic Press, New York, 1978. (Klaus Glashoff) **80a:65110** 65J05 (65K05)
- Magura, Bruce A. Images of  $SK_2G$ . *Pacific J. Math.* **79** (1978), no. 2, 531-539. (Keith Dennis) **80m:18006** 18F25 (16A54)
- Mahabala, H. N. (with Sinha, R. M. K.) Machine recognition of Devanagari script. *IEEE Trans. Systems Man Cybernet.* **9** (1979), no. 8, 435-441. (Authors' summary) **80d:68122** 68G10
- Mahaffy, J. M. (with Banks, H. T.) Stability of cyclic gene models for systems involving repression. *J. Theoret. Biol.* **74** (1978), no. 2, 323-334. (T. W. Barrett) **80a:92033** 92A10  
(with Banks, H. T.) Global asymptotic stability of certain models for protein synthesis and repression. *Quart. Appl. Math.* **36** (1978/79), no. 3, 209-221. (J. Myron Hood) **80b:92001** 92A05
- Mahailov, V. G. (with Zubkov, A. M.) An estimate of the accuracy of the Poisson approximation in the problem of the distribution of particles into cells. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **23** (1978), no. 4, 819-824. (D. A. Darling) **80a:60011** 60C05 (60F05)
- Mahajan, G. B. Transformation formula involving double hypergeometric series. *Math. Student* **45** (1977), no. 1, 1-7 (1978). (V. L. Deshpande) **80a:33006** 33A35
- Mahajan, R. R. (with Saxena, Rajendra K.) On fractional integration and Meijer transform of two variables. *Islamabad J. Sci.* **4** (1977), no. 1-2, 47-49 (1978). (U. C. Jain) **80j:44003** 44A15  
(with Saxena, Rajendra K.) On summation of some double series of S-function. *Islamabad J. Sci.* **4** (1977), no. 1-2, 58-61 (1978). (B. L. Sharma) **80j:33004** 33A35  
(with Saxena, Rajendra K.) Some finite integrals and Fourier sine series for a generalized function of two variables. II. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **21** (1978), no. 2, 123-132. (Authors' summary) **80c:33003** 33A30
- Mahajan, Virendra N. Asymptotic behavior of diffraction images. (French summary) *Canad. J. Phys.* **57** (1979), no. 9, 1426-1431. (Author's summary) **80m:78023** 78A45
- Mahalanabis, A. K. (with Sinha, N. K.) On the design of stationary feedback regulators for linear discrete systems. *Internat. J. Systems Sci.* **9** (1978), no. 12, 1373-1386. (Kimio Kanai) **80b:93166** 93E20 (93B40)
- Mahaney, S. (with Hartmanis, J.; Immerman, N.) One-way log-tape reductions. *19th Annual Symposium on Foundations of Computer Science (Ann Arbor, Mich., 1978)*, pp. 65-72. IEEE, Long Beach, Calif., 1978. (Authors' summary) **80c:68133** 68C40 (03D10, 68C25)
- Mahan'ko, A. V. (with Petrov, B. N.; Aleksandrov, A. D.; Andreev, V. P.; Bul'kov, V. P.; Viktorov, B. V.; Izvol'skii, E. G.; Kudryavcev, P. S.; Kuzin, V. P.; Mihalov, F. A.; Muravleva, G. A.; Nikolaev, Ju. P.; Pobedonosev, G. V.; Pohvalenskii, V. L.; Sadukov, F. R.; Serpionov, G. V.; Salikova, I. M.; Ul'jaichenko, A. E.; Frolov, P. A.; Červjakov, V. P.; Caturjan, K. T.) ★Многомерные и нестационарные системы автоматического управления. (Russian) [Multistate and nonstationary automatic control systems] "Mašinostroenie", Moscow, 1978. 240 pp. (Publisher's summary) **80c:93073** 93C40
- Mahan'kov, V. G. Dynamics of classical solitons (in nonintegrable systems). *Phys. Rep.* **35** (1978), no. 1, 1-128. (Author's summary) **80i:81044** 81E99 (35Q20, 58F11, 58F40, 82A45)  
(with Kummer, G.; Švačka, A. B.) Many-dimensional U(1) solitons, their interactions, resonances and bound states. Special issue on solitons in physics. *Phys. Scripta* **20** (1979), no. 3-4, 454-461. (Brian DeFacio) **80j:81017** 81C05 (35Q20, 58G35)  
(with Fedjanin, V. K.) Soliton-like solutions in one-dimensional systems with resonance interaction. Special issue on solitons in physics. *Phys. Scripta* **20** (1979), no. 3-4, 552-557. (Authors' summary) **80a:81018** 81C05 (35Q20)
- Mahanta, M. N. On the problem of embedding hadronic microuniverses in normal flat space-time. *Lett. Nuovo Cimento* (2) **26** (1979), no. 10, 317-320. (José M. Cerveró) **80m:81115** 81G99
- Mahanti, N. C. Small-amplitude internal waves due to an oscillatory pressure. *Quart. Appl. Math.* **37** (1979/80), no. 1, 92-97. (Ph. Mathieu) **80c:76012** 76C10 (35Q99)
- Mahapatra, G. B. A simplified method of finding equivalence conditions in a class of distributed parameter systems. *J. Franklin Inst.* **307** (1979), no. 4, 209-215. (Author's summary) **80c:93062** 93C20
- Maharadze, L. M. The homotopy of pseudosimplicial rings and non-abelian derived functors. (Russian. English summary) *Sakharit. SSR Meen. Akad. Math. Inst. Šrom.* **59** (1978), 50-67. (Gencho Skordev) **80b:18016** 18G10
- Maharam, Dorothy An example on tail fields. *Measure theory applications to stochastic analysis (Proc. Conf., Res. Inst. Math., Oberwolfach, 1977)*, pp. 251-252, Lecture Notes in Math., 695, Springer, Berlin, 1978. (S. D. Chatterji) **80d:28004** 28A05  
(with Stone, A. H.) Realizing isomorphisms of category algebras. *Bull. Austral. Math. Soc.* **19** (1978), no. 1, 5-10. (Tadashi Ohkuma) **80a:54021** 54C40 (54E50)  
Realizing automorphisms of category algebras of product spaces. *General Topology Appl.* **10** (1979), no. 2, 161-174. (T. Thrivikraman) **80d:54005** 54B10 (54C50, 54H05)  
(with Stone, A. H.) Borel boxes. *Pacific J. Math.* **81** (1979), no. 2, 471-473. (Richard D. Mauldin) **80k:54007** 54B10 (54C50, 54H05)
- Mahaviricharya See Jha, Sachchidanand, **80a:01008**
- Maher, Richard J. Strong liftings on topological measured spaces. *Studies in probability and ergodic theory*, pp. 153-166, *Advances in Math., Suppl. Studies*, 2, Academic Press, New York, 1978. (K. Bichteler) **80c:28006** 28A51 (46G15)
- Maheshwari, Amar Energy eigenvalues from periodic orbits for nonseparable potentials in two dimensions. *Proceedings of the Conference on Mathematical Analysis and its Applications (Inst. Engrs., Mysore, 1977)*, pp. P5-P12, *Matscience Rep.*, 91, Inst. Math. Sci., Madras, 1978. (From the text) **80b:81051** 81C99  
(with DeWitt-Morette, Cecile; Nelson, Bruce) Path integration in nonrelativistic quantum mechanics. *Phys. Rep.* **50** (1979), no. 5, 255-372. (L. L. Lee) **80b:81029** 81C35
- Maheshwari, N. K. (with Pradhan, K. M.) Certain relations involving a generalized hypergeometric function and the Legendre function with applications. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **22** (1979), no. 3, 217-222. (Rishi Srivastava) **80m:33009** 33A30 (33A35)
- Maheshwari, S. N. (with Prasad, R.) Semi-open sets and semicontinuous functions in bitopological spaces. *Math. Notae* **26** (1977/78), 29-37. (Ivan L. Reilly) **80c:54040** 54E55  
(with Tapi, U.) On feebly  $R_0$ -spaces. *An. Univ. Timișoara Ser. Științ. Mat.* **16** (1978), no. 2, 173-177 (1979). (C. W. Patty) **80m:54030** 54D10  
(with Hakimi, S. L.) Corrections and comments on: "On models for diagnostic systems and probabilistic fault diagnosis" (IEEE Trans. Computers **C-25** (1976), no. 3, 228-236). *IEEE Trans. Comput.* **27** (1978), no. 3, 287-288. (Editors) **80a:90046** 94C05  
(with Malhotra, V. M.; Kumar, M. Pramodh) An  $O(|V|^2)$  algorithm for finding maximum flows in networks. *Inform. Process. Lett.* **7** (1978), no. 6, 277-278. (Gerald Hammer) **80b:90058** 90B10  
(with Prasad, R.) On pairwise  $s$ -regular spaces. *Riv. Mat. Univ. Parma* (4) **4** (1978), 45-48 (1979). (Ivan L. Reilly) **80g:54037** 54E55  
(with Tapi, U.) Connectedness of a stronger type in topological spaces. *Nam Math.* **12** (1979), no. 1, 102-109. (O. T. Alas) **80j:54013** 54D05
- Mahfoud, W. E. Oscillation theorems for a second order delay differential equation. *J. Math. Anal. Appl.* **63** (1978), no. 2, 339-346. (K. Zima) **80a:34105** 34K15  
(with Rankin, Samuel M.) Some properties of solutions of  $(r(t)\psi(x)')' + a(t)f(x) = 0$ . *SIAM J. Math. Anal.* **10** (1979), no. 1, 49-54. (Ch. G. Philos) **80b:34032** 34C10
- Mahler, Guy Nonlinear parabolic problems in unbounded domains. *Proc. Roy. Soc. Edinburgh Sect. A* **82** (1978/79), no. 3-4, 201-209. (Mieczysław Altman) **80i:35103** 35K55
- Mahmoodian, Ebadollah S. A critical case method of proof in combinatorial mathematics. *Bull. Iranian Math. Soc.* **8** (1978), 1L-26L. (W. T. Tutte) **80d:05046** 05C9 (05B20)
- Mahmoud, M. S. (with Vogt, William G.; Mickle, Martin H.) Decomposition and coordination methods for constrained optimization. *J. Optim. Theory Appl.* **28** (1979), no. 4, 549-584. (Authors' summary) **80c:65070** 65K10 (90C30)
- Mahmudov, A. P. (with Ragimov, M. B.) On a study of a functional system. (Russian) *Functional analysis and its applications*, No. 3 (Russian), pp. 121-134, "Ekm", Baku, 1978. (K. Lajko) **80c:39005** 39B60  
A generalized quasilinear eigenvalue problem. (Russian) *Dokl. Akad. Nauk SSSR* **243** (1978), no. 1, 33-36. (Gheorghe Micula) **80a:65119** 65J10 (49G05)
- Mahmudov, E. N. (with Pšeničnyĭ, B. N.) The optimality principle for polyhedral differential inclusions. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* No. 25 *Neobhodim. Uslov. Ekstremum. dlja Differencial. Vključen. i Zadač. Ubeug.* (1978), 3-22. (Vadim Komkov) **80b:49024** 49B99  
(with Pšeničnyĭ, B. N.) The optimality principle for polyhedral differential inclusions. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidž. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1978**, no. 6, 26-29. (Rémi Vaillancourt) **80i:49003** 49A10 (93C99)  
The optimality principle for polyhedral differential inclusions and linear problem of optimal control on linear manifolds. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidž. SSR Dokl.* **35** (1979), no. 1, 3-8. (V. F. Dem'janov) **80c:90008** 93C05 (49B10)
- Mahmudov, Ju. A. See Questions of engineering cybernetics, **80a:93176a**
- Mahmudov, M. D. Small-parameter asymptotics of the solution of a boundary value problem for elliptic equations of order  $2m$  in a thin infinite layer. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidž. SSR Dokl.* **35** (1979), no. 3, 13-18. (E. M. Saak) **80i:35073** 35J40 (35B40)
- Mahoney, J. F. (with Sivazlian, B. D.) Group replacement of a multicomponent system which is subject to deterioration only. *Adv. in Appl. Probab.* **10** (1978), no. 4, 867-883. (H. Taylor) **80d:90042** 90B25  
Comments on sufficiency conditions for constrained extrema. *AICHe J.* **25** (1979), no. 2, 370-373. (Author's summary) **80i:90122** 90C30
- Mahorkin, V. V. Manifolds of hyperquadrics of  $n$ -dimensional projective space and their local manifolds. (Russian) *Kaliningrad. Gos. Univ. Differencial' naja Geom. Mnogobraz. Figur* No. 9 (1978), 60-63, 138. (M. C. Chaki) **80j:53016** 53A20
- Mahoux, G. (with Auberson, G.; Mennessier, G.) On the perturbation theory of the anharmonic oscillator at large orders. (Italian and Russian summaries) *Nuovo Cimento A* (11) **48** (1978), no. 1, 1-23. (P. G. L. Leach) **80c:81030** 81C12 (47E05)
- Mahowald, Mark (with Davis, Donald M.) Immersions of projective spaces. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976, Part 2)*, pp. 151-154. *Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I.*, 1978. (David Handel) **80c:57034** 57R42 (55S35)  
(with Cohen, F. R.; Milgram, R. James) The stable decomposition for the double loop space of a sphere. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976, Part 2)*, pp. 225-228. *Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I.*, 1978. (P. W. H. Lemmens) **80j:55009** 55P35 (55P42)  
(with Davis, Donald M.) Obstruction theory and  $K$ -theory. *Geometric applications of homotopy theory (Proc. Conf., Evanston, Ill., 1977)*, II, pp. 134-164, *Lecture Notes in Math.*, 658, Springer, Berlin, 1978. (David Handel) **80g:55034** 55S45  
The construction of small ring spectra. *Geometric applications of homotopy theory (Proc. Conf., Evanston, Ill., 1977)*, II, pp. 234-239, *Lecture Notes in Math.*, 658, Springer, Berlin, 1978. (V. P. Snaith) **80d:55016** 55Q10
- Mahr, Bernd Strategies and arithmetic complexity of pathalgorithms. *Datenstrukturen, Graphen, Algorithmen* (3. Fachtagung über Graphentheoretische Konzepte der Informatik, Linz, 1977), pp. 169-177, *Applied Comput. Sci.*, 8, Hanser, Munich, 1978. (Ondrej Šýkoni) **80a:68043** 68C25

- Mahmoud, M. H. A.** (with Obada, A. S. F.; Abu-Sitta, A. M.) Commutation relations and the moments effects in the theory of quantum optics. (Arabic summary) *Proc. Math. Phys. Soc. Egypt No. 47* (1979), 33-40. (Authors' summary) **80k:81205** 81K05 (81D05)
- Mai, Brigitte** See **Filtingo'c, G. M.** **80i:26001** and **Vorobiev, M. M.** **80k:10008**
- Mai, Walter** See **Filtingo'c, G. M.** **80i:26001**
- da Silva Maia, Emma** See **da Silva Maia, Emma**
- Malbaun, T. S. E.** The semantics of a simple nondeterministic language. *Transformations de programmes (Proc. Third Internat. Sympos. Programming, Paris, 1978)*, pp. 159-172. Dunod, Paris, 1978. (Author's summary) **80b:68024** 68B10
- Malboroda, I. N.** (with Sportjuk, G. A.) A method for two-sided approximation of the solutions of operator equations. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 3(190), 116-119. (From the text) **80a:47097** 47H15 (65J05)
- Maida, Antonio** (with Leuci, Margherita) Higher order derivations in the tensor algebra of a differentiable manifold. (Italian. English summary) *Rend. Mat.* (6) **11** (1978), no. 3, 373-385 (1979). (V. Oproiu) **80i:58007** 58A20 (53C05)
- Majer, V.** (with Sal'e, N.) On the general relativistic phenomenological theory of superconductivity. (Russian. English summary) *Theoret. Mat. Fiz.* **38** (1979), no. 3, 408-416. (Authors' summary) **80b:81117** 81J05 (83C99)
- Majer, Volker**  $L_p$ -approximation by Kantorovič operators. (Russian summary) *Anal. Math.* **4** (1978), no. 4, 289-295. (S. D. Riemschneider) **80b:41006** 41A35
- Majer, Z.** See **Mayer, Jacques**
- Majgrin, B. Ž.** (with Aikinov, M. K.) Absolute stability of steady-state motions of controlled systems at the angle  $(0, k)$ . (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat. Nauk* **1978**, no. 5, 1-6, 92. (A. A. Martynuk) **80g:93060** 93D05 (with Zumatov, S. S.) Absolute stability, an estimate of the indices of the transient process of a programming manifold of controllable systems. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat. Nauk* **1979**, no. 1, 29-36, 91. (V. M. Popov) **80i:34082** 34D25 (with Aikinov, M. K.) Absolute stability of controlled systems with multiple regulating units. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat. Nauk* **1979**, no. 3, 34-39, 90. (Stefan Mircea) **80k:93037** 93D05
- Majkov, E. V.** (with Romanov, V. A.) Continuous translations of the Feynman measure. (Russian. French summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1979**, no. 1, 56-61, 88. (S. A. Čobanjan) **80g:28016** 28C20
- Maillard, P.** (with Garcia, M.; Peltraut, Y.) Une martingale de saut multiplicatif donné. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 51-52. *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (From the text) **80g:60048** 60G44 (with Garcia, M.; Peltraut, Y.) Sur la structure de certaines familles de tribus. (English summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* **14** (1978), no. 3, 335-341. (Maurizio Pratelli) **80a:60066** 60G44
- Mallot, Henry** Endomorphisme de base et courbe aréolaire d'une sous-variété d'une variété riemannienne. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 2, A131-A133. (Author's summary) **80b:53054** 53C40 (53C21)
- Maimardi, F.** (with Servi, G.; Turchetti, G.) Application of Padé approximants to elastic wave propagation problems. *Modern problems in elastic wave propagation (Proc. IUTAM Sympos., Northwestern Univ., Evanston, Ill., 1977)*, pp. 103-119. Wiley, New York, 1978. (T. Bryant-Monte) **80k:73020** 73D15 (86A15)
- Mala, Alfonso** (with Monte, Anna-Maria) The propagation of electromagnetic waves in an ionized gas. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **63** (1977), no. 1-2, 52-58 (1978). (G. P. Bava) **80i:78007** 78A40 (with d'Anna, Armando; Monte, Anna-Maria) Stability questions for boundary value problems. *Ann. Soc. Sci. Bruxelles Sér. I* **92** (1978), no. 3, 109-126. (Michel Cotsakis) **80c:35011** 35B35
- Maioli, M.** (with Graffi, Sandro; Grecchi, Vincenzo; Levoni, S.) Resonances in one-dimensional Stark effect and continued fractions. *J. Math. Phys.* **20** (1979), no. 4, 685-690. (Michael F. Barnsley) **80b:81010** 81C05 (34B25)
- Maione, Bruno** (with Brucoli, Michele; Torelli, Francesco) Algorithm for identification of multivariable discrete-time linear systems. *Electron. Lett.* **14** (1978), no. 10, 313-315. (Authors' summary) **80d:93028** 93B30
- Maizura, James** (with Fredrickson, Harold) Necklaces of beads in  $k$  colors and  $k$ -ary de Bruijn sequences. *Discrete Math.* **23** (1978), no. 3, 207-210. (N. G. de Bruijn) **80c:05007** 05A05
- Maizorov, I. V.** A problem for equations of mixed type with a closed line of degeneracy. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 7, 1321-1323, 1343. (G. W. Hedstrom) **80b:35108** 35M05
- Maizorov, V. E.** Various diameters of the class  $H_p^r$  in the space  $L_q$ . (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* **42** (1978), no. 4, 773-788. (J. Albricht) **80c:41014** 41A46
- le Maire, B.** See **Le Maire, B.**
- Maisani, O. I.** (with Gegelia, T. G.) Fundamental mathematical problems of the dynamical state of an elastic unbounded medium. (Russian) *Complex analysis and its applications* (Russian), pp. 151-159, 666, "Nauka", Moscow, 1978. (From the introduction) **80d:73053** 73D99 (with Gaččiladze, R. I.) A study of some fundamental contact boundary problems of statics of elasticity theory and the moment theory of elasticity. (Russian. Georgian and English summaries) *Tbilis. Gos. Univ. Inst. Prikl. Mat. Trudy* **5/6** (1978), 68-92. (From the summary) **80d:73118** 73T05 (35Q99)
- Maison, H. Dieter** On the complete integrability of the stationary, axially symmetric Einstein equations. *J. Math. Phys.* **20** (1979), no. 5, 871-877. (Author's summary) **80c:83027** 83C99 (35Q20, 53C80)
- Maisonneuve, B.** On the structure of certain excursions of a Markov process. *Z. Wahrsch. Verw. Gebiete* **47** (1979), no. 1, 61-67. (Michael Sharpe) **80g:60070** 60J25
- Maistrov, L. E. D.** Hume's views of probability. (Russian) *Istor.-Mat. Issled.* **No. 23** (1978), 307-313, 359. (I. Ruzsa) **80i:01008** 01A50 (60-03)
- Maistrovskii, G. D.** The rate of convergence of the gradient method for the modified Lagrange function. (Russian) *Ekonom. i Mat. Metody* **15** (1979), no. 2, 380-386. (A. D. Ioffe) **80b:90118** 90C25 (65K10)
- The gradient method for a modified Lagrange function. (Russian) *Ž. Vychisl. Mat. i*
- Mat. Fiz.* **19** (1979), no. 1, 56-69, 268. (Jifi V. Outrata) **80a:49062** 49D07 (90C25)
- Maisuradze, A. I.** Controllability and stability of logical-dynamical systems. (Russian) *Kibernet. i Vychisl. Tehn.* **1978**, no. 39, 102-109, 116. (A. A. Martynuk) **80a:93064** 93B99
- Maiti, M.** (with Pal, T. K.) Extensions of Čirić's quasicontractions. *Math. Balkanica* **6** (1976), 152-154 (1978). (Haskell Cohen) **80g:54055** 54H25 (with Pal, T. S.) On the formulation of plane problems of elasticity in terms of dislocation layers. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Star.)* **30** (1978), no. 6, 717-741. (E. Pinney) **80k:73013** 73C35 (73C45) (with Pal, T. K.) Generalizations of two fixed-point theorems. *Bull. Calcutta Math. Soc.* **70** (1978), no. 2, 57-61. (Silvio Massa) **80b:54062** 54H25
- Maiti, S. N.** (with Misra, Jayadev) Effect of the presence of a crack on the thermal stresses in a long insulated cylinder. *Bull. Calcutta Math. Soc.* **70** (1978), no. 2, 63-71. (P. M. Gupta) **80g:73061** 73M05
- Maiti, S. R.** (with Raychaudhuri, A. K.) Conformal flatness and the Schwarzschild interior solution. *J. Math. Phys.* **20** (1979), no. 2, 245-246. (Authors' summary) **80b:83048** 83D05 (53C20)
- Maitra, A.** (with Rao, B. V.; Rao, K. P. S. Bhaskara) A problem in the extension of measures. *Illinois J. Math.* **23** (1979), no. 2, 211-216. (J. Lukel) **80d:28011** 28A10
- des Malzeaux, Pierre** See **Des Malzeaux, Pierre**
- Majcher, G.** (with Styrylska, T.) Multistage equalization of direct conditioned observations. (Polish) *Mat. Stos.* (3) **13** (1978), 67-71. (R. Kala) **80d:15002** 15A06 (65F05)
- Majchrzak, Wiesław** An extremal arclength problem in some classes of univalent and  $p$ -symmetric functions. *Ann. Polon. Math.* **36** (1979), no. 3, 287-297. (W. C. Royster) **80i:30018** 30C45
- Majda, Andrew** (with Ralston, James V.) An analogue of Weyl's theorem for unbounded domains. II. *Duke Math. J.* **45** (1978), no. 3, 513-536. (D. M. Eids) **80b:35114** 35P20 (58G25) (with McDonough, James; Osher, Stanley) The Fourier method for nonsmooth initial data. *Math. Comp.* **32** (1978), no. 144, 1041-1081. (H.-O. Kreiss) **80b:65197** 65M10 (with Osher, Stanley) A systematic approach for correcting nonlinear instabilities. The Lax-Wendroff scheme for scalar conservation laws. *Numer. Math.* **30** (1978), no. 4, 429-452. (C. Bardos) **80g:65101** 65M10 (with Engquist, Björn) Radiation boundary conditions for acoustic and elastic wave calculations. *Comm. Pure Appl. Math.* **32** (1979), no. 3, 314-358. (Kazimierz Sobczyk) **80b:76041** 76Q05 (73D99) (with Osher, Stanley) Numerical viscosity and the entropy condition. *Comm. Pure Appl. Math.* **32** (1979), no. 6, 797-838. (D. Schultz) **80g:65031** 65N05 (76D99)
- Majeed, Abdul** On torsion-free nonfree linear groups. *Islamabad J. Sci.* **4** (1977), no. 1-2, 53-55 (1978). (Author's introduction) **80b:20061** 20G15 (20F99) (with Mason, A. W.) Solvable-by-finite subgroups of  $GL(2, F)$ . *Glasgow Math. J.* **19** (1978), no. 1, 45-48. (Ulrich Dempwolff) **80a:20050** 20G20
- Majewska-Tronowicz, Jadwiga** (with Belkowska, Krystyna; Kinowska, Małgorzata) Current bibliography of the history of science and technology. No. 28. (Oct.-Dec. 1977). (Polish) *Kwart. Hist. Nauk. Tech.* **23** (1978), no. 2, suppl., 18 pp. (Editors) **80b:00016a** 00A15 (01A75) (with Michalczyk, Barbara; Kinowska, Małgorzata) Current bibliography of the history of science and technology. No. 29/30 (Jan.-June 1978). (Polish) *Kwart. Hist. Nauk. Tech.* **23** (1978), no. 3-4, suppl., 24 pp. (Editors) **80b:00016b** 00A15 (01A75) (with Michalczyk, Barbara; Kinowska, Małgorzata) Current bibliography of the history of science and technology. No. 31 (July-Sept. 1978). (Polish) *Kwart. Hist. Nauk. Tech.* **24** (1979), no. 1, suppl., 28 pp. (Editors) **80b:00016c** 00A15 (01A75)
- Majewski, Mirosław** On some matrix of the Birkhoff and von Neumann quantum logic. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **7** (1978), no. 3, 133-136. (L. L. Maksimova) **80d:03061** 03G12
- Majhi, S. N.** (with Shankara, T. S.) Transformations of some non-commuting operator monomials. *J. Math. Phys. Sci.* **12** (1978), no. 5, 519-527. (David Promislow) **80c:05024** 05A19 (81C99)
- Majumdar, K. N.** Linear combinations of Hermitian and real symmetric matrices. *Linear Algebra Appl.* **25** (1979), 95-105. (Yik-Hoi Au-Yeung) **80b:15033** 15A63 (15A57) Corrigendum to: "Intersection of blocks in a quasiresidual balanced incomplete block design" [*Utilitas Math.* **13** (1978), 189-191; MR **58** #16338]. *Utilitas Math.* **15** (1979), 334. (Editors) **80b:05018** 05B05
- Major, Péter** (with Csörgő, Miklós; Komlós, János; Révész, Pál; Tusnády, Gábor) On the empirical process when parameters are estimated. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 87-97, Academia, Prague, 1978. (P. K. Sen) **80c:60033** 60F05 (62G99)
- On the invariance principle for sums of independent identically distributed random variables. *J. Multivariate Anal.* **8** (1978), no. 4, 487-517. (M. Csörgő) **80f:60034** 60F17 (60F15)
- Majorana, Ettore** See **Recami, Erasmo**, **80a:01041**
- Majorkowska-Knap, Krystyna** Dynamical problems of thermo-piezoelectricity. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **27** (1979), no. 2, 139-147. (Xanthippi Markenscoff) **80k:73067** 73R05
- Majster, Milla E.** Data types, abstract data types and their specification problem. *Theoret. Comput. Sci.* **8** (1979), no. 1, 89-127. (Author's summary) **80c:68015** 68B15
- Majumdar, Dilyen** (with Mitra, Sujit Kumar) Least squares under quadratic constraints. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977)*, pp. 321-333, Academic Press, New York, 1979. (N. N. Abdelmalek) **80f:65015** 65D15
- Majumdar, Hiranmay** Rank order tests for multiple regression for grouped data under progressive censoring. *Calcutta Statist. Assoc. Bull.* **26** (1977), no. 101-104, 1-16 (1978). (James N. Adichie) **80a:62104** 62J05 (with Sen, Pranab Kumar) Invariance principles for jackknifing  $U$ -statistics for finite population sampling and some applications. *Comm. Statist. A—Theory Methods* **7** (1978), no. 11, 1007-1025. (George W. Williams) **80f:62015** 62D05 (62Q05, 62L12)



- Majumdar, Mukul K. (with Brock, W. A.) Global asymptotic stability results for multisector models of optimal growth under uncertainty when future utilities are discounted. *J. Econom. Theory* 18 (1978), no. 2, 225-243. (Carl P. Simon) 80d:90029 90A17
- (with Föllmer, Hans) On the asymptotic behavior of stochastic economic processes. Two examples from intertemporal allocation under uncertainty. *J. Math. Econom.* 5 (1978), no. 3, 275-287. (Edwin H. Neave) 80c:90035 90A16 (62P20)
- Dasgupta, Majumdar, S. See Dasgupta, Majumdar, S.
- Majumdar, S. K. (with Mandal, M.) On a difficulty of constructing Padé approximation of order  $(n, n)$  to the hypergeometric function  $F(a, \beta, \gamma; x)$ . *Indian J. Pure Appl. Math.* 7 (1976), no. 10, 1195-1198. (Authors' summary) 80c:65015 65D20
- Majumdar, S. R. (with O'Neill, M. E.) Asymmetric Stokes flows generated by the motion of a closed torus. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 6, 967-982. (William H. H. Banks) 80m:76040 76D99
- Majumdar, K. L. (with Bhattacharjee, G. P.) Multivariate interval interpolation. *J. Comput. Appl. Math.* 4 (1978), no. 4, 295-300. (Authors' summary) 80c:65024 65D05
- Mak, Tak K. (with Chan, Lai K.) On the maximum likelihood estimation of a linear structural relationship when the intercept is known. *J. Multivariate Anal.* 9 (1979), no. 2, 304-313. (Hans-Peter Höschel) 80k:62042 62F10
- (with Chan, Lai K.) Maximum likelihood estimation of a linear structural relationship with replication. *J. Roy. Statist. Soc. Ser. B* 41 (1979), no. 2, 263-268. (C. A. Robertson) 80j:62029 62F10
- Makai, E., Jr. The isomorphisms of the category of uniform spaces and related categories. *Acta Math. Acad. Sci. Hungar.* 32 (1978), no. 1-2, 121-128. (Worthen Hunsaker) 80a:54051 54E15
- (with Andrka, Hajnal; Márki, L.; Némethi, István) Reduced products in categories. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 25-45. Heyn, Klagenfurt, 1979. (Paul Bankston) 80k:03049 03C20 (03C60, 18A30, 18C05)
- Makanin, G. S. Algorithmic decidability of the rank of constant-free equations in a free semigroup. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 4, 851-854. (Robert G. Burns) 80b:20069 20M05
- Systems of standard equations in words of an  $n$ -layer alphabet with unknowns. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 3, 637-645, 718. (V. N. Remeslennikov) 80a:20039 20F10
- Identification of the rank of equations in a free semigroup. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 3, 547-602, 734. (André Lentin) 80h:20084 20M05 (03D40)
- Makarenko, G. I. (with Krasnov, M. L.; Kiselev, A. I.) ★Сборник задач по обыкновенным дифференциальным уравнениям. (Russian) [A collection of problems in ordinary differential equations] Third edition, revised and augmented. *Izdat. "Vysshaia Škola", Moscow*, 1978. 287 pp. (Editors) 80c:34001 34-01
- Makarov, A. A. Correct solvability classes of a general boundary value problem in an infinite layer for systems of linear convolution equations. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* No. 31 (1979), 86-90, 167. (S. A. Terenov) 80m:45005 45E10 (45K05)
- Makarov, B. M. (with Weber, Martin) Einige Untersuchungen des Raumes der maximalen Ideale eines Vektorverbandes mit Hilfe finiter Elemente. I. Topologische Charakterisierung der finiten Elemente. *Math. Nachr.* 79 (1977), 115-130. (Rosaling Reichard) 80j:46016 46A40 (46E05)
- (with Weber, Martin) Einige Untersuchungen des Raumes der maximalen Ideale eines Vektorverbandes mit Hilfe finiter Elemente. II. Einige Eigenschaften des Raumes der (ml)-Ideale eines Vektorverbandes vom Typ (Σ). *Math. Nachr.* 80 (1977), 115-125. (Rosaling Reichard) 80j:46016 46A40 (46E05)
- A characterization of Hilbert space. (Russian) *Mat. Zametki* 26 (1979), no. 5, 739-746, 814. (M. M. Day) 80m:46021 46C05 (46B20)
- Makarov, G. I. (with Fedorova, L. A.) The method of multiple reflected waves. (Russian. English summary) *Izv. Vysš. Učebn. Zaved. Radiofizika* 21 (1978), no. 10, 1424-1433. (Authors' summary) 80a:78018 78A40 (00A89)
- Makarov, I. A. Solution of the Cauchy-Goursat (CG) problem for an equation with two lines of degeneracy of the second kind. (Russian) *Differentsial'nye Uravnenija (Ryazan) No. 12* (1978), 78-86. (Author's summary) 80c:35072 35M05
- Solution of the Cauchy-Goursat problem for an equation with two lines of degeneracy of the second kind. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 7, 7-10. (Ju. V. Egorov) 80c:35044 35L80 (35C15)
- Extension of the applicability of formulas to negative values of parameters of equations with singular coefficients. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 5(192), 87-95. (L. G. Mihailov) 80f:35025 35C99
- Solution of the Cauchy-Goursat problem for an equation with two lines of degeneracy of the second kind. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 5, 29-40. (A. P. Soldatov) 80c:35028 35C05 (35L80)
- Makarov, I. L. (with Makarov, V. L.; Prikazčikov, V. G.) Exact difference schemes and schemes of any order of accuracy for systems of second-order differential equations. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 7, 1194-1205, 1340. (E. S. Čičkin) 80h:65060 65L10
- Makarov, I. M. (with Vinogradskaja, T. M.) Global characteristic of the preference structure in the problems of choice. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 2, 312-315. (Ju. G. Pavlov) 80f:90012 90A06 (90A07)
- Makarov, Ju. N. Estimates of the measure of linear independence for the values of  $E$ -functions. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 2, 3-12. (John H. Loxton) 80m:10026 10F37
- Makarov, N. N. A condition of continuous choice of representative measures in a finite-dimensional convex compactum. (Russian. English summary) *Game theory questions of decision making (Russian)*, pp. 112-116, 127. Nauka Leningrad. Otdel., Leningrad, 1978. (F. S. Szidorsky) 80f:90163 90D25
- Makarov, O. M. (with Lenin, A. I.) Recurrence algorithms for the computation of Hankel forms and the inversion of a dyadic matrix and a cyclic matrix. (Russian) Optimization of computations (the solution of equations, numerical integration, statistical data processing). *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 40* (1977), 33-42. (Eugene Levner) 80d:68040 68C05 (65F30, 68C25)
- Using duality to compute the pair of matrix products  $QY$  and  $Y^TQ$  over a commutative ring. *Inform. Process. Lett.* 8 (1979), no. 1, 46-49. (Editors) 80j:68025 68C05 (65F99)
- Makarov, V. L. (with Burhanov, Š. A.; Guminskaja, N. O.; Prikazčikov, V. G.) Exact difference schemes for a fourth order ordinary differential equation. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 9, 778-781, 660. (Walter Gautschi) 80a:65166 65L10
- The existence of economic equilibrium in the presence of several types of money and prices. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 5, 1083-1091, 1215. (Mohamed El-Hodini) 80c:90026 90A14
- (with Prikazčikov, V. G.) A one-step iteration method for the calculation of eigenvalues. (Russian. English summary) *Vysš. Prikl. Mat. (Kiev) No. 34* (1978), 152-157, 168. (B. I. Kvasov) 80a:65079 65F15
- (with Skorobogat'ko, A. A.) Solution of boundary value problems for a generalized biharmonic equation in unbounded domains. (Russian. English summary) *Vysš. Prikl. Mat. (Kiev) No. 36* (1978), 123-130, 167. (Jiří Nedoma) 80d:35049 35J40 (65N20)
- (with Smanenko, T. L.) Application of best schemes with an exact spectrum to the Sturm-Liouville problem with discontinuous coefficients. (Russian. English summary) *Vysš. Prikl. Mat. (Kiev) No. 36* (1978), 130-139, 167. (Authors' summary) 80a:65183 65L15
- (with Gavriljuk, I. P.; Elenin, G. G.; Zdobrenko, Ju. I.; Zmitrenko, N. V.; Šar'ın, I. M.) A difference scheme with an exact spectrum for a quasilinear heat equation. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 97* (1979), 26 pp. (Authors' summary) 80m:65066 65N05 (80A20)
- (with Makarov, I. L.; Prikazčikov, V. G.) Exact difference schemes and schemes of any order of accuracy for systems of second-order differential equations. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 7, 1194-1205, 1340. (E. S. Čičkin) 80h:65060 65L10
- (with Voichevskii, S. A.; Prikazčikov, V. G.) Error of the method of nets in an eigenvalue problem for fourth-order ordinary differential equations. (Russian. English summary) *Vysš. Prikl. Mat. (Kiev) No. 38* (1979), 138-145, 167. (Authors' summary) 80f:65090 65L15
- Makarov, S. B. On the optimal choice of observation times in a problem of distinguishing between stochastic processes. (Russian. English summary) Investigations in the theory of probability distributions. IV. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 85 (1979), 129-136, 240, 246. (Wolfgang Winkler) 80j:62062 62M05 (62K99)
- Makarov, B. M. See Makarov, B. M.
- Makaler, N. K. (with Kogan, M. N.) Derivation of the equations of gas dynamics for multi-atomic gases with arbitrary relation between the speeds of elastic and inelastic processes. (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1978, no. 2, 57-70. (Authors' summary) 80a:76044 76N99 (35Q99)
- Boundary conditions for equations of gas dynamics that correspond to the upper estimates of the Chapman-Enskog method for the solution of the Boltzmann equation. (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1979, no. 3, 77-87. (Author's summary) 80f:76029 76N15 (35Q99)
- Makhamkov, V. G. See Mahan'kov, V. G.
- Makino, Atsuhiko (with Matsumoto, Takashi; Chua, Leon O.) On the implications of capacitor-only cutsets and inductor-only loops in nonlinear networks. *IEEE Trans. Circuits and Systems* 26 (1979), no. 10, 828-845. (Authors' summary) 80h:94044 94C05
- Makino, Teiji On the use of Pareto diagrams for representation of characteristics of some distributions. (Japanese. English summary) *Proc. Inst. Statist. Math.* 26 (1979), no. 1, 1-9. (Author's summary) 80a:62031 62E15 (62N05)
- Makinouchi, Akifumi On single production elimination in simple LR(k) environment. *J. Inform. Process.* 1 (1978), no. 2, 76-80. (Author's summary) 80d:68110 68F25 (68B10)
- Maklad, Michael There are atomic Nadel structures. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 3, 157-160. (Editors) 80c:03038 03C70
- (with Harnik, Victor) New axiomatizations for logics with generalized quantifiers. *Israel J. Math.* 32 (1979), no. 2-3, 257-281. (J. A. Makowsky) 80f:03040 03C00 (03C50, 03C70)
- Maklakov, D. V. An investigation of the cavitation flow around a symmetric wedge in a longitudinal gravitational field. (Russian) *Trudy Sem. Kraev. Zadacham No. 14* (1977), 161-174. (From the introduction) 80a:76004 76B10 (30E99)
- Makov, Ju. N. (with Hohlov, R. V.) Markov wave processes. (Russian) *Problemy v matematicheskoy fizike i matematicheskoy matematike (Russian)*, pp. 308-316, 328. "Nauka", Moscow, 1977. (Authors' summary) 80a:76011 76B99 (00A89)
- Makov, U. E. (with Smith, A. F. M.) A quasi-Bayes sequential procedure for mixtures. *J. Roy. Statist. Soc. Ser. B* 40 (1978), no. 1, 106-112. (Adolfo Gili) 80a:62013 62C10
- Makower, André (with Greckach, Wilfried) Ein Hilbertraumwertiges stochastisches dynamisches System. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* 20 (1978), no. 4, 498-505. (D. M. Sudakov) 80a:93056 93E20 (60H05)
- Makowiecka, Hanna (with Lewandowski, Andrzej) Some remarks on Havlicek-Tietze configuration. *Časopis Pěst. Mat.* 104 (1979), no. 2, 180-184. (J. André) 80g:51004 51A20 (51E30)
- (with Lewandowski, Andrzej) A geometrical characterization of the projective plane of order 4. *Časopis Pěst. Mat.* 104 (1979), no. 2, 185-187. (T. G. Östrom) 80c:51007 51E15
- Makowiecka, Irena Investigations into the boundedness of the solutions for the equation of the longitudinal vibrations of the bar. *Demonstratio Math.* 11 (1978), no. 3, 603-611. (J. L. Nowinski) 80c:35038 35L30 (73D35)
- Makowski, Bogusław Convex functions of order- $\alpha$  and type- $\beta$ . (Polish and Russian summaries) *Zeszyty Nauk. Politech. Łódź. Mat. No. 10* (1978), 47-57. (John G. Milcetic) 80j:30019 30C45
- Makowski, Karol See Joffe, Alexandre D.; et al., 80d:49001b
- Makowski, Louis Value theory with personalized trading. *J. Econom. Theory* 20 (1979), no. 2, 194-212. (J. Rosenmüller) 80d:90020 90A14
- Makowsky, J. A. Quantifying over countable sets: positive vs. stationary logic. *Logic Colloquium '77 (Proc. Conf., Wrocław, 1977)*, pp. 183-193. *Studies in Logic and*

*Foundations of Math.*, 96, North-Holland, Amsterdam, 1978. (K. J. Barwise) **80j:03052** 03C80 (03B15, 03C75)

The reals cannot be characterized topologically with strictly local properties and countability axioms. *Essays on mathematical and philosophical logic (Proc. Fourth Scandinavian Logic Sympos. and First Soviet-Finnish Logic Conf., Jyväskylä, 1976)*, pp. 251-257, Synthese Library, 122, Reidel, Dordrecht, 1979. (Peter Schmitt) **80b:03055** 03C80 (03C85, 54A99)

Maklakov, A. F. The solution of problems that are connected with the determination of dynamical characteristics of an alloy model by dispersion curves. (Russian) *Čisl. Metody Meh. Splajn. Sredy* 9 (1978), no. 1 *Mat. Modelirovanie*, 90-112. (From the text) **80d:82058** 82A60 (20H15)

Maklakov, Ju. M. Possible disappearance of quantum-field divergences in the framework of modified quantum dynamics. (Russian) *Vysš. Učebn. Zaved. Fizika* 1979, no. 6, 7-11. (Author's summary) **80j:81072** 81G05 (81E99)

Maklakov, S. I. Self-similar behavior of inclusive formfactors with respect to a generalized scaling variable. (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 3, 321-330. (Author's summary) **80b:81058** 81D05 (46N05)

Maklakov, V. M. See Matheron, Georges, **80j:60014**

Maklakov, L. L. Craig's theorem in superintuitionistic logics and amalgamable varieties. (Russian) *Algebra i Logika* 16 (1977), no. 6, 643-681, 741. (A. Tauts) **80c:03028** 03B55 (03G10)

(with Skvortsov, D. P.; Šehtman, V. B.) Impossibility of finite axiomatization of Medvedev's logic of finite problems. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 5, 1051-1054. (G. E. Mine) **80c:03021** 03B55 (03B45)

Maklakov, N. O. (with Oleinik, O. A.) The behavior of the solutions of inhomogeneous elliptic systems in unbounded domains. (Russian) *Trudy Sem. Petrovsk.* No. 3 (1978), 117-137. (Ju. V. Kostarčuk) **80a:35044** 35J55

Maklakov, N. L. Thermodynamics and evaporation of vacuum bubbles. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1979, no. 6, 58-63. (Author's summary) **80j:83036** 83C99

Maklakov, F. G. (with Guseinov, V. G.) Asymptotic behavior of the number of eigenvalues of the Sturm-Liouville equation with an operator coefficient on the half-axis. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 5, 3-7. (Editors) **80b:34023** 34B25 (47E05)

(with Mardanov, I. D.; Šamilov, A. H.) A special boundary value problem for nonlinear differential equations with deviating argument of neutral type. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 6, 13-17. (Š. Schwabik) **80j:34061** 34K10

(with Mirsalimov, V. M.; Babieva, L. A.) Determination of the optimal cooling rate in continuous casting. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 35 (1979), no. 8, 12-15. (Authors' summary) **80m:80006** 80A20

See also Investigation of questions in the theory of elasticity and plasticity, **80b:73001**; Functional analysis and its applications, **80d:00009** and Spectral theory of operators, **80j:47003**

Maklakov, R. The asymptotic expansion of solutions of some integro-differential equations. (Russian) *Differencial'nye Uravnenija* 14 (1978), no. 11, 2047-2051, 2108-2109. (D. Balnov) **80a:45026** 45M05 (34C29)

Maklakov, T. S. (with Israilov, M. I.) Approximate solution of singular integral equations by the iteration method. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 48 (1977), 20-27, 191. (Authors' summary) **80j:65129** 65R20

Cubature formulas with multiple nodes for singular integrals with a Hilbert kernel. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 51 (1978), 69-73, 227-228. (Author's summary) **80j:65027** 65D32

Maklakov, O. A. Finiteness of the set of equilibrium situations in the noncooperative game. (Russian) *Control of dynamical systems (Russian)*, pp. 135-142, 317, Leningrad. Univ., Leningrad, 1978. (Author's summary) **80c:90134** 90D10

The natural metric and equilibrium situations in noncooperative games. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 4, 143-145, 154. (Milan Mareš) **80j:90154** 90D05

Existence of situations in  $E$ -equilibrium for mixed strategies in differential games without coalitions. (Russian) *Differencial'nye Uravnenija* 15 (1979), no. 4, 609-613, 763. (Ė. G. Al'breht) **80a:90046** 90D25 (90D10, 90D42)

Maklakov, A. N. (with Virov'janskij, A. L.) Approximate calculation of transition probability density of one-dimensional Markov processes. (Russian. English summary) *Izv. Vysš. Učebn. Zaved. Radiofizika* 22 (1979), no. 5, 560-565. (From the summary) **80j:82019** 82A15 (81C35)

Maklakovskij, V. S. Surfaces whose normals intersect a line orthogonally. (Russian) *Kaliningrad. Gos. Univ. Differencial'naja Geom. Mnogobraz. Figur* No. 9 (1978), 54-59, 138. (Leo Boček) **80j:53004** 53A05

Maklakov, M. M. Perturbations of the operator of differentiation. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 5, 618-626, 717. (R. C. Gilbert) **80c:47038** 47E05 (47A55)

Perturbations of the operator of fractional integration. (Russian) *Funkcional. Anal. i Prilozhen.* 13 (1979), no. 2, 85-86. (S. G. Samko) **80j:47061** 47G05 (26A33, 47A55)

Maklowski, Kazimierz (with Lasiecka, Irena) On discrete-time Ritz-Galerkin approximation of control constrained optimal control problems for parabolic equations. *Optimization techniques (Proc. 8th IFIP Conf., Würzburg, 1977)*, Part 1, pp. 334-342, *Lecture Notes in Control and Information Sci.*, 6, Springer, Berlin, 1978. (Michael J. O'Carroll) **80a:65128** 65K05 (49D99)

On regularity of solutions to optimal control problems for systems with control appearing linearly. (Russian and Polish summaries) *Arch. Automat. Telemech.* 23 (1978), no. 3, 227-242. (A. Halanay) **80a:49004** 49A10 (49B10)

On normality of Lagrange multipliers for state and control constrained optimal control problems. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 26 (1978), no. 5, 529-535. (Emmanuel Nicholas Barron) **80a:49026** 49B10

On regularity of solutions to constrained optimal control problems for systems with control appearing linearly. *Modelling and optimization of complex systems (Proc. IFIP-TC 7 Working Conf., Nicosia, 1978)*, pp. 41-57, *Lecture Notes in Control and Information Sci.*, 18, Springer, Berlin, 1979. (From the text) **80m:93048** 93C50

On convergence of finite difference approximations to optimal control problems for systems with control appearing linearly. (Russian and Polish summaries) *Arch. Automat.*

*Telemech.* 24 (1979), no. 2, 155-171. (William W. Hager) **80b:49022** 49D25 (65K10)

Malaspinas, A. (with Droz, M.; Enz, C. P.) Fokker-Planck description of a Navier-Stokes fluid with instability. *Stochastic processes in nonequilibrium systems (Lectures, Fifth Stiges Internat. School Statist. Mech., Stiges, 1978)*, pp. 280-286, *Lecture Notes in Phys.*, 84, Springer, Berlin, 1978. (J. D. Atkinson) **80j:76031** 76E99 (35Q10)

Malbos, Jean-Pierre Sur la classe de nilpotence des boucles commutatives de Moufang et des espaces médiaux. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 9, A691-A693. (Author's summary) **80a:20068** 20N05

Malboussin, A. P. C. (with Bergbre, M. C.; de Calan, C.) A theorem on asymptotic expansion of Feynman amplitudes. *Comm. Math. Phys.* 62 (1978), no. 2, 137-158. (K. J. Le Couteur) **80j:81010** 81C05

Mal'cev, E. A. (with Lifšic, A. L.) ★Статистическое моделирование систем массового обслуживания. (Russian) [Statistical modeling of queueing systems] With a foreword by N. P. Buslenko. *Izdat. "Sovet. Radio", Moscow, 1978. 247 pp. (Publisher's description)* **80a:60121** 60K25

Mal'cev, A. A. See Aleksandrov, P. S., **80j:01040**

Mal'cev, Ju. N. (with Kuz'min, E. N.) A basis for identities of the algebra of second-order matrices over a finite field. (Russian) *Algebra i Logika* 17 (1978), no. 1, 28-32, 121. (I. Enescu) **80b:15023** 15A33

Mal'cev, V. V. (with Vokovič, V. L.; Lavrinenko, V. P.) Methods of the theory of sensitivity in the problem of determining the domains of admissible variations of parameters of an automatic control system. (Russian) *Kibernet. i Vyčisl. Tehn.* 1978, no. 39, 98-102, 115. (From the introduction) **80a:93161** 93E10

Malchow, H. (with Ebeling, W.) Bifurcations in a bistable reaction-diffusion system. (German summary) *Ann. Physik* (7) 36 (1979), no. 2, 121-134. (J. Smoller) **80b:35012** 35B32 (58C28, 58F14)

Malcolm, Michael A. A process abstraction and its application. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1978)*, pp. 33-50, *Congress. Numer., XXII, Utilitas Math., Winnipeg, Man., 1979*. (Author's summary) **80b:68023** 68B20 (68C40)

Malcolmson, Peter A prime matrix ideal yields a skew field. *J. London Math. Soc.* (2) 18 (1978), no. 2, 221-233. (L. Bokut') **80d:16003** 16A06 (16A08, 16A39)

Malek-Mansour, M. Sur la description stochastique des systèmes de non-équilibre. (English summary) *J. Physique* 39 (1978), no. 8 suppl., Colloque C-5, C5-79-C5-82. (Author's summary) **80c:80015** 80A35 (58F11)

(with Turner, J. W.) On the absorbing zero boundary problem in birth and death processes. *Phys. A* 93 (1978), no. 3-4, 517-525. (Authors' summary) **80b:82012** 82A05

(with Jury, E. I.; Chaparro, L. F.) Estimation of the margin of stability for linear continuous and discrete systems. *Internat. J. Control* 30 (1979), no. 1, 49-69. (Seihaku Higuchi) **80j:93067** 93D99

Malencé, Jean-Pierre (with Rix, Hervé) Detecting small variations in shape. *IEEE Trans. Systems Man Cybernet.* 10 (1980), no. 2, 90-96. (Authors' summary) **80m:54018** 94A12 (68G10)

Malevič, T. L. (with Volodina, L. N.) Inequalities for the moments of the number of zeros of a stationary Gaussian process. I. (Russian. Uzbek summary) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1978, no. 5, 30-36. (Ju. M. Ryzlov) **80d:60046** 60G15

(with Volodina, L. N.) Inequalities for the moments of the number of zeros of a stationary Gaussian process. II. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 2, 29-33, 99. (Ju. M. Ryzlov) **80m:60048** 60G15

(with Abdalimov, B. A.) Estimation of the deviation of the distribution of a U-statistic from the normal distribution. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 3, 10-13, 92. (W. Hoeffding) **80j:60023** 60F05

(with Abdalimov, B. A.) Probabilities of large deviations for U-statistics. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 1, 215-220. (S. A. Book) **80d:60032** 60F10

Malgoure, Jean (with Voisin, Christine) Spectre d'un espace annelé et dualité de Stone généralisée. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 8, A449-A451. (Authors' summary) **80j:55026** 55U30 (18F20)

(with Voisin, Christine) Découpe d'un espace topologique suivant un fermé. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 10, A507-A510. (Authors' summary) **80j:57033** 57N99

Malgrange, B. Remarques sur les équations différentielles à points singuliers irréguliers (Séminaire Goulaouic-Schwartz 1976-1977). *Séminaire Goulaouic-Schwartz 1977/1978: Équations aux dérivées partielles*, Exp. No. 25, 10 pp., École Polytech., Palaiseau, 1978. (J. S. Joel) **80j:58003** 58A15 (14D05, 34A20)

Algebraic aspects of the theory of partial differential equations. *Enseign. Math.* (2) 24 (1978), no. 3-4, 179-188. (P. Schapira) **80d:58063** 58C05 (34A20, 35A25)

Remarques sur les équations différentielles à points singuliers irréguliers. *Équations différentielles et systèmes de Pfaff dans le champ complexe (Sem. Inst. Rech. Math. Avancée, Strasbourg, 1975)*, pp. 77-86, *Lecture Notes in Math.*, 712, Springer, Berlin, 1979. (Antoinette Sec) **80k:14019** 14D05 (34A20, 58A15)

See also Sebastiani, Marcos, **80b:32025**

Malherd, M. Z. M. (with Carr, J.) Beck's problem. *SIAM J. Appl. Math.* 37 (1979), no. 2, 261-262. (Cornelius O. Horgan) **80b:35013** 35B35 (35L35, 73H10)

Malherbe, J. B. (with Scheffler, T. B.) Complex energy eigenvalues of a zero-range atom in a uniform electric field. *J. Phys. A* 12 (1979), no. 7, 1011-1023. (Authors' summary) **80d:81016** 81C05 (34B25)

Malhotra, A. M. (with Gupta, Sat Narain) Blockwise error-location codes. *Inform. Sci.* 16 (1978), no. 2, 75-79. (Authors' summary) **80j:94024** 94B05

Malhotra, V. M. (with Kumar, M. Pramodh; Maheshwari, S. N.) An  $O(|V|)$  algorithm for finding maximum flows in networks. *Inform. Process. Lett.* 7 (1978), no. 6, 277-278. (Gerald Hammer) **80b:90058** 90B10

Malicki, Antoni On an equation of the movement of a point in the cone gap. (Polish. Russian and English summaries) *Biul. Lubel. Towarz. Nauk. Mat. Fiz. Chem.* 20 (1978), no. 2, 207-210. (Author's summary) **80j:34007** 34A25

Maligranda, Lech A remark on the Riesz and Calderón-Zygmund theorem. *Funct. Approx. Comment. Math.* 7 (1979), 83-89. (Hans P. Heinig) **80k:46031** 46E30 (46M35)

Malik, M. A. (with Barbu, Viorel) Semilinear integro-differential equations in Hilbert space. *J. Math. Anal. Appl.* 67 (1979), no. 2, 452-475. (R. K. Miller) **80a:45017** 45N05 (45J05, 47H05)



- Malikov, H. M.** A versal integral of type  $A_k$  and a maximally overdetermined system. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadzhik. SSR* 22 (1979), no. 1, 12–15. (J. S. Joel) **80b:32024** 32C40 (35N10, 58C27, 58G07, 58G16)
- Malina, S.** (with Mansfield, V. N.) The coupling of matter and radiation in scale covariant cosmology. *Astronom. and Astrophys.* 74 (1979), no. 3, 294–296. (Colin B. G. McIntosh) **80b:83040** 83F05
- Malina, Lubor** Transfer methods for systems of linear algebraic equations with band matrices. (Russian) *Mathematical models and numerical methods (Papers, Fifth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 237–248, Banach Center Publ., 3, PWN, Warsaw, 1978. (Ca. J. Hegedűs) **80b:65036** 65F05
- General theory of direct methods for solving systems of equations with band matrices. (Czech and Russian summaries) *Apl. Mat.* 24 (1979), no. 3, 161–183, ii. (R. P. Tewarson) **80d:65042** 65F05
- On generalized methods of the transfer of conditions. (Czech and Russian summaries) *Apl. Mat.* 24 (1979), no. 3, 184–198, ii. (Author's summary) **80d:65048** 65F30
- Malina, Witold** (with Sobczak, Wojciech) ★Metody selekcji informacji. (Polish) [Methods of information selection] *Wydawnictwa Naukowo-Techniczne (WNT), Warsaw, 1978*. 158 pp. (Publisher's description) **80c:94001** 94-02 (68H05)
- Malinetskii, G. G.** (with Kurdjumov, S. P.; Kurkina, E. S.) Dissipative structures in media with distributed parameters. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 16* (1979), 79 pp. (Authors' summary) **80a:80005** 80A20
- Malinskii, Ju. V.** Difference equations arising in a queueing theory problem. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 1, 22–25, 92. (M. A. Fainberg) **80c:60111** 60K25
- Malinowski, H.** (with Smarzewski, R.) A numerical method for solving the Abel integral equation. (Polish summary) *Zastos. Mat.* 16 (1977/78), no. 2, 275–281. (J. Sprekels) **80a:65270** 65R20
- (with Smarzewski, R.) Numerical solutions of a class of Abel integral equations. *J. Inst. Math. Appl.* 22 (1978), no. 2, 159–170. (Frank G. Hagin) **80c:65253** 65R20 (45L10)
- (with Smarzewski, R.) On the numerical solution of an Abel integral equation. (Polish summary) *Zastos. Mat.* 16, no. 3, 497–503 (1979). (Abha Ghoshal) **80b:65108** 65R20 (82A45)
- Malinowski, Krzysztof** (with Findeisen, Władysław) Two-level control and coordination for dynamical systems. (Polish and Russian summaries) *Arch. Automat. Telemekh.* 24 (1979), no. 1, 3–27. (Zvi Artstein) **80g:93048** 93C30
- Malita, Mircea** (with Berechet, Oprea) Schemes with four "lines". (Romanian. French summary) *Stud. Cerc. Mat.* 31 (1979), no. 1, 41–51. (Gheorghe Micula) **80b:65131** 65N40 (65J05)
- See also *Systems in the natural sciences*, **80g:93003**
- Maljutin, S. A.** Functions with a constant integral on congruent cubes. (Russian) *Mat. Zametki* 24 (1978), no. 3, 339–341, 445. (F. Miroslaw Filipczak) **80a:26003** 26B35 (26B15)
- The topology of covering sets and continuous extension of outer measures. (Russian) *Mat. Zametki* 26 (1979), no. 2, 285–292, 318. (V. N. Aleksjuk) **80b:28024** 28B10
- Maljuta, Ju. M.** Calculation of instantons. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 3, 573–574. (P. E. Newstead) **80b:53031** 53C05 (55R25, 81C99)
- Mal'kin, I. A.** (with Man'ko, V. I.) ★Динамические симметрии и когерентные состояния квантовых систем. (Russian) [Dynamical symmetry and coherent states of quantum systems] "Nauka", Moscow, 1979. 319 pp. (Vadim Komkov) **80b:81001** 81-02 (22E70, 58F07, 81C40, 81D99)
- Mal'kov, V. P.** (with Beh, L. P.; Bol'shakova, A. T.) Acceleration of the search process for optimal thin-walled constructions. (Russian) *Prikl. Problemy Proč. i Plast. No. 8* (1978), 58–65, 145. (From the text) **80d:73103** 73K99 (49D07)
- Mallela, Parthasaradhi** (with Rao, Akundi S.) Necessary and sufficient conditions for inadmissibility of transformations in time. *Internat. Econom. Rev.* 20 (1979), no. 1, 157–167. (Andrew Harvey) **80b:62093** 62P20
- Mallet-Paret, John** (with Chow, Shui Nee; Yorke, James A.) Finding zeroes of maps: homotopy methods that are constructive with probability one. *Math. Comp.* 32 (1978), no. 143, 887–899. (Hansgeorg Jögle) **80d:55002** 55M25 (47H10, 65H10, 90C99)
- (with Chow, Shui Nee; Yorke, James A.) Global Hopf bifurcation from a multiple eigenvalue. *Nonlinear Anal.* 2 (1978), no. 6, 753–763. (Christian Fenske) **80a:58015** 58E07 (34C25)
- (with Chow, Shui Nee; Yorke, James A.) A homotopy method for locating all zeros of a system of polynomials. *Functional differential equations and approximation of fixed points (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978)*, pp. 77–88, *Lecture Notes in Math.*, 730, Springer, Berlin, 1979. (Ju. G. Borisovic) **80a:58012** 58C15 (47H17, 55M20, 65H10)
- Mallavin, Marie-Paule** See **Mallavin-Brancet, Marie-Paule**
- Mallavin, Paul** Un principe de transfert et son application au calcul des variations. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 284 (1977), no. 3, A187–A189. (J. S. Joel) **80a:58036a** 58G99 (35H05, 60H10)
- Hypoellipticité avec dégénérescence et analyse stochastique en dimension infinie. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 284 (1977), no. 22, A1455–A1456. (J. S. Joel) **80a:58036b** 58G99 (35H05, 60H10)
- Travaux de H. Skoda sur la classe de Nevanlinna. *Séminaire Bourbaki, 29e année* (1976/77), *Exp. No. 504*, pp. 201–217, *Lecture Notes in Math.*, 677, Springer, Berlin, 1978. (Editors) **80b:32020** 32F15
- $C^k$ -hypoellipticity with degeneracy. *Stochastic analysis (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1978)*, pp. 199–214, Academic Press, New York, 1978. (Ju. L. Daleckiĭ) **80b:58045a** 58G32 (35H05, 60H10)
- $C^k$ -hypoellipticity with degeneracy. II. *Stochastic analysis (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1978)*, pp. 327–340, Academic Press, New York, 1978. (Ju. L. Daleckiĭ) **80b:58045b** 58G32 (35H05, 60H10)
- (with Dixmier, Jacques) Factorisations de fonctions et de vecteurs indéfiniment différentiables. (English summary) *Bull. Sci. Math.* (2) 102 (1978), no. 4, 307–330. (Mitsuo Sugiyara) **80f:22005** 22E30
- Stochastic Jacobi fields. *Partial differential equations and geometry (Proc. Conf., Park City, Utah, 1977)*, pp. 203–235, *Lecture Notes in Pure and Appl. Math.*, 48, Dekker, New York, 1979. (Mark Pinsky) **80b:58046** 58G32 (60J60)
- Régularité de lois conditionnelles et calcul des variations stochastiques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 5, A357–A360. (Author's summary) **80b:60112** 60J65
- Mallavin-Brancet, Marie-Paule** See *Séminaire: Algèbre Paul Dubreil*, **80m:13001**
- Malik, A.** A note on J. B. Friedlander's paper: "On the class numbers of certain quadratic extensions" [Acta Arith. 28 (1975/76), no. 4, 391–393; MR 52 #10683]. *Acta Arith.* 31 (1979), no. 1, 54–55. (W. Narkiewicz) **80b:12010** 12A70 (12A35, 12A50)
- Malik, S.** Asymmetric systems described by a pair of local covariant wave equations. *Nuclear Phys. B* 154 (1979), no. 1, 35–46. (Author's summary) **80d:81055** 81D25
- Mallios, Anastasios** Generalized structure sheaf envelopes of topological function algebras. (Greek summary) *Prakt. Akad. Athinon* 49 (1974), no. 2, 373–385 (1975). (R. M. Brooks) **80j:46079** 46H20 (32C35)
- Malley, Ernst** See **Gombocz, Wolfgang Leopold**, **80b:03010**
- Malonek, H.** On the question of validity of theorems of Phragmén-Lindelöf type for solutions of complex differential inequalities. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* 14 (1979), no. 3, 192–200, 254. (H. J. Rossberg) **80c:30003** 30A10 (30G20)
- Maloney, John P.** A non graph theory approach to Ulam's conjecture. *Portugal. Math.* 36 (1977), no. 1, 1–6. (R. A. Melter) **80g:05017** 05B20 (05C60, 15A36)
- Malovicko, V. O.** (with Gončarenko, V. M.) A first boundary value problem for equation with nonnegative characteristic form. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 5* (1979), 323–325, 398. (Boris Pavlov) **80b:35064** 35J25
- Malozemov, V. N.** (with Pevnyi, A. B.) Spline approximation of an arbitrary defect. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 3, 572–575. (J. Girshovich) **80j:41018** 41A15
- (with Solomennikov, A. V.) The rate of convergence of the method of equalization of maxima. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1309–1312, 1339. (Ulrich Eckhardt) **80a:65129** 65K05 (90D99)
- The synthesis problem for a multipole electrical filter. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 3, 601–609, 796. (Author's summary) **80g:94005** 94A05 (93E99)
- Malta, I. P.** Hyperbolic Birkhoff centers. *An. Acad. Brasil. Ciênc.* 51 (1979), no. 1, 27–29. (Zbigniew Nitecki) **80j:58047** 58F10
- Maltsev, George** Convexity methods and the Choquet boundary in Banach algebras. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 1, 131–136. (Mohammed Akkar) **80b:46065** 46J20
- A remark on the existence of nonannihilating vectors and functionals in normed spaces. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 17 (1980), no. 1, 128–130. (Author's summary) **80a:46014** 46B10
- Maltz, F. H.** (with Hitzl, Donald L.) Variance reduction in Monte Carlo computations using multidimensional Hermite polynomials. *J. Comput. Phys.* 32 (1979), no. 3, 345–376. (Authors' summary) **80f:65006** 65C05
- Maluszynski, Jan** (with Dembiński, Piotr) Attribute grammars and two-level grammars: a unifying approach. *Mathematical foundations of computer science, 1978 (Proc. Serech Symposium, Zakopane, 1978)*, pp. 143–154, *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (P. Deussen) **80b:68059** 68F05
- Mal'vache, N.** (with Willaëys, D.) Contribution of the fuzzy set theory to man-machine system. *Advances in fuzzy set theory and applications*, pp. 481–499, North-Holland, Amsterdam, 1979. (Authors' summary) **80m:94123** 94D05 (03E72, 68A05)
- Malý, Jan** A note on separation of sets by approximately continuous functions. *Comment. Math. Univ. Carolin.* 20 (1979), no. 2, 207–212. (S. N. Mukhopadhyay) **80b:26004** 26A15 (54D15)
- Mal'ugin, V. I.**  $\beta N$  is prime. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 3–4, 295–297. (Douglass L. Grant) **80b:54027** 54D35 (54B10, 54G05)
- Fréchet-Uryson bicompacts:  $\pi$ -points and Stone-Čech extensions. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 2, 424–427, 461. (A. I. Baškirov) **80d:54029** 54D55 (54A25, 54A35, 54D35)
- The structure of the inverse image of a point of a space under the natural mapping of the absolute of the inverse image onto the point. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 2(206), 207–208. (V. V. Miskin) **80g:54041** 54G05
- Malý, V. I.** Simplification of functionals of the theory of elastoplastic processes. (Russian) *Prikl. Meh.* 14 (1978), no. 2, 48–53, 141. (Author's summary) **80b:73031** 73F99
- Malýšenko, Ju. V.** Determining the sites of a specified number of additional test points with due regard to a possible uncertainty in signal values. *Avtomat. i Telemekh.* 1978, no. 7, 146–152. (Russian. English summary); translated as *Automat. Remote Control* 39 (1978), no. 7, part 2, 1058–1063. (Author's summary) **80b:94053** 94C30
- Mal'yshev, A. V.** (with Pačev, U. M.) Representation of integers by positive ternary quadratic forms (a new variant of the discrete ergodic method). (Russian) *Studies in number theory*, 5, *Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 81 (1979), 33–87, 165. (W. Schwarz) **80j:10027** 10B35
- See also *Studies in number theory (LOMI)*, **80d:10003**
- Mal'yshev, F. M.** Decompositions of nilpotent Lie algebras. (Russian) *Mat. Zametki* 23 (1978), no. 1, 27–30. (I. L. Kantor) **80m:17004** 17B05 (32M10)
- Mal'yshev, Ju. V.** Stability and topological classification of invariant sets. (Russian) *Differencial'nye Uravnenija* 14 (1978), no. 8, 1362–1370, 1529. (Ju. E. Glikiĭ) **80f:58004** 58F10 (34D20)
- (with Demidovič, B. P.) A study of the neighborhood of invariant and exceptional sets. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 2, 48–56. (O. Hájek) **80a:34054** 34C99 (58F10)
- Mal'yshev, V. A.** Uniform cluster estimates for lattice models. *Comm. Math. Phys.* 64 (1978/79), no. 2, 131–157. (Jean-Pierre Eckmann) **80f:82050** 82A67 (60K35)
- Soliton sectors in lattice models with continuous time. (Russian) *Funkcional. Anal. i Priložen.* 13 (1979), no. 1, 31–41, 96. (Author's summary) **80e:82038** 82A67
- (with Men'sikov, M. V.) Ergodicity, continuity and analyticity of countable Markov chains. (Russian) *Trudy Moskov. Mat. Obšč.* 39 (1979), 3–48, 235. (M. Iosifescu) **80b:60081** 60J05 (60K25)
- Mal'jeva, I. A.** Boundedness of solutions of a Liénard differential equation. (Russian) *Differencial'nye Uravnenija* 15 (1979), no. 8, 1420–1426, 1533. (D. Izjumova) **80b:34040** 34C11

- Malyshenko, Yu. V. See Malyshenko, Ju. V.
- Malyshenko, V. A. See Malyshenko, V. A.
- Malan, Jerry (with Djoković, Dragomir Ž.) Products of reflections in the quaternionic unitary group. *J. Algebra* 59 (1979), no. 2, 399-411. (E. W. Ellers) 80f:20055 20H15 (with Djoković, Dragomir Ž.) Products of reflections in the unitary group. *Proc. Amer. Math. Soc.* 73 (1979), no. 2, 157-160. (Louis Solomon) 80d:22003 22C05 (20G25)
- Mamnev, S. G. (with Grib, A. A.; Mostepanenko, V. M.) Creation of pairs of particles in an expanding isotropic universe. (Russian) *Problemy Teor. Gravitatsii i Element. Častice* No. 9 (1978), 7-27. (V. Wunsch) 80b:83036 83C99 (58D30)
- (with Trunov, N. N.) Vacuum averages of the quantum field energy-momentum tensor on manifolds of varying topology and geometry. I. (Russian) *Izv. Vys. Učebn. Zaved. Fizika* 1979, no. 7, 88-93. (From the text) 80m:81065a 81E99 (57R20, 81G05)
- (with Trunov, N. N.) Vacuum averages of the quantum field energy-momentum tensor on manifolds of varying topology and geometry. II. (Russian) *Izv. Vys. Učebn. Zaved. Fizika* 1979, no. 9, 51-54. (From the text) 80m:81065b 81E99 (57R20, 81G05)
- (with Trunov, N. N.) The dependence of vacuum expectation values of the stress-energy tensor upon the geometry and the topology of the manifold. (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 3, 345-354. (G. Lassner) 80i:83028 83C99 (53C80, 81E99)
- Mamutkulov, A. Solution of a boundary value problem of mixed type with two parallel lines of degeneration by the finite difference method. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 52 (1978), 30-36, 154. (I. P. Gavriljuk) 80e:65096 65N20
- Mamuzanov, Ž. M. (with Tolipov, V.) Numerical solution of a multipoint boundary value problem of the theory of filtration in a multilayer stratum under elastic water pressure. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 50 (1978), 88-101, 161-162. (Authors' summary) 80d:76095 76S05
- Mambriani, Antonio (with Mambriani, Giuseppe) Restricted deralgebra: first step towards a new "functional analysis". I. (Italian) *Riv. Mat. Univ. Parma* (4) 4 (1978), 1-22 (1979). (I. Fenyő) 80j:44012 44A40
- Mambriani, Giuseppe (with Mambriani, Antonio) Restricted deralgebra: first step towards a new "functional analysis". I. (Italian) *Riv. Mat. Univ. Parma* (4) 4 (1978), 1-22 (1979). (I. Fenyő) 80j:44012 44A40
- Mamiani, E. H. (with Esfahani, F.) A general approach to linguistic approximation. Special issue on fuzzy reasoning (Workshop, Queen Mary Coll., London, 1978). *Internat. J. Man-Mach. Stud.* 11 (1979), no. 4, 501-519. (Authors' summary) 80g:94115 94D05 (03B52, 68F99)
- See also Special issue: Fuzzy reasoning. 80e:00005
- Mamedov, A. M. (with Tagieva, Z. A.) The approximate solution of multidimensional linear integral equations in a subclass of analytic functions. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 5, 76-80. (A. Ramn) 80e:45014 45L10
- Mamedov, Ju. D. (with Dosiev, A. A.) On the solution of a mixed boundary value problem for nonlinear elliptic equations by the network method. (Russian) *Dokl. Akad. Nauk SSR* 242 (1978), no. 4, 757-760. (G. I. Sulhanišvili) 80i:65077 65N20
- Mamedov, Ju. M. The torsion of a beam of doubly-connected cross section having symmetry axes. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* 31 (1978), no. 4, 43-55, 101. (J. Mazumdar) 80h:73041 73K05
- Mamedov, K. Š. (with Babae, D. A.) A method of solving a Boolean programming problem. (Russian) *Questions of mathematical cybernetics and applied mathematics*, No. 3 (Russian), pp. 3-7, "Elm", Baku, 1978. (From the text) 80j:90082 90C09 (with Babae, D. A.) Approximate methods of solution of Boolean programming problems of large dimension. (Russian) *Questions of mathematical cybernetics and applied mathematics*, No. 3 (Russian), pp. 8-16, "Elm", Baku, 1978. (N. I. Janev) 80k:90028 90C10
- The completeness of root vector functions of a general boundary value problem for an operator-differential equation, and the application to irregular boundary value problems for partial differential equations. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 2, 17-22. (Russell C. Thompson) 80c:34042 34G10 (35G15, 47A70)
- (with Babev, Dž. A.) Aggregation of a class of systems of integer equations. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 3, 614-619, 811. (Authors' summary) 80a:65064 65F05 (90C10)
- (with Babae, D. A.; Mehtiev, M. G.) Methods of constructing sub-optimal solutions of the multidimensional knapsack problem. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 6, 1443-1453, 1628. (G. Serikyns) 80d:90053 90C10
- (with Babae, D. A.; Veliev, G. P.) A priori determination of optimal values of unknowns in discrete programming problems. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 2, 519-523, 559. (Authors' summary) 80c:90102 90C10
- Mamedov, M. B. Application of differential games with a fixed sequence of moves to the problem of the rational granting of credit to an enterprise by a bank. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 6, 13-19. (Authors' summary) 80j:90164 90D25 (90D40)
- Mamedov, N. E. The minimality of multiply complete systems of functions. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 2, 23-26. (V. A. Ktachenko) 80f:42011 42A65
- Mamedov, R. G. See Studies in some questions of the constructive theory of functions and differential equations. 80d:00021
- Mamedova, Š. Dž. Boundary value problems for operator-differential equations of order 2n. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1978, no. 2, 82-85. (M. A. Atahodžev) 80d:34082 34G10
- Mamford, D. See Mumford, David
- Mami, M. (with Poor, H. Vincent; Thomas, John B.) On robust detection of discrete-time stochastic signals. *J. Franklin Inst.* 309 (1980), no. 1, 29-53. (Authors' summary) 80m:94017 94A12
- Mamonov, E. V. An equation of small perturbations in a non-steady-state transonic flow of gas. (Russian) *Dinamika Splošn. Sredy* No. 37 *Nestacionarnye Problemy Mehaniki* (1978), 139-143, 152. (Author's summary) 80d:76049 76H05 (76N15)
- (with Ljapidevskij, V. Ju.; Tešukov, V. M.) Problems of non-steady-state gas dynamics. (Russian) *Dinamika Splošn. Sredy* No. 38 *Nestacionarnye Problemy Gidrodinamiki* (1979), 89-110, 175. (Authors' summary) 80k:76063 76N15
- Manuylov, Dž. (with Kir'jan, S. V.) Problems of synthesis and analytic design of optimal regulators for oscillatory systems with bounded excitations. (Russian) *Mathematical methods of control of systems with distributed parameters* (Russian), pp. 63-76, 96, "Ilim", Frunze, 1978. (S. P. Bingulac) 80f:93037 93B99 (34Cxx)
- ta Man See Ta Man
- vũ duy Mãi See Vũ Duy Mãi
- Manabe, G. T. Synthesis of minimal graphs with bounded paths between vertices. (Russian) *Theoretical and applied problems in mathematics and mechanics* (Russian), pp. 223-231, 314, "Nauka" Kazah. SSR, Alma-Ata, 1977. (Author's summary) 80b:68081 68E10 (05C38)
- Manabe, Shojiro (with Ikeda, Nobuyuki) Stochastic integral of differential forms and its applications. *Stochastic analysis* (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1978), pp. 175-185, Academic Press, New York, 1978. (Jacques Vauthier) 80d:60075 60H05 (58A15, 60J60)
- On the intersection number of the path of a diffusion and chains. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 1, 23-26. (Mark Pinsky) 80e:60102 60J60 (58A30, 58G32)
- Manacher, Glenn K. Significant improvements to the Hwang-Lin merging algorithm. *J. Assoc. Comput. Mach.* 26 (1979), no. 3, 434-440. (Author's summary) 80e:68115a 68C25 (68E05)
- The Ford-Johnson sorting algorithm is not optimal. *J. Assoc. Comput. Mach.* 26 (1979), no. 3, 441-456. (Author's summary) 80e:68115b 68C25 (68E05)
- Manandhar, R. P. An inversion theorem for the Laplace inversion operators. *Ranchi Univ. Math. J.* 8 (1977), 1-16 (1978). (E. Gesztelyi) 80m:44005 44A10
- Manankandrianana, Domasoa Comportement du noyau de la chaleur d'un opérateur hypoelliptique dégénéré pour des temps petits. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 23, A1061-A1063. (Author's summary) 80c:32024 32F20 (35H05, 58G11)
- Manara Pellegrini, Silvia (with Ferrero Cotti, C.) Rings whose proper quotients are nilpotent. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 15 (1978), no. 3, 745-760. (Melvin Henriksen) 80e:16006 16A22
- Maňas, Miroslav Decision situations with several participants and multiple payoffs. (Czech. English summary) *Ekonom.-Mat. Obzor* 15 (1979), no. 3, 261-268. (Author's summary) 80h:90011 90A05
- Manasevich, Rami F. (with Tineo, Antonio R.; Rivero Mendoza, Jesús) Asymptotic and oscillatory behavior of third-order differential equations of a certain type. *J. Math. Anal. Appl.* 65 (1978), no. 3, 607-615. (John R. Graef) 80f:34031 34C10
- Manca, Paolo Generating all planar graphs regular of degree four. *J. Graph Theory* 3 (1979), no. 4, 357-364. (Andrew Vince) 80c:05037 05C10
- Mancini, Giovanni Periodic solutions of some semilinear autonomous wave equations. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 15 (1978), no. 2, 649-672. (Mitsuhiko Nakao) 80g:35009 35B10 (35L05)
- (with Ambrosetti, Antonio) Sharp nonuniqueness results for some nonlinear problems. *Nonlinear Anal.* 3 (1979), no. 5, 635-645. (J. Kolomý) 80k:47073 47H15 (35J60)
- (with Amann, Herbert) Some applications of monotone operator theory to resonance problems. *Nonlinear Anal.* 3 (1979), no. 6, 815-830. (K. Goebel) 80k:47072 47H15 (35J60, 35L70)
- Mancini, Louis J. (with Wilde, Douglass J.) Signomial dual Kuhn-Tucker intervals. *J. Optim. Theory Appl.* 28 (1979), no. 1, 11-27. (T. R. Jefferson) 80g:90095 90C25 (65G10)
- (with McCormick, Garth P.) Bounding global minima with interval arithmetic. *Oper. Res.* 27 (1979), no. 4, 743-754. (J. A. Grant) 80h:65028 65G10 (65K05)
- Mańczak, Kazimierz ★ Metody identyfikacji wielowymiarowych obiektów sterowania. (Polish) [Methods of identification of multidimensional controlled objects] Second edition. *Wydawnictwa Naukowo-Techniczne (WNT), Warsaw*, 1979. 244 pp. ISBN 83-204-0116-X (Editors) 80e:93128 93E12
- Mandell, V. (with Huseyin, K.) Nonlinear instability behaviour of nongradient systems. *Hadronic J.* 2 (1979), no. 3, 657-681. (Authors' summary) 80e:73040 73H99 (49B10, 58C27, 58E07)
- Mandal, Birendranath Torsion of a paraboloid of revolution with mixed boundary conditions. *Bull. Calcutta Math. Soc.* 68 (1976), no. 3, 225-232. (Author's summary) 80d:73030 73C35
- Mandal, M. (with Majumdar, S. K.) On a difficulty of constructing Padé approximation of order (n, n) to the hypergeometric function  $F(a, \beta, \gamma; x)$ . *Indian J. Pure Appl. Math.* 7 (1976), no. 10, 1195-1198. (Authors' summary) 80g:65015 65D20
- Mandana, Sahib Ram From [3] to [9]. *J. Indian Math. Soc. (N.S.)* 41 (1977), no. 3-4, 429-451 (1978). (B. d'Orgeval) 80b:14028 14N10
- Mandel, J. Dissipativité normale et variables cachées. *Mech. Res. Comm.* 5 (1978), no. 4, 225-229. (D. Işan) 80e:80002 80A05
- Mandelbaum, David M. Construction of error correcting codes by interpolation. *IEEE Trans. Inform. Theory* 25 (1979), no. 1, 27-35. (R. J. McEliece) 80e:94021 94B60
- On vote-taking and complete decoding of certain error-correcting codes. *Inform. and Control* 43 (1979), no. 2, 195-197. (Author's summary) 80m:94065 94B35
- Mandelbaum, Richard Decomposing analytic surfaces. *Geometric topology* (Proc. Georgia Topology Conf., Athens, Ga., 1977), pp. 147-217, Academic Press, New York, 1979. (Lee Rudolph) 80h:57013 57N10 (14J10)
- On the topology of elliptic surfaces. *Studies in algebraic topology*, pp. 143-166, *Advances in Math., Suppl. Studies*, 5, Academic Press, New York, 1979. (Alan H. Durfee) 80f:57034 57R99 (14J25, 14J99)
- Irrational connected sums and the topology of algebraic surfaces. *Trans. Amer. Math. Soc.* 247 (1979), 137-156. (Alan H. Durfee) 80e:57023 57R15 (14J99)
- Mandelberg, K. I. (with Finkelstein, Harold) On solutions of "equations in symmetric groups". *J. Combin. Theory Ser. A* 25 (1978), no. 2, 142-152. (W. Narkiewicz) 80a:20003 20B05
- (with Doyle, John Kevin; Vaughan-Lee, M. R.) On solvability of groups of exponent four. *J. London Math. Soc.* (2) 18 (1978), no. 2, 234-242. (N. D. Gupta) 80b:20058 20F50



- Mandelbrojt, S.** Quelques nouvelles considérations sur les itérés des noyaux singuliers symétriques. (Russian summary) *Complex analysis and its applications* (Russian), pp. 363–366, 669, "Nauka", Moscow, 1978. (C. van Trigt) **80a:45008** 45E99
- Mandelbrot, Benoit** Geometric facets of statistical physics: scaling and fractals. *Statistical physics—"STATPHYS 13"* (Proc. Thirteenth IUPAP Conf. Statist. Phys., Technion—Israel Inst. Tech., Haifa, 1977), Part 1, pp. 225–233, *Ann. Israel Phys. Soc.*, 2, Hegerl, Bristol, 1978. (Author's summary) **80a:82001** 82–XX (00A89)
- Colliers aléatoires et une alternative aux promenades au hasard sans boucle: les cordons discrets et fractals. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 20, A933–A936. (Author's summary) **80c:60118** 60K99 (52A22, 60D05, 60J15)
- Corrélations et texture dans un nouveau modèle d'univers hiérarchisé, basé sur les ensembles trémas. *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 1, A81–A83. (Author's summary) **80c:85005** 85A99
- Mandelkern, Mark** An example in connectivity. *Bull. London Math. Soc.* **10** (1978), no. 3, 314. (Douglas S. Bridges) **80b:54039** 54F15 (54G20)
- Suprema of located sets. *J. London Math. Soc.* (2) **20** (1979), no. 2, 161–164. (Douglas S. Bridges) **80b:03066** 03F65 (54E35)
- Mandel'stam, Leonid Isakovskii** See **Raiski, S. M.**, **80a:01040** and **Rytov, S. M.**, **80a:01043**
- Manderscheid, Ronald W.** (with Smith, Paul J.; Rae, Donald S.; Silbergeld, Sam) Exact and approximate distributions of the chi-square statistic for equiprobability. *Comm. Statist. B—Simulation Comput.* **8** (1979), no. 2, 131–149. (Authors' summary) **80c:62023** 62E15 (62G10)
- Mandl, Petr** Elements of stochastic analysis. *Kybernetika* (Prague) **Suppl. 14** (1978), no. 1–3, 55 pp. (A. T. Bharucha-Reid) **80a:60077a** 60H05 (60H10)
- (with Lánská, Věra; Vrkoč, Ivo) Exercises in stochastic analysis. *Kybernetika* (Prague) **Suppl. 14** (1978), no. 4–5, 36 pp. (A. T. Bharucha-Reid) **80a:60077b** 60H05 (60H10)
- Mandras, Franco** The Dirichlet problem for a class of degenerate linear second-order elliptic equations of nonvariational type. (Italian. English summary) *Rend. Sem. Fac. Sci. Univ. Cagliari* **40** (1978), no. 3–4, 375–383. (Z. C. Mottelet) **80f:35059** 35J70
- Mandrikar, V.** On subordination of decomposable fields. *Measure theory applications to stochastic analysis* (Proc. Conf., Res. Inst. Math., Oberwolfach, 1977), pp. 207–210, *Lecture Notes in Math.*, 695, Springer, Berlin, 1978. (R. M. Dudley) **80j:60056** 60G20
- Characterization of Banach space through validity of Bochner theorem. *Vector space measures and applications* (Proc. Conf., Univ. Dublin, Dublin, 1977), I, pp. 314–326, *Lecture Notes in Math.*, 644, Springer, Berlin, 1978. (N. N. Vahanija (Vakhanian)) **80b:60011** 60B11 (28C20)
- Mandrioli, Dino** (with Guida, Giovanni; Somalvico, Marco) An integrated model of problem solver. *Inform. Sci.* **13** (1977), no. 1, 11–33. (Authors' summary) **80c:68234** 68G20
- (with Crespi-Reghezzi, S.; Guida, Giovanni) Noncounting context-free languages. *J. Assoc. Comput. Mach.* **25** (1978), no. 4, 571–580. (Matti Linna) **80a:68079** 68F05
- Mandryka, A. P.** The relation of the fundamental and applied aspects in the technological sciences. (Russian. English summary) *Voprosy Ist. Estestvozn. i Tehn.* 1979, no. 64–66, 32–36, 108, 118. (Author's summary) **80d:00012** 00A25
- Mandrikadze, K. V.** On the construction of an exact confidence interval for the statistical estimate of the maximum of a function. (Russian. Georgian and English summaries) *Sobbič. Akad. Nauk Gruz. SSR* **91** (1978), no. 3, 545–548. (I. Viduva) **80c:65009** 65C05 (62F25)
- Mandulis, A. V.** (with Hmil', S. V.) A beam of partially polarized electromagnetic radiation in the Schwarzschild gravitational field. (Russian. English summary) *Astron. i Astrofiz.* **20** (1979), 41–50, 124. (Authors' summary) **80c:83019** 83C50
- Manié, Ricardo** Persistent manifolds are normally hyperbolic. *Trans. Amer. Math. Soc.* **246** (1978), 261–283. (Clark Robinson) **80c:58019** 58F15
- Absolute stability and bifurcation theory. *Invent. Math.* **53** (1979), no. 1, 59–75. (G. R. Sell) **80m:58029** 58F14
- Orbits of paths under hyperbolic total automorphisms. *Proc. Amer. Math. Soc.* **73** (1979), no. 1, 121–125. (M. C. Irwin) **80d:58053** 58F15 (58F10)
- Expansive homeomorphisms and topological dimension. *Trans. Amer. Math. Soc.* **252** (1979), 313–319. (L. A. Bunimovich) **80i:58032** 58F15 (54H20)
- Măneasa, Vasile** Confluence of currents from several electrical networks. (Romanian. English summary) *Stud. Cerc. Mat.* **30** (1978), no. 5, 499–509. (Author's summary) **80j:94032** 94C05
- Mannes, Ernest G.** (with Arbib, Michael A.) Tree transformations and the semantics of loop-free programs. *Acta Cybernet.* **4** (1978/79), no. 1, 11–17. (From the introduction) **80c:68009** 68B10
- (with Arbib, Michael A.) Intertwined recursion, tree transformations, and linear systems. *Inform. and Control* **40** (1979), no. 2, 144–180. (Cristian Calude) **80c:18001** 18B20 (68D30, 93A05)
- Măneasa, Manea** Economic logistics and quantum. *Econom. Comput. Econom. Cybernet. Stud. Res.* **12** (1978), no. 4, 15–63. (Editors) **80a:90046** 90A99
- Mandrell, Bianca** Asperiodicity and quasiperiodicity. (Italian. English summary) *Rio. Mat. Univ. Parma* (4) **4** (1978), 395–402 (1979). (A. Precupanu) **80j:42027** 42A75
- Mangasarian, O. L.** (with Sutherland, W. R. S.) Solution of the linear inverse vector optimization problem by a single linear program. *Math. Programming* **15** (1978), no. 2, 232–235. (J. A. Tomlin) **80f:90075** 90C05
- Generalized linear complementarity problems as linear programs. *Third Symposium on Operations Research* (Univ. Mannheim, Mannheim, 1978), Section I, pp. 393–402, *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (B. Mond) **80c:90141** 90C33
- Uniqueness of solution in linear programming. *Linear Algebra Appl.* **25** (1979), 151–162. (R. N. Kaul) **80c:90025** 90C05
- Simplified characterizations of linear complementarity problems solvable as linear programs. *Math. Oper. Res.* **4** (1979), no. 3, 268–273. (Ikuyo Kaneko) **80f:90133** 90C33
- Mangel, Marc** Fluctuations in systems with multiple steady states. Application to Lancaster equations. *Information linkage between mathematics and industry* (Proc. First Annual Workshop, Naval Postgraduate School, Monterey, Calif., 1978), pp. 335–340, Academic Press, New York, 1979. (Author's summary) **80g:65100** 65L99 (90B30)
- Uniform treatment of fluctuations at critical points. *Phys. A* **97** (1979), no. 3, 597–615. (Ronald F. Fox) **80b:82020** 82A25
- Relaxation at critical points: deterministic and stochastic theory. *Phys. A* **97** (1979), no. 3, 616–642. (Ronald F. Fox) **80b:82021** 82A25 (58F13)
- Small fluctuations in systems with multiple steady states. *SIAM J. Appl. Math.* **36** (1979), no. 3, 544–572. (Author's summary) **80c:80012** 80A30 (34F05, 82A05)
- Mangeron, D.** (with Krivošelin, L. E.; Leung, K. V.; Oğuztöreli, Mehmet Namik) Analyse mathématique. Étude de certains systèmes intégraux non linéaires aux opérateurs paraboliques et aux autoréglages multiples dans les limites d'intégration. (English and Spanish summaries) *Math. Notae* **26** (1977/78), 21–27. (I. Fenýő) **80g:45012** 45J05
- Mangione, V.** (with Vezzani, A.) On connections with null torsion vector. (Italian. English summary) *Rio. Mat. Univ. Parma* (4) **4** (1978), 143–155 (1979). (C. Di Comite) **80g:53023** 53C05
- Mangolini, Marco** Some properties of the solutions to the generalized Pexider equations. (Italian. English summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* **111** (1977), no. 1, 194–202 (1978). (A. Climescu) **80m:39008** 39B70 (39B30)
- (with Paganoni, Luigi) Regularity theorems for a class of functional equations. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* **57** (1977), 93–105 (1978). (A. Climescu) **80h:39008** 39B30
- Mand, P.** (with Burton, G. R.) A characterization of the ellipsoid in terms of concurrent sections. *Comment. Math. Helv.* **53** (1978), no. 4, 485–507. (C. M. Petty) **80c:52003** 52A20
- Mani-Levitska, P.** (with Klee, W. E.; Guigas, B.) Rectifiable  $n$ -periodic maps. *Geom. Dedicata* **8** (1979), no. 2, 127–137. (D. Barnett) **80b:52008** 52A25 (05C99)
- Manin, Ju. I.** (with Drinfel'd, V. G.) A description of instantons. *Comm. Math. Phys.* **63** (1978), no. 2, 177–192. (J. H. Rawnsley) **80c:81061** 81E10 (14F05, 53C05, 58D17)
- Matrix solitons and vector bundles over curves with singularities. (Russian) *Funkcional. Anal. i Prilozhen.* **12** (1978), no. 4, 53–63. (P. A. Kučment) **80j:35114** 35Q20 (14F05, 14H20, 58F07)
- See also **Mumford, David**, **80b:14001** and **How convincing is a proof?**, **80m:03024**
- Maniński, Andrzej Z.** (with Olbort, Andrzej W.) Finite spectrum assignment problem for systems with delays. *IEEE Trans. Automat. Control* **24** (1979), no. 4, 541–553. (Edward W. Kamen) **80f:93038** 93C05
- Mańka, Roman** Two fixed point theorems on contraction. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* **26** (1978), no. 1, 41–48. (Lee Mohler) **80f:54043** 54H25 (54C60)
- On the characterization by Kuratowski of irreducible continua. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* **26** (1978), no. 1, 49–55. (Lee Mohler) **80f:54027** 54F20 (54F55)
- Manikiewicz, Piotr** A remark on Edgar's extremal integral representation theorem. *Studia Math.* **63** (1978), no. 3, 259–265. (S. D. Chatterji) **80d:46015** 46A55 (46B22)
- Fat equicontinuous groups of homeomorphisms of linear topological spaces and their application to the problem of isometries in linear metric spaces. *Studia Math.* **64** (1979), no. 1, 13–23. (K. Floret) **80g:46004** 46A06 (52A01, 54H99, 57N17, 57S05)
- Man'ko, G. P.** (with Rvačov, V. L.; Koval', F. F.) New constructive means of the  $R$ -function method. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1978**, no. 8, 691–695, 767. (G. W. Hedstrom) **80a:65232** 65N30 (35C99)
- Man'ko, V. I.** (with Dodonov, V. V.) Integrals of motion of pure and mixed quantum systems. *Phys. A* **94** (1978), no. 3–4, 403–412. (A. Terry Amos) **80a:81013** 81C05 (58F05)
- (with Malkin, I. A.) ★Динамические симметрии и когерентные состояния квантовых систем. (Russian) [Dynamical symmetry and coherent states of quantum systems] "Nauka", Moscow, 1979. 319 pp. (Vadim Komkov) **80k:81001** 81–02 (22E70, 58F07, 81C40, 81D99)
- Mann, F. L.** (with Brubaker, T. A.) Steady-state design of second-order digital filters using the Kalman formulation. *Comput. Electr. Engrg.* **6** (1979), no. 1, 55–66. (Author's summary) **80c:93054** 93E11
- Mann, J. E.** (with Bratcher, T. L.) On Bayes sequential tests regarding two Koopman-Darmois distributions: bounds on the maximum sample size. *Ann. Statist.* **7** (1979), no. 6, 1339–1344. (B. K. Ghosh) **80k:62094** 62L10 (62F15)
- Mann, L. N.** (with Cattani, Eduardo H.) Homogeneous Riemannian manifolds with a fixed isotropy representation. *J. Math. Soc. Japan* **31** (1979), no. 3, 535–552. (O. Kowalski) **80f:53031** 53C30
- Gell-Mann, M.** See **Gell-Mann, M.**
- Manna, Zohar** (with Dershowitz, Nachum) Proving termination with multiset orderings. *Comm. ACM* **22** (1979), no. 8, 465–476. (Authors' summary) **80g:68017** 68B10
- Manneville, V. L.** (with Nagore, C. Sri Han) Generalized commutative semigroups. *Semigroup Forum* **17** (1979), no. 1, 65–73. (K. S. S. Nambooripad) **80b:20078** 20M11 (20M12)
- Manneville, P.** (with Dubois-Violette, E.) Stability of Couette flow in nematic liquid crystals. *J. Fluid Mech.* **89** (1978), no. 2, 273–303. (G. Wilks) **80a:76032** 76E99 (35Q99)
- Mannheim, Philip D.** Dynamical basis for the Poincaré stresses. *Nuclear Phys. B* **143** (1978), no. 2, 285–300. (J.-L. Calais) **80c:81110** 81L05
- (with Deshpande, Nilendra G.; Hwa, Rudolph C.)  $SU(4) \times U(1)$  gauge theory. II. CP nonconservation. *Phys. Rev. D* (3) **19** (1979), no. 9, 2703–2707. (Authors' summary) **80d:81051** 81D20 (22E70)
- (with Deshpande, Nilendra G.; Hwa, Rudolph C.)  $SU(4) \times U(1)$  gauge theory. III. New approach to Cabibbo mixing. *Phys. Rev. D* (3) **19** (1979), no. 9, 2708–2726. (Authors' summary) **80g:81041** 81E10 (22E70)
- Manning, R.** Two theorems concerning optimal educational policy in balanced growth. *J. Econom. Theory* **21** (1979), no. 3, 465–472. (Author's introduction) **80j:90045** 90A16
- Mannion, David** Random packing of an interval. II. *Adv. in Appl. Probab.* **11** (1979), no. 3, 591–602. (R. V. Ambarcumjan) **80c:60014** 60D05 (60B80)
- Mannoury, Gerrit** See **van der Waerden, B. L.**, **80c:51002**
- Mannshardt, Reinhold** One-step methods of any order for ordinary differential equations with discontinuous right-hand sides. *Numer. Math.* **31** (1978/79), no. 2, 131–152. (Steven M. Serbin) **80b:65101** 65L05

- Manocha, H. L.** (with Jain, Sunita) Some generating functions by means of Cauchy's integral formula. *Indian J. Pure Appl. Math.* 8 (1977), no. 12, 1472-1479. (From the introduction) **80i:33020** 33A65
- Manohar, Ram P.** (with Stephenson, J. W.) Forbidden nodes for curved finite elements. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 9, 1421-1427. (Authors' summary) **80c:65105** 65N30
- (with Gupta, Murlu M.) Boundary approximations and accuracy in viscous flow computations. *J. Comput. Phys.* 31 (1979), no. 2, 265-288. (P. C. Jain) **80g:76018** 76D05 (65P05)
- (with Gupta, Murlu M.) Direct solution of the biharmonic equation using noncoupled approach. *J. Comput. Phys.* 33 (1979), no. 2, 236-248. (Authors' summary) **80i:65101** 65P05
- Manohar, A. N.** An approach to the prediction of the "prospectiveness" of objects. (Russian) *Vysisl. Sistemy No. 74 Metody Obrabotki Informacii* (1978), 108-128, 151. (Author's summary) **80c:68222** 68G10
- Manolache, Nicolae** Meromorphic functions along a Segre-Veronese subvariety. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 7, 1053-1063. (Martin Lindner) **80g:14020** 14E25 (14B20)
- (with Bărcănescu, Șerban) Nombres de Betti d'une singularité de Segre-Veronese. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 4, A237-A239. (From the summary and text) **80g:14003** 14B05 (14M12)
- Manolitsakis, I.** (with Ross, G.; Fiddy, M. A.; Nieto-Vesperinas, M.) The propagation and encoding of information in the scattered field by complex zeros. *Optica Acta* 26 (1979), no. 2, 229-238. (Authors' summary) **80b:78008** 78A45
- Manolov, S.** An algorithm for the approximation of a periodic trajectory and of its period. (Bulgarian. Russian and French summaries) *Godišnik Visi. Učebn. Zaved. Prirodna Mat.* 12 (1976), no. 1, 27-63 (1978). (D. Bainov) **80i:34060** 34C25
- A general method for the construction of periodic trajectories of autonomous systems of differential equations with a small parameter and with semi-odd nonlinearities in the presence of inner resonance. I, II. (Bulgarian. Russian and French summaries) *Godišnik Visi. Učebn. Zaved. Prirodna Mat.* 12 (1976), no. 1, 65-89, 91-107 (1978). (D. Bainov) **80i:34061** 34C25
- An invariant and its relation to the period of the corresponding trajectory for nonlinear autonomous systems. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst. No. 357* (1978), 63-67. (M. K. Grammatikopoulos) **80i:34062** 34C25
- Manor, Ruth** (with Kasher, Asa) A note on the breadth and depth of terms. Language theory. *Theory and Decision* 11 (1979), no. 1, 71-79. (David Makinson) **80m:03015** 03A05 (03B45)
- Manoukian, E. B.** Subtractions vs. counterterms. (Italian and Russian summaries) *Nuovo Cimento A* (11) 53 (1979), no. 3, 345-358. (R. Delbourgo) **80j:81052** 81E15
- Manoufield, E. H.** On the deflection of an anisotropic cantilever plate with variable rigidity. *Proc. Roy. Soc. London Ser. A* 366 (1979), no. 1727, 491-515. (Z. Kęczkowski) **80i:73043** 73K10 (73J05)
- Manoufield, Richard** A footnote to a theorem of Solovay on recursive encodability. *Logic Colloquium '77* (Proc. Conf., Wrocław, 1977), pp. 195-198, *Studies in Logic and Foundations of Math.*, 96, North-Holland, Amsterdam, 1978. (C. G. Jockusch, Jr.) **80i:03064** 03D30 (03D55)
- Manoufield, V. N.** (with Malin, S.) The coupling of matter and radiation in scale covariant cosmology. *Astronom. and Astrophys.* 74 (1979), no. 3, 294-296. (Colin B. G. McIntosh) **80i:83040** 83F05
- Manusimov, F. B.** (with Mansimov, K. B.) Some multipoint necessary conditions of optimality for a system with distributed parameters. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1979, no. 3, 29-35. (Authors' summary) **80j:49029** 49B99
- Mansimov, K. B.** A sequence of necessary optimality conditions for singular controls of systems with lag. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 10, 8-12. (From the text) **80c:93063** 93C20 (49B22)
- A multipoint necessary condition of optimality in the singular case. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 3, 17-20. (S. Kutateladze) **80i:49046** 49B99
- On the theory of necessary conditions of a high order of optimality in discrete controlled systems with a moving right end of the trajectory. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 6, 43-48. (Author's summary) **80c:49014** 49B05
- (with Mansimov, F. B.) Some multipoint necessary conditions of optimality for a system with distributed parameters. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1979, no. 3, 29-35. (Authors' summary) **80j:49029** 49B99
- Mansour, M.** See Malek-Mansour, M.
- Mansouri, Freydoon** (with Chang, Lay Nam) Nonlinear gauge fields and the structure of gravity and supergravity theories. *Phys. Rev. D* (3) 17 (1978), no. 12, 3168-3178. (Helmuth K. Urbantke) **80d:83040** 83C45 (53C05)
- Mansson, Bengt** Equations of motion for a class of space-time singularities. *Gen. Relativity Gravitation* 9 (1978), no. 12, 1049-1066. (J. K. Beem) **80i:83005** 83C10
- Muntavilius, E.** Sums of multiplicative functions and limit theorems in probabilistic number theory. I. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 2, 135-151, 213. (J. Galambos) **80i:10049** 10K20 (10H25)
- Abū Naṣr Maṣnūn, ibn 'Alī ibn 'Iṣrāq** See Abū Naṣr Maṣnūn, ibn 'Alī ibn 'Iṣrāq
- Mantel, B.** (with Glowinski, Roland; Periaux, J.; Pironneau, O.)  $H^{-1}$  least squares method for the Navier-Stokes equations. *Numerical methods in laminar and turbulent flow* (Proc. First Internat. Conf., Univ. College Swansea, Swansea, 1978), pp. 29-42, Halsted, New York, 1978. (J. P. Hennart) **80d:76021** 76D05 (65P05)
- Mantel, N.** (with Gail, Mitchell H.; Weiss, George H.; O'Brien, S. J.) A solution to the generalized birthday problem with application to allozyme screening for cell culture contamination. *J. Appl. Probab.* 16 (1979), no. 2, 242-251. (Authors' summary) **80d:92011** 92A09
- Mantel, Rolf** (with Kannai, Yakar) Non-convexifiable Pareto sets. *Econometrica* 46 (1978), no. 3, 571-575. (Yves Balasko) **80b:90009** 90A10 (90A06)
- Mantero, Anna Maria** (with Tonge, Andrew) Some remarks on the injective tensor product and Banach algebras. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 1, 109-114. (J. R. Holub) **80d:46123** 46M05 (46J35)
- (with Tonge, Andrew) Banach algebras and von Neumann's inequality. *Proc. London Math. Soc.* (3) 38 (1979), no. 2, 309-334. (E. R. Lorch) **80j:46081** 46J05 (47A30)
- Mantuffel, Thomas A.** Adaptive procedure for estimating parameters for the nonsymmetric Tchebychev iteration. *Numer. Math.* 31 (1978/79), no. 2, 183-208. (C. A. Hall) **80d:65047** 65F15 (65J10)
- Manjla, Adriana** (with Enghis, Pavel) On conformal-recurrent spaces. (Romanian. French summary) *Studia Univ. Babeş-Bolyai Math.* 23 (1978), no. 2, 33-40. (P. Stavre) **80i:53019** 53B20
- Mantini, Lisa A.** (with Beyer, W. A.) Optimization of natural gas production by waterflooding. *Appl. Math. Optim.* 5 (1979), no. 2, 101-116. (Authors' summary) **80d:76092** 76S05 (49A99, 93C99)
- Manton, M.** (with Ladevèze, J.; Ladevèze, P.; Pécaustings, F.; Pelle, J.-P.) Sur les fondements de la théorie linéaire des poutres élastiques. I. Méthode. Construction du prolongement admissible optimal. (English summary) *J. Mécanique* 18 (1979), no. 1, 129-173. (H. J. Weinitschke) **80m:73014** 73C99 (49H05, 73K05)
- Manton, N. S.** An effective Lagrangian for solitons. *Nuclear Phys. B* 150 (1979), no. 2-3, 397-412. (Author's summary) **80b:81074** 81E10 (35Q99)
- Manturor, O. V.** An integer equation that is connected with homogeneous Riemannian spaces. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* 1978, no. 11(198), 70-73. (C. Teleman) **80i:57029** 57T15
- Some cohomological properties of the Cartan models of symmetric spaces. *Trudy Sem. Vektor. Tensor. Anal.* 18 (1978), 169-175. (Th. Friedrich) **80b:57037** 57T15 (53C35)
- Manukjan, E. B.** Dimensional analysis of subtracted out Feynman integrands. (Russian. English summary) *Teoret. Mat. Fiz.* 39 (1979), no. 3, 307-316. (Author's summary) **80c:81019** 81C30
- Manwell, A. R.** A variational principle for steady homenergetic compressible flow with finite shocks. *Wave Motion* 2 (1980), no. 1, 83-95. (Author's summary) **80m:76055** 76L05
- Manzo, M.** See Di Manzo, M.
- Maor, Eli** Line equations of curves: duality in analytic geometry. *Internat. J. Math. Ed. Sci. Tech.* 9 (1978), no. 3, 311-322. (W. M. Kincaid) **80f:51010** 51N20
- Maquet, A.** (with Gazeau, J. P.) Bound states in a Yukawa potential: a Sturmian group-theoretical approach. *Phys. Rev. A* (3) 20 (1979), no. 3, 727-739. (Authors' summary) **80f:81028** 81C10 (22E70, 35P05)
- Maracchia, S.** The postulate behind the scenes. (Italian) *Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* 111 (1977), no. 3-4, 245-251. (H. W. Guggenheimer) **80i:01003** 01A20 (51M05)
- Maradudin, A. A.** (with Wallis, R. F.; Mills, D. L.) Attenuation of Rayleigh waves by point defects. *Phys. Rev. B* (3) 19 (1979), no. 8, 3981-3995. (I. M. Longman) **80c:73025** 73D20 (35Q99)
- Marangonova, P. C.** Criteria for the linearity of a class of optimal control problems. (Bulgarian. Russian and English summaries) *Godišnik Visi. Učebn. Zaved. Prirodna Mat.* 12 (1976), no. 1, 203-214 (1978). (Editors) **80i:93074** 93C05
- A theorem for the separability of sets. (Bulgarian. Russian and English summaries) *Godišnik Visi. Učebn. Zaved. Prirodna Mat.* 12 (1976), no. 3, 167-172 (1978). (Z. Nădenik) **80i:52006** 52A20 (93A10)
- Marasini, Donata** Stratification in sampling with randomized response. (Italian. English and French summaries) *Statistica (Bologna)* 38 (1978), no. 4, 493-506. (Jean Larisse) **80c:62062** 62D05
- Maratos, N.** (with Mayne, D. Q.) A first order, exact penalty function algorithm for equality constrained optimization problems. *Math. Programming* 16 (1979), no. 3, 303-324. (Michael Minkoff) **80i:90127** 90C30
- Maravall Casemoves, Dario** The integration of systems of linear differential equations with random initial values. (Spanish. Romanian summary) *Bul. Inst. Politehn. Iaşi Sec. I* 24(28) (1978), no. 1-2, 33-37. (Author's summary) **80c:34061** 34F05
- Differential equations and linear integral equations with random initial conditions. (Spanish) *Rev. Real Acad. Cienc. Exact. Fis. Natur. Madrid* 72 (1978), no. 1, 15-29. (David Nualart Rodón) **80i:34093** 34F05
- Marcellini, Paolo** (with Sbordon, Carlo) Homogenization of nonuniformly elliptic operators. *Applicable Anal.* 8 (1978/79), no. 2, 101-113. (E. M. Saak) **80i:35042** 35J15
- Some problems of semicontinuity and of  $\Gamma$ -convergence for integrals of the calculus of variations. *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis* (Rome, 1978), pp. 205-221, Pitagora, Bologna, 1979. (Carlo Sbordon) **80c:49003** 49A05
- Convergence of second order linear elliptic operators. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 1, 278-290. (Ju. V. Kostarčuk) **80i:35055** 35J15
- Marčenko, A. V.** Approximation of the spectrum of an elliptic operator with almost periodic coefficients. (Russian) *Mat. Zametki* 25 (1979), no. 5, 713-724, 799. (Author's summary) **80i:35100** 35P05
- Marčenko, L. V.** (with Nazarenko, T. I.) An interval method for solving integro-differential equations of Fredholm type. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 282-291, 322, Irkutsk. Gos. Univ., Irkutsk, 1976. (Authors' summary) **80i:65106** 65R20 (65G10)
- Marčenko, V. M.** On the theory of the controllability of systems with delay. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 101-108, 315, Irkutsk. Gos. Univ., Irkutsk, 1976. (Author's summary) **80j:93021** 93B05
- (with Moskovska, B. P.; Simeonova, Ju. S.) Pointwise controllability of systems with after effect. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 7, 1324-1327, 1343-1344. (A. A. Martinjuk) **80c:93046** 93C05
- Controllability of systems with lag. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* 1978, no. 1(188), 54-65. (Bojan Popović) **80i:93037** 93B05 (34Kxx, 93A20)
- On the problem of the calculation of the minimal number of inputs of controllable dynamical systems. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* 1978, no. 4(191), 42-52. (I. Muntean) **80i:93049** 93B20
- Some extremal principles in the new theory of plastic flow. (Russian) *Učen. Zap.*



- CAGI 9** (1978), no. 1, 84–91. (Author's summary) **80d:73057** 73E05 (49A99)  
 Quasiconrollability of linear systems with aftereffect. *Automat. i Telemekh.* **1979**, no. 3, 18–22 (Russian, English summary); translated as *Automat. Remote Control* **40** (1979), no. 3, part 1, 335–339. (S. Chakrabarti) **80j:93022** 93B05 (34K35)
- On the controllability of zero function of time lag systems. (Russian, English summary) With a loose English translation. *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* **8** (1979), no. 5–6, 421–432. (Author's summary) **80j:93023** 93B05
- Marčenko, S. S.** The quasi-Peano property of recursive functions. (Russian) *Problemy Kibernet.* No. 35 (1979), 199–204, 208. (Igor Lavrov) **80j:03054** 03D20
- Marchal, B.** (with Lepelletier, J. P.) Techniques probabilistes dans le contrôle impulsif. (English summary) *Stochastics* **2**, no. 4, 243–286 (1979). (From the summary) **80b:93078** 93E20
- Marchal, C.** The quasi-integrals. Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics (Math. Forschungsinst., Oberwolfach, 1978), Part II. *Celestial Mech.* **21** (1980), no. 2, 183–191. (Author's summary) **80j:70009** 70H05 (70M05)
- Marchal, William G.** Some simpler bounds on the mean queuing time. *Oper. Res.* **26** (1978), no. 6, 1083–1088. (U. Narayan Bhat) **80e:60110** 60K25
- Marchand, Jean-Paul** (with Gudder, Stanley P.; Wyss, Walter) Bures distance and relative entropy. *J. Math. Phys.* **20** (1979), no. 9, 1963–1966. (C. Martin Edwards) **80j:46109** 46L60 (46L10, 82A99)
- (with Benoist, Rodney W.) Statistical inference in coupled quantum systems. *Lett. Math. Phys.* **3** (1979), no. 2, 93–96. (Authors' introduction) **80e:82018** 82A15
- (with Benoist, Rodney W.; Wyss, Walter) A note on relative entropy. *Lett. Math. Phys.* **3** (1979), no. 3, 169–173. (Authors' summary) **80g:94024** 94A17
- Marchand, Pierre** See *Livsey, C.* **80k:68004**
- Marchant, Alan B.** (with Shapiro, Stuart L.) Star clusters containing massive, central black holes: Monte Carlo simulations in two-dimensional phase space. *Astrophys. J.* **225** (1978), 603–624. (R. H. Wilson, Jr.) **80d:85008** 85A35 (65D15)
- Marchenko, V. M.** See *Marčenko, V. M.*
- Marchesin, Dam** (with Isaacson, David) The eigenvalues and eigenfunctions of a spherically symmetric anharmonic oscillator. *Comm. Pure Appl. Math.* **31** (1978), no. 6, 659–670. (Sandro Graffi) **80f:81005** 81-XX (35P10)
- The scaling limit of the  $\phi^2$  field in the anharmonic oscillator. *J. Math. Phys.* **20** (1979), no. 5, 830–836. (Author's summary) **80k:81115** 81E15 (34B25)
- Marchesini, G.** (with Fornasini, E.) Doubly-indexed dynamical systems: state-space models and structural properties. *Math. Systems Theory* **12** (1978/79), no. 1, 59–72. (Arunabha Bagchi) **80e:93028** 93B05 (93B07)
- (with Fornasini, E.) On the internal stability of two-dimensional filters. *IEEE Trans. Automat. Control* **24** (1979), no. 1, 129–130. (Authors' summary) **80b:93110a** 93D05 (93E10)
- (with Fornasini, E.) Correction to: "On the internal stability of two-dimensional filters" (IEEE Trans. Automat. Control **24** (1979), no. 1, 129–130). *IEEE Trans. Automat. Control* **24** (1979), no. 4, 678. (Editors) **80b:93110b** 93D05
- Marchetti, Elena** (with Bonacini, Riccardo) The sign of the solution to a nonhomogeneous Dirichlet problem. I. (Italian) *Istit. Lombardo Accad. Sci. Lett. Rend. A* **111** (1977), no. 1, 100–104 (1978). (E. Giusti) **80j:35026a** 35J25
- (with Bonacini, Riccardo) The sign of the solution to an inhomogeneous Dirichlet problem. II. (Italian) *Istit. Lombardo Accad. Sci. Lett. Rend. A* **112** (1978), no. 1, 31–36 (1979). (E. Giusti) **80j:35026b** 35J25
- Marchetto, D.** Stepanoff flows on orientable surfaces. *Rocky Mountain J. Math.* **9** (1979), no. 2, 273–281. (Gustav A. Hedlund) **80d:58058** 58F25 (28D99, 54H15, 54H20)
- Marchi, Ezio** On the description of the space of movements and decision-making of one living being. *An. Acad. Brazil. Ciênc.* **50** (1978), no. 4, 459–467. (James W. Friedman) **80d:90107** 90D35
- (with Tarazaga, Pablo) About  $(k, n)$  stochastic matrices. *Linear Algebra Appl.* **26** (1979), 15–30. (Adolf Rhodius) **80f:15026** 15A51 (15A99)
- Marchi, Maria Vittoria** Invariant sets. (Italian, English summary) *Rend. Istit. Mat. Univ. Trieste* **10** (1978), no. 1–2, 123–127 (1979). (Piero Bassanini) **80g:34011** 34A60
- Marchildon, Louis** Nonlinear realization of the superconformal group and conformal supergravity. *Phys. Rev. D* (3) **18** (1978), no. 8, 2804–2809. (G. Vitiello) **80a:81134** 81M05 (22E65)
- Marchini, Carlo** Comparison of two categorical semantics. (Italian, English summary) *Boll. Un. Mat. Ital. A* (5) **16** (1979), no. 1, 103–108. (Anna Labella) **80m:03113** 03G30 (18C10)
- Marchio, Carlo** Complete  $(M, N, F)$ -controllability. (Italian) *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 2, 273–280. (A. Halanay) **80b:93014** 93B05
- Marchioro, C.** (with Pellegrinotti, A.; Pulvirenti, M.; Triolo, L.) Velocity of a perturbation in infinite lattice systems. *J. Statist. Phys.* **19** (1978), no. 5, 499–510. (Authors' summary) **80b:82053** 82A60 (58F05)
- (with Pellegrinotti, A.; Pulvirenti, M.; Suhov, Yu.) Time evolution of Gibbs states for an anharmonic lattice. *Comm. Math. Phys.* **66** (1979), no. 2, 131–146. (Authors' summary) **80k:82014** 82A05 (60K35)
- Marchouk, G. I.** See *Marčuk, G. I.*
- Marchow, E.** (with Pulikowski, W.) Equivariant Whitney immersion theorem. *Comment. Math. Prace Mat.* **20** (1977/78), no. 2, 409–415. (R. Paul Beem) **80b:57040** 57R42
- Marčuk, G. I.** See *Marčuk, G. I.*
- Marçhlyac, G.** (with Léauté, Bernard) Some new exact solutions of Einstein-Maxwell equations with axial symmetry. *Lett. Nuovo Cimento* (2) **26** (1979), no. 6, 183–187. (Editors) **80i:83005** 83C05 (83E15)
- Marchniak, Zbigniew** Poincaré duality groups with one defining relation. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979), no. 1, 27–31. (J. S. Birman) **80k:20042** 20F34 (57M99)
- Marchuk, H.** (with Gonczewski, J.; Okrasinski, W.; Tabisz, K.) On the percolation of water from a cylindrical reservoir into the surrounding soil. (Polish summary) *Zastos. Mat.* **16** (1978/79), no. 2, 249–261. (E. Ungureanu-David) **80c:76053** 76S05
- Marchukowski, M. J.** Unifying concepts in the theories of elasticity, plasticity, and dislocations. (German summary) *Phys. Status Solidi (B)* **93** (1979), no. 2, 703–711. (V. T. Golovchan) **80g:73011** 73B99
- Marcolungo, P.** (with Costa, G.; D'Anna, M.) Neutral currents in unified gauge models. (Italian and Russian summaries) *Nuovo Cimento A* (11) **50** (1979), no. 2, 177–196. (Authors' summary) **80g:81035** 81D15
- Marcov, Nicolae** (with Dragos, Lazăr; Botezatu, Nicu Paul) La dispersion convective radioactive dans une conduite cylindrique à section circulaire. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **23**(71) (1979), no. 2, 135–142. (Ivan Lerche) **80g:82046** 82A70
- Marcowitz, Ulrich** (with Meis, Theodor) ★Numerische Behandlung partieller Differentialgleichungen. Hochschultext. Springer-Verlag, Berlin-New York, 1978. viii + 452 pp. ISBN 3-540-08967-5 (J. R. Cannon) **80g:65003** 65-01
- Marcu, Dănuț** A method for finding the kernel of a digraph. *An. Univ. București Mat.* **27** (1978), 41–43. (D. H. Younger) **80a:05102** 05C20
- Marčuk, G. I.** Some mathematical problems on the preservation of the environment. (Russian) *Complex analysis and its applications* (Russian), pp. 375–381, 669, "Nauka", Moscow, 1978. (Author's summary) **80a:92051** 92A15 (76F05)
- Problèmes liés à l'environnement: allocation optimale d'unités industrielles. *Étude numérique des grands systèmes* (Proc. Sympos., Novosibirsk, 1976), pp. 1–8, *Méthodes Math. de l'Informatique*, T. Dunod, Paris, 1978. (Author's summary) **80e:92042** 92A17 (90C50)
- On the problem of the preservation of the environment. (Russian) *Numerical methods in mathematical physics, geophysics and optimal control* (Sympos., Novosibirsk, 1976) (Russian), pp. 20–28, 231, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (Author's summary) **80g:92037** 92A17 (35Q99)
- (with Judin, M. S.) On the use of a priori information with the aid of conjugate equations. (Russian) *Dokl. Akad. Nauk SSSR* **243** (1978), no. 1, 66–69. (G. S. Tabidze) **80d:86009** 86A35
- (with Penenko, V. V.) Application of optimization methods to the problem of mathematical simulation of atmospheric processes and environment. *Modelling and optimization of complex systems* (Proc. IFIP-TC 7 Working Conf., Novosibirsk, 1978), pp. 240–252, *Lecture Notes in Control and Information Sci.*, 18, Springer, Berlin, 1979. (Robert Pearson) **80m:86005** 86A10 (93A10)
- See also *Étude numérique des grands systèmes*, **80a:65011**; *Stetter, H.*, **80a:65143**; *Numerical methods in mathematical physics, geophysics and optimal control*, **80e:65006**; *Computational methods in linear algebra*, **80j:65003** and *Modelling and optimization of complex systems*, **80j:93006**
- Mărculescu, S.** (with Bányai, L.) Analytic properties of the eikonal approximation in quantum mechanics. (French summary) *Rev. Roumaine Phys.* **24** (1979), no. 9, 843–851. (Authors' summary) **80k:81148** 81F05
- Marcum, Howard J.** Homotopy decompositions for product spaces. *Proceedings of the Eleventh Brazilian Mathematical Colloquium* (Poços de Caldas, 1977), Vol. II (Portuguese), pp. 665–680, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (G. V. Krishnarao) **80k:55047** 55Q15 (55P99)
- Stiefel manifolds and similarity mappings of spheres. *Proceedings of the Tenth Brazilian Colloquium* (Poços de Caldas, 1975), Vol. II (Portuguese), pp. 447–455, *Con. Nac. Desenvolvimento Ci. Tec.*, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (David Handel) **80k:55046** 55Q15 (55S36)
- Twisted Whitehead products. *Proc. Amer. Math. Soc.* **74** (1979), no. 2, 358–361. (John Roy Dennett) **80j:55019** 55Q15
- Marcus, Brian** (with Adler, Roy) Finitistic coding for shifts of finite type. *The structure of attractors in dynamical systems* (Proc. Conf., North Dakota State Univ., Fargo, N.D., 1977), pp. 1–11, *Lecture Notes in Math.*, 668, Springer, Berlin, 1978. (B. Weiss) **80i:28036** 28D20 (54H20, 58F11)
- (with Goodman, Sue) Topological mixing of higher degrees. *Proc. Amer. Math. Soc.* **72** (1978), no. 3, 561–565. (Karl Petersen) **80a:54076** 54H20
- (with Newhouse, Sheldon) Measures of maximal entropy for a class of skew products. *Ergodic theory* (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1978), pp. 105–125, *Lecture Notes in Math.*, 729, Springer, Berlin, 1979. (Peter Walters) **80j:28030** 28D20
- (with Petersen, Karl) Balancing ergodic averages. *Ergodic theory* (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1978), pp. 126–143, *Lecture Notes in Math.*, 729, Springer, Berlin, 1979. (Yves Derriennic) **80m:28013** 28D05
- Marcus, Froim** Sur les surfaces dont deux normales ou droites canoniques passent par un point fixe. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **24** (1978), no. 2, 345–349. (M. Decupier) **80i:53004** 53A20
- Marcus, Marvin** An inequality for non-decomposable elements in the Grassmann algebra. *Houston J. Math.* **4** (1978), no. 3, 417–422. (A. O. Morris) **80a:15032** 15A75
- (with Filippenko, Ivan) Nondifferentiable boundary points of higher numerical range. *Linear Algebra Appl.* **21** (1978), no. 3, 217–232. (B. David Saunders) **80g:15026** 15A60
- (with Chollet, John) Decomposable symmetrized tensors. *Linear and Multilinear Algebra* **6** (1978/79), no. 4, 317–326. (J. A. Dias da Silva) **80b:15037a** 15A72
- Decomposable symmetrized tensors and an extended LR decomposition theorem. *Linear and Multilinear Algebra* **6** (1978/79), no. 4, 327–330. (J. A. Dias da Silva) **80b:15037b** 15A72
- (with Filippenko, Ivan) Linear operators preserving the decomposable numerical range. *Linear and Multilinear Algebra* **7** (1979), no. 1, 27–36. (John Duncan) **80d:15028** 15A60
- (with Shure, B. N.) The numerical range of certain 0, 1-matrices. *Linear and Multilinear Algebra* **7** (1979), no. 2, 111–120. (Werner Bani) **80c:15015** 15A60 (65F99)
- See also *Minc, Henryk*, **80d:15009**
- Marcus, Michael B.** (with Pisier, Gilles) ★Necessary and sufficient conditions for the uniform convergence of random trigonometric series. *Lecture 1977/78. Lecture Notes Series*, 50, Aarhus Universitet, Matematisk Institut, Aarhus, 1978. 38 pp. (not consecutively pagged). (J.-P. Kahane) **80m:42009** 42A20 (60G15)
- (with Jain, Naresh C.) Continuity of sub-Gaussian processes. *Probability on Banach spaces*, pp. 81–196, *Advances in Probability and Related Topics*, 4, Dekker, New York, 1978. (L. A. Shepp) **80d:60044** 60G15
- (with Woyczyński, Wojbor A.) A necessary condition for the central limit theorem on spaces of stable type. *Vector space measures and applications* (Proc. Conf., Univ.

- Dublin, Dublin, 1977, I, pp. 327-339, *Lecture Notes in Math.*, 644, Springer, Berlin, 1978.  
(Gilles Pisier) **80c:60016** 60B12
- Continuity and the central limit theorem for random trigonometric series. *Z. Wahrsch. Verw. Gebiete* 42 (1978), no. 1, 35-56. (M. G. Hahn) **80c:60037** 60F05 (42C20, 60G15)
- (with Araujo, Aloisio) Stable processes with continuous sample paths. *Probability in Banach spaces, II (Proc. Second Internat. Conf., Oberwolfach, 1978)*, pp. 9-32, *Lecture Notes in Math.*, 709, Springer, Berlin, 1979. (Bert Fristedt) **80j:60053** 60G17 (60G10)
- Marcus, Moshe (with Bandle, Catherine) Un théorème de comparaison pour un problème elliptique avec une non-linéarité singulière. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 13, A861-A863. (Authors' summary) **80i:35075** 35J60 (35B05)
- (with Mizel, Victor J.) Every superposition operator mapping one Sobolev space into another is continuous. *J. Funct. Anal.* 33 (1979), no. 2, 217-229. (Vo-Khac Khoan) **80b:47039** 47B38 (46E35)
- (with Mizel, Victor J.) Complete characterization of functions which act, via superposition, on Sobolev spaces. *Trans. Amer. Math. Soc.* 251 (1979), 187-218. (Richard Bagby) **80j:46055** 46E35 (47H15)
- Marcus, Philip S. Stellar convection. I. Modal equations in spheres and spherical shells. *Astrophys. J.* 231 (1979), no. 1, part 1, 176-192. (Author's summary) **80d:85007** 85A30
- Marcus, R. A. (with Noid, D. W.; Koszykowski, M. L.) Semiclassical studies of bound states and molecular dynamics. *Stochastic behavior in classical and quantum Hamiltonian systems (Volta Memorial Conf., Como, 1977)*, pp. 283-292, *Lecture Notes in Phys.*, 93, Springer, Berlin, 1979. (Martin Kummer) **80k:81192** 81G55 (58F05, 58F14)
- (with Noid, D. W.; Koszykowski, M. L.) Semiclassical calculation of bound states in multidimensional systems with Fermi resonance. *J. Chem. Phys.* 71 (1979), no. 7, 2864-2873. (J. S. Joel) **80c:81056** 81C99 (58F05, 58G25)
- Marcus, Ruth. Further results on simultaneous confidence bounds in normal models with restricted alternatives. *Comm. Statist. A—Theory Methods* 7 (1978), no. 6, 573-590. (S. John) **80b:62065** 62H12 (62F25)
- (with Hochberg, Yosef) On partitioning successive increments in means or ratios of variances in a chain of normal populations. *Comm. Statist. A—Theory Methods* 7 (1978), no. 15, 1501-1513. (R. J. McKay) **80b:62031** 62F03
- A note on analyzing ordered alternatives. *Psychometrika* 43 (1978), no. 1, 133-139. (K. M. Lal Saxena) **80b:62059** 62G10 (62J15)
- Marcus, Solomon (with Calude, Cristian; Tevy, Ionel) The first example of a recursive function which is not primitive recursive. (French summary) *Historia Math.* 6 (1979), no. 4, 380-384. (Editors) **80i:03053** 03D20 (01A60)
- (with Vranceanu, Gheorghe; Cristescu, Romulus; Andreian Cazacu, Cabiria; Lazăr, Dragos; Burghelua, Dan; Iosifescu, Marius) L'académicien Nicolae Teodorescu (à l'occasion de son 70 anniversaire). *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 5, 671-672. (Editors) **80j:01035** 01A70
- (with Cristescu, Romulus; Andreian Cazacu, Cabiria; Lazăr, Dragos; Burghelua, Dan; Iosifescu, Marius) Gheorghe Vranceanu: (1900-1979). (French) *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 6, 989-990. (Editors) **80i:01037b** 01A70
- Marcus, Steven I. (with Wilksy, Alan S.; Hsu, Kai) The use of harmonic analysis in suboptimal estimator design. *IEEE Trans. Automat. Control* 23 (1978), no. 5, 911-916. (W. A. Gardner) **80a:93154** 93E10
- Optimal nonlinear estimation for a class of discrete-time stochastic systems. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 297-302. (Tamer Başar) **80c:93115** 93E10
- (with Wise, Gary L.) Stochastic stability for a class of systems with multiplicative state noise. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 333-335. (S. M. Hrisanov) **80i:93061** 93E15
- Marczyk, Antoni (with Bermond, Jean-Claude) Comparaison des puissances de graphes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 1, A13-A15. (Stephane Foldes) **80d:05042** 05C99
- Mardanov, I. D. (with Maksudov, F. G.; Šamilov, A. H.) A special boundary value problem for nonlinear differential equations with deviating argument of neutral type. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 3, 13-17. (Š. Schwabik) **80i:34061** 34K10
- (with Šamilov, A. H.) Sufficient solvability conditions of a boundary value problem for nonlinear differential equations with a deviating argument of neutral type. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 5, 46-51. (Józef Kalinowski) **80c:34051** 34K10
- Mardanov, M. D. Optimality of singular controls in systems with lag. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1979, no. 2, 101-105. (From the summary) **80j:93065** 93C30 (49B10)
- Marden, A. (with Jørgensen, T.; Maskit, B.) The boundary of classical Schottky space. *Duke Math. J.* 46 (1979), no. 2, 441-446. (A. D. Mednyh) **80k:32028** 32G15 (30F40)
- (with Maskit, B.) On the isomorphism theorem for Kleinian groups. *Invent. Math.* 51 (1979), no. 1, 9-14. (C. Earle) **80i:30037** 30F40 (57M99)
- Mardelák, Sibe (with Rushing, T. B.) Shape fibrations. I. *General Topology Appl.* 9 (1978), no. 3, 193-215. (Paul F. Duval) **80i:55013a** 55P55 (54C56)
- Comparing fibres in a shape fibration. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 13(33) (1978), no. 2, 317-333. (Jerzy Dydak) **80j:55021** 55P55 (54F43, 55R65)
- (with Rushing, T. B.) *n*-shape fibrations. Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978), II. *Topology Proc.* 3 (1978), no. 2, 429-459 (1979). (Maria Moszyńska) **80m:54028** 54C56 (55R05)
- (with Rushing, T. B.) Shape fibrations. II. *Rocky Mountain J. Math.* 9 (1979), no. 2, 283-298. (Paul F. Duval) **80i:55013b** 55P55 (54C56)
- Mardia, K. (with Zemroch, P. J.) ★Tables of the *F*- and related distributions with algorithms. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York*, 1978. x + 256 pp. ISBN 0-12-471140-5 (From the preface) **80e:62076** 62Q05
- ★Статистический анализ уловов наблюдений. (Russian) [Statistics of the analysis of directional data] Translated by È. V. Hmaladze. Edited by L. N. Bol'shev. "Nauka", Moscow, 1978. 239 pp. (Editors) **80i:62001** 62-02
- (with Bingham, Christopher) A small circle distribution on the sphere. *Biometrika* 65 (1978), no. 2, 379-389. (C. G. Khatri) **80c:62064** 62H10
- (with Puri, Madan L.) A spherical correlation coefficient robust against scale. *Biometrika* 65 (1978), no. 2, 391-395. (C. G. Khatri) **80c:62074** 62H20
- Some properties of classical multi-dimensional scaling. *Comm. Statist. A—Theory Methods* 7 (1978), no. 13, 1233-1241. (P. A. K. Covey-Crump) **80c:62075** 62H25 (62-07, 62P15)
- (with Kent, J. T.; Rao, J. S.) A characterization of the uniform distribution on the circle. *Ann. Statist.* 7 (1979), no. 4, 882-889. (M. Riedel) **80i:62018** 62E10
- Marek, Ivo (with Husták, Petr; Kubiček, Milan; Marek, Miloš) Bifurcation in reaction-diffusion systems. *Theory of nonlinear operators (Proc. Fifth Internat. Summer School, Central Inst. Math. Mech. Acad. Sci. GDR, Berlin, 1977)*, pp. 117-128, *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1978, 6, Akademie-Verlag, Berlin, 1978. (Mario Primicerio) **80i:35014** 35B32 (35K40, 58E07)
- Perron root of a convex combination of a positive kernel and its adjoint. (Russian and Czech summaries) *Acta Univ. Carolin.—Math. Phys.* 19 (1978), no. 1, 3-14. (Bryan E. Cain) **80c:47031** 47B38 (47B55)
- (with Kyncl, J.) Some problems in neutron transport theory. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977)*, pp. 224-232, *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (Mizan Rahman) **80c:82050** 82A75 (45K05)
- Marek, J. (with Sloane, A.) A finite rotating body in general relativity. (Italian and Russian summaries) *Nuovo Cimento B* (11) 51 (1979), no. 1, 45-52. (Brian O. J. Tupper) **80c:83007** 83C15
- Marek, Miloš (with Husták, Petr; Kubiček, Milan; Marek, Ivo) Bifurcation in reaction-diffusion systems. *Theory of nonlinear operators (Proc. Fifth Internat. Summer School, Central Inst. Math. Mech. Acad. Sci. GDR, Berlin, 1977)*, pp. 117-128, *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1978, 6, Akademie-Verlag, Berlin, 1978. (Mario Primicerio) **80i:35014** 35B32 (35K40, 58E07)
- (with Kubiček, Milan) Evaluation of limit and bifurcation points for algebraic equations and nonlinear boundary-value problems. *Appl. Math. Comput.* 5 (1979), no. 3, 253-264. (Authors' summary) **80d:65055** 65H10 (58C15, 65L99)
- Marek, Wiktor (with Nyberg, A. M.) Extendability of ZF models in the von Neumann hierarchy to models of KM theory of classes. *Generalized recursion theory, II (Proc. Second Sympos., Univ. Oslo, Oslo, 1977)*, pp. 271-282, *Studies in Logic and Foundations of Math.*, 94, North-Holland, Amsterdam, 1978. (L. Bukovsky) **80i:03034** 03C65 (03E99)
- Some comments on the paper by Artigue, Isambert, Perrin and Zalc: "Some remarks on bicommutability" [Fund. Math. 101 (1978), no. 3, 207-226; MR 80j:03019a]. *Fund. Math.* 101 (1978), no. 3, 227-228. (W. Marek) **80j:03019b** 03B30
- (with Lolli, Gabriel) On elementary theories of v. Neumann's levels. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 2, 406-411. (F. R. Drake) **80j:03074** 03E30 (03C55)
- Marenikova, O. N. (with Golovačev, Ju. G.; Tarnavskii, A. A.) Stability of stratified flows. II. Viscid two-layer flow. (Russian) *Izv. Sibirsk. Otdel. Akad. Nauk SSSR Ser. Tehn. Nauk* 1977, no. 13, 16-28, 141. (From the summary) **80c:76056** 76V05
- Mareš, Jan Conditional programmed automata. *Kybernetika (Prague)* 14 (1978), no. 4, 227-244. (Author's summary) **80c:68068** 68D45
- Mareš, Milan General coalition-games. *Kybernetika (Prague)* 14 (1978), no. 4, 245-260. (Robert Rosenthal) **80a:90167** 90D12
- Dynamic solution of general coalition-games. *Kybernetika (Prague)* 14 (1978), no. 4, 261-284. (Robert Rosenthal) **80a:90168** 90D12
- Additivity in general coalition-games. *Kybernetika (Prague)* 14 (1978), no. 5, 350-368. (Tamer Başar) **80b:90154** 90D12
- Transformations of general coalition-games. (Russian summary) *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* 9 (1980), no. 2, 103-110. (Author's summary) **80m:90067** 90D12
- Mareschal, M. (with Résibois, P.) Kinetic equations, initial conditions and time-reversal: a solvable one-dimensional model revisited. *Phys. A* 94 (1978), no. 2, 211-253. (Authors' summary) **80b:82041** 82A40 (45K05)
- Margenau, Henry ★Physics and philosophy: selected essays. *Episteme*, 6. D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1978. xxviii + 404 pp. (1 plate). ISBN 90-277-0901-7 (Mario Bunge) **80c:01020** 01A75 (00A25, 03A05, 81B05)
- Margenstern, Maurice On a variant of constructivisation of the theory of almost periodic functions. *Z. Math. Logik Grundlag. Math.* 24 (1978), no. 6, 495-507. (From the introduction) **80b:03101** 03F65 (42A75)
- Margiocco, Marco (with Belcastro, Alessandro) *B*<sub>0</sub>-categories and *g*-functors. *Riv. Mat. Univ. Parma* (4) 4 (1978), 329-337 (1979). (Tadashi Ohkuma) **80j:18001** 18A22
- Margolin, Barry H. (with Schruben, Lee W.) Pseudorandom number assignment in statistically designed simulation and distribution sampling experiments. With comments and a reply by the authors. *J. Amer. Statist. Assoc.* 73 (1978), no. 363, 504-525. (B. L. Granovskii) **80c:62013** 62E25 (62J05, 65C99)
- Margrave, G. (with Kambayashi, T.) On homomorphisms from algebraic groups to GL<sub>n</sub>(Z). *Proc. Amer. Math. Soc.* 74 (1979), no. 2, 223-226. (Wim H. Hesselink) **80b:20055** 20G15
- Margul, G. A. Factor-groups of discrete subgroups. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 3, 533-536. (J. S. Joel) **80c:22013** 22E40 (20G35)
- Factor groups of discrete subgroups and measure theory. (Russian) *Funkcional. Anal. i Priložen.* 12 (1978), no. 4, 64-76. (R. K. Thomas) **80c:22005** 22E40 (22D40, 28C10, 43A07)
- Finiteness of quotient groups of discrete subgroups. (Russian) *Funkcional. Anal. i Priložen.* 13 (1979), no. 3, 28-39. (R. K. Thomas) **80c:22006** 22E40 (28C10, 43A07)
- Marhašev, L. M. The method of invariants in problems of the equivalence of ordinary equations. (Russian) *Kibernet. i Vychisl. Tehn.* 1978, no. 39, 45-53, 114. (F. Neuman) **80c:34039** 34C20 (58F35)
- de Maria, M. See De Maria, M.
- Mariamé, Philippe Sur la solution numérique, par un schéma implicite de différences finies, de certaines équations aux dérivées partielles paraboliques quasi-linéaires. *Acad. Roy. Belg. Bull. Cl. Sci. (5)* 64 (1978), no. 6, 351-359. (Author's summary) **80i:65108** 65N20
- Marías, Michel Espaces du type Sobolev sur un espace de Hilbert complexe. *Séminaire Paul Krée, 3e année (1976/77), Équations aux dérivées partielles en dimension infinie*,



- Exp. No. 7, 12 pp., *Secrétariat Math., Paris*, 1978. (Françoise Berquier) **80j:46056** 46E35 (46G99)
- Marichev, O. I. ★Метод вычисления интегралов от специальных функций (теория и таблицы формул). (Russian) [A method of calculating integrals from special functions (theory and tables of formulas)] Edited by F. D. Gahov. "Nauka i Tekhnika", Minsk, 1978. 310 pp. (J. Kofron) **80j:65021** 65D30
- Marie, Jean-Louis (with Lance, Michel; Charnay, Georges; Bataille, Jean) Les équations de la turbulence dans un écoulement diphasique incompressible en l'absence de transfert de masse. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 20, A957-A960. (Authors' summary) **80c:76025** 76F05 (35Q20)
- Marie, Raymond A. (with Stewart, William J.) A hybrid iterative-numerical method for the solution of a general queueing network. *Measuring, modelling and evaluating computer systems (Proc. Third Internat. Sympos., Bad Godesberg, 1977)*, pp. 173-188, North-Holland, Amsterdam, 1977. (From the introduction) **80c:68006** 68C15
- An approximate analytical method for general queueing networks. *IEEE Trans. Software Engrg.* **5** (1979), no. 5, 530-538. (Author's summary) **80f:68036** 68C15 (60K25, 90B22)
- Marimón, Ronald B. Connectivity, combinatorics, and a continuant. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 489-497, Congress. Numer., XXI, Utilities Math., Winnipeg, Man., 1978. (B. David Saunders) **80b:15015** 15A15
- Marin, V. G. Some properties of regular near-algebras. (Russian) Ring-theoretical constructions. *Mat. Issled.* No. 49 (1979), 105-114, 162-163. (Günter Pilz) **80i:16044** 16A76
- Marinari, Maria Grazia The Gorenstein locus of a ring. (Italian. English summary) *Ann. Univ. Ferrara Ser. VII (N.S.)* **24** (1979), 175-180. (Paolo Maroscia) **80c:13024** 13H10 (14M05)
- (with Raimondo, Mario) Properties of the regular functions ring of affine varieties defined over any field. *Rend. Sem. Mat. Univ. Politec. Torino* **37** (1979), no. 1, 63-70. (Luciana Picco Botta) **80k:14004** 14A25
- Marinero, M. (with Grella, G.) Special solutions of the sine-Gordon equations in 2+1 dimensions. *Lett. Nuovo Cimento* (2) **23** (1978), no. 12, 459-464. (Francesco Calogero) **80c:35056** 35Q20
- di Febo Marinelli, Rosa See Di Febo Marinelli, Rosa
- Marinescu, C. (with Marinescu, E.) On a problem of differential equations with impulses. (Romanian) *Bul. Univ. Braşov Ser. C* **20** (1978), 83-85. (Editors) **80m:34076** 34K99 (93C15)
- Marinescu, E. (with Marinescu, C.) On a problem of differential equations with impulses. (Romanian) *Bul. Univ. Braşov Ser. C* **20** (1978), 83-85. (Editors) **80m:34076** 34K99 (93C15)
- Marino, E. C. (with Swieca, J. A.) Non-integer topological number and infiniteness of action. *Nuclear Phys. B* **141** (1978), no. 1-2, 135-140. (Authors' summary) **80b:81075** 81E10 (57R20, 58G10)
- Marino, Mario Uniqueness and regularity of the solution to the Cauchy problem for an abstract, second-order differential equation. (Italian. English summary) *Rend. Circ. Mat. Palermo* (2) **27** (1978), no. 1, 73-94. (P. Talpalaru) **80i:34095** 34G10
- Marino, Verita (with Gualandri, L.) On a formula of Leray. (Italian) *Pubbl. Istit. Mat. Appl. Fac. Ingr. Univ. Studi Roma Quaderno* No. 12 (1978), 31-36. (A. Crumeyrolle) **80a:58030** 58G15 (58F05)
- Harmonic maps and tensorial connexions in the sense of Bompiani. (Italian. English summary) *Rend. Mat.* (6) **11** (1978), no. 3, 405-411 (1979). (J. Eells) **80f:53025** 53C05 (58E20)
- Marinucci, Rosa Anna Pseudo-affine mappings between differentiable manifolds, and their properties. (Italian. English summary) *Rend. Acad. Sci. Fis. Mat. Napoli* (4) **45** (1979), 215-226. (C. Di Comite) **80j:53038** 53C05
- Marinov, A. T. (with Ivanov, K. I.) Method of phase functions for the scattering on nonlocal potentials which admit the separation of variables in spheroidal coordinates. (Russian. English summary) *Teoret. Mat. Fiz.* **38** (1979), no. 3, 370-379. (Editors) **80b:81093** 81F05 (35P25)
- Marinov, M. S. Nonlinear wave equations and differential geometry. *Jadernaja Fiz.* **28** (1978), no. 1, 251-264 (Russian); translated as *Soviet J. Nuclear Phys.* **28** (1978), no. 1, 125-132 (1979). (Author's summary) **80i:81066** 81G25 (35Q20, 53A05, 58G40, 81E99)
- (with Terent'ev, M. V.) A functional integral on unitary groups. *Jadernaja Fiz.* **28** (1978), no. 5, 1418-1434 (Russian); translated as *Soviet J. Nuclear Phys.* **28** (1978), no. 5, 729-737. (C. S. Sharma) **80b:81023** 81C35 (58D30)
- An alternative to the Hamilton-Jacobi approach in classical mechanics. *J. Phys. A* **12** (1979), no. 1, 31-47. (Martin Kummer) **80f:70019** 70H20 (58F35, 81C99)
- Marinov, Penko (with V'leva, V'rinka) Thermoelastic behavior of two-continuum in a small deformation field. (Bulgarian. English summary) *Annuaire Univ. Sofia Fac. Math. Méc.* **69** (1974/75), 107-117 (1979). (Authors' summary) **80m:73073** 73U05
- (with Kirazov, P.) On the propagation of thermoelastic waves in a semi-infinite medium. (Bulgarian and Russian summaries) *Teoret. Prilož. Meh.* **10** (1979), no. 1, 21-27, 8. (D. Iegan) **80c:73071** 73U05
- Marinov, V. P. Perfection of ideals generated by Pfaffians of alternating matrices. *C. R. Acad. Bulgare Sci.* **32** (1979), no. 5, 561-563. (Daniel D. Anderson) **80j:13007** 13D05
- Marinucci, T. (with Sciuto, S.) Quantization of the conservation laws in the supersymmetric sine-Gordon model. *Nuclear Phys. B* **156** (1979), no. 1, 144-156. (V. E. Korepin) **80j:81049** 81E10
- Marion, Jacques Le calcul de la mesure de Hausdorff des sous-ensembles parfaits isotypiques de  $\mathbb{R}^n$ . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 2, A65-A68. (Author's summary) **80g:28009** 28A75
- Marion, C. (with Montaldi, E.) On modified normalization conditions in quantum field theory. *Lett. Nuovo Cimento* (2) **26** (1979), no. 7, 193-199. (From the text) **80m:81050** 81E10
- Maritus, D. G. (with Arvillas, A. C.) Partitioning the period of a class of  $m$ -sequences and application to pseudorandom number generation. *J. Assoc. Comput. Mach.* **25** (1978), no. 4, 675-686. (From the summary) **80j:65006** 65C10 (68J05)
- Maritz, J. S. A note on exact robust confidence intervals for location. *Biometrika* **66** (1979), no. 1, 163-166. (Jana Jurečková) **80j:62047** 62G15 (62F35)
- Maritelli, K. H. Velocity-space approach to relativity. *Proceedings of the Conference in Mathematical Analysis and its Applications (Inst. Engrs., Mysore, 1977)*, pp. P25-P41. *Matscience Rep.* **91**, Inst. Math. Sci., Madras, 1978. (Alan L. Macdonald) **80d:83005** 83A05
- On the "black body" spectrum of a "black hole". *Proceedings of the Sixteenth Anniversary Symposium on New Particles—Do They Imply New Physics?* (Inst. Math. Sci., Madras, 1978), Paper No. 9, 14 pp., *Matscience Rep.*, **92**, Inst. Math. Sci., Madras, 1978. (From the summary) **80d:83022** 83C10
- Marjanović, T. P. See Questions of modeling complex systems, **80j:90055**
- Marjanović-Gabela, Nada (with Ljolie, Krunoslav) Constants of motion of the Dirac field deduced from the continuity equation and the potential method. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* **61** (1978), no. 17, 199-210. (From the summary and introduction) **80a:81010a** 81C05 (00A89)
- (with Ljolie, Krunoslav) Constants of motion of Dirac's field derived from the continuity equation and gradient invariant potential method. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* **61** (1978), no. 17, 211-225. (From the summary and introduction) **80a:81010b** 81C05 (00A89)
- Mark, James W.-K. (with Bertin, Giuseppe) Local density-potential relation for spiral density waves in galaxies. *SIAM J. Appl. Math.* **36** (1979), no. 3, 407-420. (W. H. Julian) **80c:85002** 85A05 (35Q99)
- Markarjan, V. N. (with Kazarian, G. G.) Hypocoellipticity criteria in terms of power and strength of operators. (Russian) Studies in the theory of differentiable functions of several variables and its applications, VII. *Trudy Mat. Inst. Steklov.* **150** (1979), 122-142, 322. (Ju. V. Egorov) **80k:35019** 35H05
- Markoev, A. P. See Giacaglia, Giorgio E. O., **80h:34002**
- Markellos, V. V. The three-dimensional general three-body problem: determination of periodic orbits. *Celestial Mech.* **21** (1980), no. 3, 291-309. (Author's summary) **80m:70008** 70F07
- Markett, C. (with Görlich, E.) Mean Cesàro summability and operator norms for Laguerre expansions. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* **2** (1979), 139-148. (D. P. Gupta) **80k:42029** 42C10 (33A65)
- (with Görlich, E.) Estimates for the norm of the Laguerre translation operator. *Numer. Funct. Anal. Optim.* **1** (1979), no. 2, 203-222. (R. A. Askey) **80h:33018** 33A65
- Marković, V. E. Moving singularities of a system of two second-order differential equations. (Russian) *Differencial'nye Uravnenija* **15** (1979), no. 3, 553-554, 575. (C. E. Langenhop) **80f:34005** 34A20
- Markov, B. R. (with Griewank, A. O.; Evans, Denis J.) Singularity-free static lattice energy minimization. *J. Chem. Phys.* **71** (1979), no. 8, 3449-3454. (Authors' summary) **80f:82049** 82A67
- Markham, Thomas L. (with Lau, Cony M.) LU factorizations. (Russian summary) *Czechoslovak Math. J.* **29(104)** (1979), no. 4, 546-550. (Donald W. Robinson) **80j:15010** 15A23
- Marki, L. Radical semisimple classes and varieties of semigroups with zero. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 357-369, *Colloq. Math. Soc. János Bolyai*, **20**, North-Holland, Amsterdam, 1979. (Ju. G. Kolelev) **80h:20085** 20M07
- (with Andr  ka, Hajnal; Makai, E., Jr.; N  meti, Istv  n) Reduced products in categories. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 25-45, *Heyn, Klagenfurt*, 1979. (Paul Bankston) **80h:03049** 03C20 (03C60, 18A30, 18C05)
- Markiewicz, Teresa Approximation des fonctions de deux variables par les moyennes de N  rland des s  ries doubles de Fourier. *Demonstratio Math.* **11** (1978), no. 4, 1071-1081 (1979). (R. L. Cooke) **80g:42014** 42B05
- Markley, Nelson G. (with Paul, Michael E.) Recipe minimal sets. *The structure of attractors in dynamical systems (Proc. Conf., North Dakota State Univ., Fargo, N.D., 1977)*, pp. 179-190, *Lecture Notes in Math.*, **668**, Springer, Berlin, 1978. (H. Keynes) **80h:54051** 54H20
- Invariant simple closed curves on the torus. *Michigan Math. J.* **25** (1978), no. 1, 45-52. (S. Ahmad) **80k:54076** 54H20 (34C35, 58F10)
- Markov, Andrei Andreiev   See Petruszewicz, M., **80j:68072**
- Markov, P. E. Infinitesimal bendings of a two-dimensional surface in four-dimensional flat space. (Russian) *Ukrain. Geom. Sb.* No. 21 (1978), 55-72, 2. (K. Svoboda) **80j:53057** 53C45 (83C99)
- Markov, S. M. Calculus for interval functions of a real variable using extended interval arithmetic. *C. R. Acad. Bulgare Sci.* **31** (1978), no. 4, 373-376. (From the introduction) **80a:65093** 65G05
- Markova, L. N. (with Korn   k, M. T.) A class of queueing systems with discrete time. (Russian. English summary) *Issled. Operacii i ASU* No. 12 (1978), 115-126, 134. (M. A. Fainberg) **80f:60085** 60K25
- Markovi  ev, A. S. The heredity of radicals of rings of type  $(\gamma, \delta)$ . (Russian) *Algebra i Logika* **17** (1978), no. 1, 33-55, 122. (A. M. Slin'ko) **80k:17004** 17A65 (17A30)
- Nil rings of type  $(\gamma, \delta)$ . (Russian) *Algebra i Logika* **17** (1978), no. 2, 181-200, 242. (Harry F. Smith) **80h:17005** 17A30
- Markovsk  i, A. I. (with Ko  eskov, G. V.) A numerical method of solution of mixed problems for a hyperbolic system on the plane. (Russian) *Mat. Fiz. No. 25* (1979), 95-99, 120. (Authors' summary) **80d:65135** 65P05
- Regularizers of certain mixed problems on the plane. (Russian) *Mat. Fiz. No. 25* (1979), 100-106, 120. (J. Kisynski) **80k:35049** 35L40
- Markovsk  i, A. V. (with Sipilina, L. B.) Machine realization of operations with bracketed Boolean expressions. (Russian) *Algorithmic studies in combinatorics (Russian)*, pp. 172-183, 187, "Nauka", Moscow, 1978. (Authors' summary) **80b:94040** 94C10 (68H05)
- Markowitz, Harry See Portfolio theory, 25 years after, **80k:90001**
- Markowsky, George (with Carter, Larry; Floyd, Robert; Gill, John; Wegman, Mark N.) Exact and approximate membership testers. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 59-65, *ACM, New York*, 1978. (Donald B. Johnson) **80h:68037** 68C25 (68B15)

- (with Carter, J. Lawrence; Wegman, Mark N.) Analysis of a universal class of hash functions. *Mathematical foundations of computer science, 1978 (Proc. Seventh Symp., Zakopane, 1978)*, pp. 345-354. *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (K. H. V. Booth) **80a:68131** 68H05 (68B15)
- (with Nau, Dana S.; Woodbury, Max A.; Amos, D. Bernard) A mathematical analysis of human leukocyte antigen serology. *Math. Biosci.* **40** (1978), no. 3-4, 243-270. (Andrew Wohlgenuth) **80a:92063** 92A90 (06A10, 06B15)
- (with Strong, H. R.; Chandra, Ashok K.) Search within a page. *J. Assoc. Comput. Mach.* **26** (1979), no. 3, 457-482. (Authors' summary) **80c:68242** 68H05 (68B15)
- Free completely distributive lattices. *Proc. Amer. Math. Soc.* **74** (1979), no. 2, 227-228. (M. E. Adams) **80c:06017** 06D05
- (with Lin, Shu) On a class of one-step majority-logic decodable cyclic codes. *IBM J. Res. Develop.* **24** (1980), no. 1, 56-63. (From the introduction) **80i:94015** 94B15
- Markasavičius, N. I. (with Džapišvili, N. A.) Necessary conditions of optimality for control systems with variable lag. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruzin. SSR* **96** (1979), no. 2, 285-288. (Editors) **80m:49025** 49B99
- Markström, Karl (with-Storåkers, Bertil) Buckling of cracked members under tension. *Internat. J. Solids and Structures* **16** (1980), no. 3, 217-229. (Authors' summary) **80m:73045** 73H05
- Markus, A. S. (with Semencul, A. A.) Operators that weakly perturb the spectrum. (Russian) *Sibirsk. Mat. Ž.* **19** (1978), no. 3, 646-653, 718. (R. M. Džabar-Zade) **80c:47015** 47A55 (47B37)
- Markuš, I. I. (with Bobočko, V. M.) ★Асимптотические методы в теории линейных сингулярных возмущенных интегро-дифференциальных уравнений. (Russian) [Asymptotic methods in the theory of linear singularly perturbed integro-differential equations] Lecture notes. *Užgorod. Gos. Univ., Užgorod*, 1977. 72 pp. (D. Baňov) **80c:45010** 45J05
- Markuš, T. See Numerical analysis, **80c:65007**
- Markuševič, A. I. ★Краткий курс теории аналитических функций. (Russian) [A short course in the theory of analytic functions] Fourth edition, revised and supplemented. "Nauka", Moscow, 1978. 415 pp. (Editors) **80b:30001** 30-01
- Markvartová, Jitka On improper collineations of  $k$ -nets. (Czech. English and Russian summaries) *Knižnice Odborn. Věd. Spisů Vysoké. Učení Tech. v Brně A* **12** (1976), 123-133 (1978). (V. D. Belousov) **80a:05053** 05B30 (20N05)
- Markov, A. R. Quantum theory and Hilbert space. *J. Math. Phys.* **19** (1978), no. 9, 1841-1846. (Panayotis Tsilimigra) **80a:81006** 81B10 (03G12)
- Marmaris, Nikolaos Représentations linéaires des ensembles ordonnés. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 1, A5-A8. (Author's summary) **80c:06011** 06B15
- Marmazez, V. I. The structure of general triple Lie systems. (Russian) *Dokl. Akad. Nauk BSSR* **21** (1977), no. 11, 972-974, 1051. (G. P. Kukin) **80b:17010** 17B60
- Marmstein, I. I. The relation between the stability of some differential boundary value problems and of the difference problems corresponding to them. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **17**, no. 10 (1977), 52-55. (V. M. Isakov) **80i:35013** 35B35 (39A11, 65P05)
- A property of the spectrum of a family of linear operators and its applications to the study of solutions of difference and operator equations. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* No. 32 (1979), 53-61, 3. (C. Ilioi) **80c:47004** 47A10 (39A10)
- Marmo, G. (with Saletan, E. J.; Simoni, A.) A general setting for reduction of dynamical systems. *J. Math. Phys.* **20** (1979), no. 5, 856-860. (Mark Adler) **80c:58021** 58F05 (34C05, 70H10)
- (with Saletan, E. J.; Simoni, A.) Reduction of symplectic manifolds through constants of the motion. (Italian and Russian summaries) *Nuovo Cimento B* (11) **50** (1979), no. 1, 21-36. (Richard C. Swanson) **80i:70020** 70H99 (58F05)
- (with Balachandran, A. P.; Skagerstam, B. S.; Stern, A.) Magnetic monopoles with no strings. *Nuclear Phys. B* **162** (1980), no. 3, 385-396. (Authors' summary) **80b:81160** 81G10
- (with Balachandran, A. P.; Skagerstam, B. S.; Stern, A.) Spinning particles in general relativity. *Phys. Lett. B* **89** (1980), no. 2, 199-202. (Authors' summary) **80c:83029** 83C99
- Marr, Thomas Proximal limit spaces. *Quaestiones Math.* **2** (1977/78), no. 4, 443-452. (D. C. Kent) **80a:54049** 54E05 (54A20)
- On epireflective subcategories of topological categories. *General Topology Appl.* **10** (1979), no. 2, 175-181. (Lawrence Neff Stout) **80g:18004** 18A40 (18D15, 54A05, 54D10)
- Maroni, P. Sur quelques relations intégrales entre les solutions de l'équation biconfluente de Heun. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **30** (1979), no. 4, 315-332. (H. Hochstadt) **80c:33020** 33A70 (33A30, 34B30)
- Maroma, Ricardo A. (with Yohai, Victor J.) A bivariate test for the detection of a systematic change in mean. *J. Amer. Statist. Assoc.* **73** (1978), no. 363, 640-645. (N. Giri) **80a:62029** 62F03
- (with Yohai, Victor J.) Asymptotic behavior of  $M$ -estimators for the linear model. *Ann. Statist.* **7** (1979), no. 2, 258-268. (B. Ja. Levit) **80c:62025** 62E20 (62F35, 62J05)
- Maroni, Judith (with Tusnády, Gábor) On the construction of confidence intervals for the expectation of a Poisson distribution on the basis of censored data. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 347-352, *Academia, Prague*, 1978. (G. K. Bhattacharyya) **80c:62040** 62F10 (62F25)
- Marot, Jean Topologies d'anneau principal. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 15, 713-715. (J.-P. Lafon) **80i:13015** 13J99
- Limite inductive plate de  $P$ -anneaux. *J. Algebra* **57** (1979), no. 2, 484-496. (Gerhard Pfister) **80b:13008** 13B20 (14B20)
- Marotto, Frederick R. Chaotic behavior in the Hénon mapping. *Comm. Math. Phys.* **68** (1979), no. 2, 187-194. (D. L. Rod) **80m:58026** 58F13
- Marouf, Mohamed Abdelaziz (with Friedman, Arthur D.) Efficient design of self-checking checker for any  $m$ -out-of- $n$  code. Special issue on fault-tolerant computing. *IEEE Trans. Comput.* **27** (1978), no. 6, 482-490. (Izzet Cem Göknaar) **80m:94092** 94C10 (68C05)
- Maroulas, John (with Barnett, Stephen) More on Routh's array and Bézoutian matrices. *Internat. J. Control* **28** (1978), no. 5, 657-664. (Peter J. Moylan) **80a:93050** 93B25
- (with Barnett, Stephen) Greatest common divisor of generalized polynomial and polynomial matrices. *Linear Algebra Appl.* **22** (1978), 195-210. (Marvin Marcus) **80a:15015** 15A24
- (with Barnett, Stephen) A new controllability condition. *IEEE Trans. Automat. Control* **24** (1979), no. 4, 635-637. (Authors' summary) **80c:93015** 93B05
- (with Barnett, Stephen) Properties of Hermite's matrices in stability theory. *Internat. J. Control* **29** (1979), no. 5, 717-732. (William Boykin) **80j:93097** 93D20 (15A09, 15A57)
- (with Barnett, Stephen) Canonical forms for time-invariant linear control systems: a survey with extensions. II. Multivariable case. *Internat. J. Systems Sci.* **10** (1979), no. 1, 33-50. (B. P. Molinari) **80b:93020** 93B10 (93C45)
- (with Barnett, Stephen) Further results on the qualitative theory of generalized polynomials. *J. Inst. Math. Appl.* **23** (1979), no. 1, 33-42. (Authors' summary) **80m:42030** 42C05
- Marques, F. (with Lapedra, R.; Molina, A.) Classical predictive electrodynamics of two charges with radiation: energy and 3-momentum balance and scattering cross sections. II. *J. Math. Phys.* **20** (1979), no. 7, 1316-1320. (Ilija Lukačević) **80c:83023b** 83C50
- Marques de Sá, E. Imbedding conditions for  $\lambda$ -matrices. *Linear Algebra Appl.* **24** (1979), 33-50. (R. C. Thompson) **80g:15017** 15A42 (05A20)
- On the existence of matrices with constrained elements, rows and columns. *Linear Algebra Appl.* **24** (1979), 263-270. (J. W. Moon) **80b:15027** 15A45
- Marquina, A. (with Sanz Serna, Jesús M.) Barreledness conditions on  $c_0(E)$ . *Arch. Math. (Basel)* **31** (1978/79), no. 6, 589-596. (K. Floret) **80b:46010** 46A45 (46A07)
- Marr, D. Representing visual information. Some mathematical questions in biology, IX (Proc. 11th Symp., Denver, Colo., 1977), pp. 101-180, *Lectures on Math. in the Life Sciences*, 10, Amer. Math. Soc., Providence, R.I., 1978. (From the summary) **80i:92005** 92A07
- Marra, R. (with de Martino, S.; de Siena, S.) A note on some confinement criteria. (Italian and Russian summaries) *Nuovo Cimento A* (11) **48** (1978), no. 3, 279-289. (W.-H. Steeb) **80a:82010** 82A05 (00A89)
- (with Miracle-Solé, S.) On the statistical mechanics of the gauge invariant Ising model. *Comm. Math. Phys.* **67** (1979), no. 3, 233-240. (Francesco Guerra) **80c:82070** 82A67 (81E99)
- Marras, A. Renouncing existential presuppositions. *Logique et Anal. (N.S.)* **21** (1978), no. 82-83, 355-363. (David W. Miller) **80c:03013** 03A05 (03B10)
- Marris, A. W. On steady screw motions of a viscous fluid. (Italian summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* **111** (1977), no. 2, 416-428 (1978). (J. C. Burns) **80c:76017** 76C05 (26B99)
- Addition to: "Universal solutions in the hydrostatics of nematic liquid crystals" [Arch. Rational Mech. Anal. **67** (1978), no. 3, 251-303]. *Arch. Rational Mech. Anal.* **69** (1979), no. 4, 323-333. (From the introduction) **80g:82039** 82A60 (35Q99)
- Steady universal motions of Rivlin-Ericksen fluids. *Arch. Rational Mech. Anal.* **69** (1979), no. 4, 335-380. (R. L. Fosdick) **80b:76004a** 76A05 (73F99)
- (with Wang, Chao Chen) Proof that motions obtained in the preceding paper by Marris are universal for all incompressible isotropic simple materials. *Arch. Rational Mech. Anal.* **69** (1979), no. 4, 381-390. (R. L. Fosdick) **80b:76004b** 76A05 (73F99)
- The impossibility of steady screw motions of a Navier-Stokes fluid. *Arch. Rational Mech. Anal.* **70** (1979), no. 1, 47-60. (M. Honda) **80b:76014** 76D05 (35Q10)
- Marrocco, A. (with Pironneau, O.) Optimum design of a magnet with finite elements. *Modelling and optimization of complex systems (Proc. IFIP-TC 7 Working Conf., Novosibirsk, 1978)*, pp. 253-263, *Lecture Notes in Control and Information Sci.*, 18, Springer, Berlin, 1979. (Authors' introduction) **80m:93035** 93C20
- Marry, Pierre (with Verdier, Jean-Louis) Quelques problèmes d'intersections en géométrie riemannienne. *J. Differential Geom.* **12** (1977), no. 3, 345-376. (Editors) **80c:57012** 57R20 (32L99, 53C20)
- Maršák, A. L. (with Vainikko, G.) The rate of convergence of the method of discrete ordinates in the problem of radiation transfer. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **17**, no. 11 (1978), 11-22. (A. Ramm) **80c:65256** 65R20 (45L05)
- Maršáček, Jacob See Stone, Richard, **80d:01021** and Klein, L. R., **80c:01025**
- Marsden, Jerrold E. (with Ball, J. M.; Knops, R. J.) Two examples in nonlinear elasticity. *Journées d'Analyse Non Linéaire (Proc. Conf., Besançon, 1977)*, pp. 41-48, *Lecture Notes in Math.*, 665, Springer, Berlin, 1978. (From the text) **80d:73033** 73C50 (49B99)
- Qualitative methods in bifurcation theory. *Bull. Amer. Math. Soc.* **84** (1978), no. 6, 1125-1148. (R. A. Plastock) **80a:58012** 58E05 (35B32)
- (with Arms, Judith M.) The absence of Killing fields is necessary for linearization stability of Einstein's equations. *Indiana Univ. Math. J.* **28** (1979), no. 1, 119-125. (J. W. Auer) **80j:58020** 58D17 (83C05)
- See also Geometric methods in mathematical physics, **80g:83001**
- Marsh, D. (with Buell, J.; Kalaba, Robert E.) On a boundary value problem in the theory of urine formation. *Appl. Math. Comput.* **5** (1979), no. 1, 55-67. (H. A. DeKleene) **80g:92002** 92A05
- Marshall, Albert W. (with Esary, J. D.) Multivariate distributions with increasing hazard rate average. *Ann. Probab.* **7** (1979), no. 2, 359-370. (Henry W. Block) **80g:62030** 62H05 (60K10, 62N05)
- Marshall, Ch. D. (with Breuer, M.) Banachian differentiable spaces. *Math. Ann.* **237** (1978), no. 2, 105-120. (J. D. Zund) **80b:58010** 58B99 (32K15, 46B99)
- Marshall, John T. (with Pell, John L.) Path-integral evaluation of the space-time propagator for quadratic Hamiltonian systems. *J. Math. Phys.* **20** (1979), no. 7, 1297-1302. (L. S. Schulman) **80b:81020** 81C30 (58D30)
- Marshall, M. V. (with Chuquiqui, Rolando) Constructibility in the impredicative theory of classes. *Mathematical logic (Proc. First Brazilian Conf., State Univ. Campinas, Campinas, 1977)*, pp. 179-202, *Lecture Notes in Pure and Appl. Math.*, 39, Dekker, New York, 1978. (M. Boffa) **80d:03054** 03E45
- Marshall, Murray A. Classification of finite spaces of orderings. *Canad. J. Math.* **31** (1979), no. 2, 320-330. (Thomas C. Craven) **80c:10026** 10C04 (12D15, 15A63)
- Quotients and inverse limits of spaces of orderings. *Canad. J. Math.* **31** (1979), no. 3, 604-616. (Ron Brown) **80f:10021** 10C04 (12D15)
- Marshall, Robert S. An alternative interpretation of superconvergence. *Internat. J. Numer.*



- Methods Engrg.* 14 (1979), no. 11, 1707-1709. (P. G. Ciarlet) **80m:65079** 65N30
- Marshman, B. J. (with Wainwright, J.; Ince, W. C. W.) Spatially homogeneous and inhomogeneous cosmologies with equation of state  $p = \mu$ . *Gen. Relativity Gravitation* 10 (1979), no. 3, 259-271. (C. B. Collins) **80a:83075** 83F05 (35C99)
- Martelli, Mario (with Furi, M.; Vignoli, A.) Contributions to the spectral theory for nonlinear operators in Banach spaces. (Italian summary) *Ann. Mat. Pura Appl.* (4) 118 (1978), 229-294. (Milan Kučera) **80k:47070** 47H12 (58C40, 58E07)
- On forced nonlinear oscillations. *J. Math. Anal. Appl.* 69 (1979), no. 2, 496-504. (Jean Mawhin) **80h:34051** 34C25 (70K30)
- Martellini, M. (with Sodano, P.; Vitiello, G.) Vacuum structure for a quantum field theory in curved space-time. (Italian and Russian summaries) *Nuovo Cimento A* (11) 48 (1978), no. 3, 341-358. (J. G. Taylor) **80a:81087** 81E15 (58E30, 83C45)
- Nonrenormalizability in quantum gravity. (Italian and Russian summaries) *Nuovo Cimento A* (11) 53 (1979), no. 2, 211-220. (S. Deser) **80j:81100** 81M05 (83C45)
- Martens, Roger (with Verbeure, André) The equipartition for quantum systems. *Lett. Math. Phys.* 3 (1979), no. 5, 413-418. (Authors' summary) **80k:82025** 82A15
- Lower bounds for the electric susceptibility. *Phys. A* 97 (1979), no. 2, 455-462. (Author's summary) **80e:78009** 78A25
- Martens, X. M. (with Sarma, P. V. L. N.; Reklaitis, G. V.; Rijckaert, M. J.) A comparison of computational strategies for geometric programs. *J. Optim. Theory Appl.* 26 (1978), no. 2, 185-203. (Authors' summary) **80c:90139** 90C30
- (with Rijckaert, M. J.) Bibliographical note on geometric programming. *J. Optim. Theory Appl.* 26 (1978), no. 2, 325-337. (Authors' summary) **80b:90113** 90C25 (00A15)
- Martensen, E. On geometric inequalities in potential theory. (Russian summary) *Complex analysis and its applications* (Russian), pp. 367-374, 669, "Nauka", Moscow, 1978. (D. H. Armitage) **80a:31006** 31B20
- (with Gerdes, Walter) Das Rothe-Verfahren für die räumlich eindimensionale Wellengleichung. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T367-T368. (J. R. Cannon) **80a:65251** 65P05
- The convergence of the horizontal line method for Maxwell's equations. *Math. Methods Appl. Sci.* 1 (1979), no. 1, 101-113. (I. P. Gavriljuk) **80k:65095** 65N40
- Martí, J. T. An algorithm for computing minimum norm solutions of Fredholm integral equations of the first kind. *SIAM J. Numer. Anal.* 15 (1978), no. 6, 1071-1076. (Abha Ghoshal) **80b:65154** 65R20
- Martí, Jean-André (with Chou, Chin Ch'eng) Un théorème d'unicité sur les hyperfonctions régulières par rapport à une des variables. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 9, A493-A495. (Vazgain Avannisian) **80k:32024** 32A45 (46F15)
- Martí, Kurt Stochastische Dominanz und stochastische lineare Programme. VIII. Oberwolfach-Tagung über Operations Research (1976), pp. 141-160. *Operations Research Verfahren, XXIII*, Hain, Königstein, 1977. (Jaap Wessels) **80b:90105** 90C15
- On stochastic dominance relations in stochastic programming. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes* (Prague, 1978), Vol. B, pp. 35-44. Reidel, Dordrecht, 1978. (Author's summary) **80f:90101** 90C15
- Lösung stochastischer linearer Programme mit "complete recourse" mittels stochastischer Penalty-Methoden. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T491-T494. (Klaus Glaschoff) **80f:90100** 90C15
- ★ Approximationen stochastischer Optimierungsprobleme. *Mathematical Systems in Economics*, 43. Hain, Meisenheim, 1979. iii + 207 pp. ISBN 3-445-01913-4 (G. Tintner) **80g:90009** 90C15
- On solutions of stochastic programming problems by descent procedures with stochastic and deterministic directions. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978), Section 3*, pp. 281-293. *Operations Research Verfahren*, 33. Hain, Meisenheim, 1979. (Klaus Tammer) **80h:90112** 90C15 (90C25)
- Diskretisierung stochastischer Programme unter Berücksichtigung der Problemstruktur. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* 59 (1979), no. 3, T105-T108. (From the introduction) **80h:90111** 90C15
- Martić, Branimir On some systems of partial differential equation and on some classes of nonanalytic functions. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* No. 16 (1976), 133-138. (Wolfgang Tutschke) **80k:35079** 35J60 (30G20, 35C05)
- A remark on partial differential equations which are in connection with nonanalytic functions. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* 61 (1978), no. 17, 21-25. (J. Conlan) **80h:35020** 35C10
- Improvements of some analytic inequalities. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* 61 (1978), no. 17, 85-93. (V. B. Headley) **80j:26013** 26D05 (26D15, 26D20)
- On some solutions of partial differential equations. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* 61 (1978), no. 17, 147-151. (J. Conlan) **80h:35021** 35C10
- Quelques équations fonctionnelles contenant plusieurs fonctions inconnues. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* 61 (1978), no. 17, 159-163. (I. M. Sheffer) **80d:39007** 39B30
- Note sur certaines inégalités d'intégrales. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* 61 (1978), no. 17, 165-168. (V. B. Headley) **80c:26015** 26D15
- On some functional equations. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* 61 (1978), no. 17, 253-258. (I. M. Sheffer) **80d:39006** 39B30
- Martikainen, A. I. Three theorems on the upper limit of sums of independent random variables. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 1, 45-51, 133. (R. J. Tomkins) **80i:60038** 60F15
- An exponential criterion for the law of the iterated logarithm. (Russian. English summary) *Investigations in the theory of probability distributions, IV. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 85 (1979), 158-168, 241, 246. (R. J. Tomkins) **80i:60039** 60F15
- Martikainen, Olli Convolutions of noncommutative analogues of vector measures with applications to operator ideals. *Ann. Acad. Sci. Fenn. Ser. A I Math. Dissertation* No. 18 (1978), 65 pp. (A. Pietsch) **80k:46111** 46L50 (46G10, 47B10, 47D30)
- Martin, André (with Chadani, K.) Scattering theory and dispersion relations for a class of long-range oscillating potentials. *Comm. Math. Phys.* 70 (1979), no. 1, 1-27. (R. G. Newton) **80k:81143** 81F05 (47A40)
- Martin, Brian (with Davies, Brian) Numerical inversion of the Laplace transform: a survey and comparison of methods. *J. Comput. Phys.* 33 (1979), no. 1, 1-32. (Authors' summary) **80b:65106** 65R10
- (with Stokes, Nick) Comparing methods for modelling dispersion in flowing media. *Utilitas Math.* 15 (1979), 307-322. (David Zachmann) **80h:76043** 76R99 (65P05)
- Martin, Christiane (with Burdet, G.; Perrin, M.) About the conformal properties of Yang-Mills fields. *Feynman path integrals* (Proc. Internat. Colloq., Marseille, 1978), pp. 403-409. *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (C. S. Sharma) **80k:81082** 81E10 (57S15)
- Martin, D. Obituary: Robert P. Gillespie. *Proc. Edinburgh Math. Soc.* (2) 21 (1978/79), no. 2, 189-190. (Editors) **80b:01022** 01A70
- Martin, D. H. Some function classes closed under infimal convolution. *J. Optim. Theory Appl.* 25 (1978), no. 4, 579-584. (B. Ross Barnish) **80a:49018** 49A99 (46G99, 90C99)
- Martin, J. See Martin, Jesús
- agular-Martin, J. See Aguilar-Martin, J.
- Martin, Jean-Claude E. Dynamic selection of actuators for lumped and distributed parameter systems. *IEEE Trans. Automat. Control* 24 (1979), no. 1, 70-78. (Author's summary) **80b:93009** 93C55
- On a nonlinear problem of moments of control theory. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 365-368. (Author's summary) **80c:93085** 93C99
- Scanning observability of linear systems. *IEEE Trans. Automat. Control* 24 (1979), no. 3, 489-491. (Author's summary) **80c:93035** 93B07
- Martin, Jesús (with Sanz, J. L.) Slow motion approximation in predictive relativistic mechanics. II. A noninteraction theorem for interactions derived from the classical field theory. *J. Math. Phys.* 20 (1979), no. 1, 25-34. (From the summary) **80k:83062** 83A05
- Martin, John R. Absolute fixed-point sets in compacta. *Colloq. Math.* 39 (1978), no. 1, 41-44. (W. Kuperberg) **80f:54028** 54F40 (54H25)
- (with Nadler, Sam B., Jr.) Examples and questions in the theory of fixed-point sets. *Canad. J. Math.* 31 (1979), no. 5, 1017-1032. (L. E. Ward, Jr.) **80m:54059** 54H25 (54G20)
- Martin, Joseph (with Rosenholtz, Ira) An elementary solution of the monotone mapping problem. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 352-354. (H. W. Lambert) **80a:54014** 54C10 (57N12)
- Martin, Kipp (with Evans, James R.) A note on feasible flows in lower-bounded multicommodity networks. *J. Oper. Res. Soc.* 29 (1978), no. 9, 923-927. (G. Berma) **80c:90059** 90B10
- Martin, Louise (with Reischer, Corina) On the modular nets. *Discrete Math.* 22 (1979), no. 2, 195-196. (From the text) **80c:68159** 68D90 (92A09)
- blanco Martín, María Francisca See Blanco Martín, María Francisca
- Martin, Mircea Almost product structures and derivations. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 2, 171-176. (Yoshio Matsuyama) **80h:53037** 53C15
- Martin, N. F. G. (with Brunk, H. D.) An inequality involving powers of sums of powers. *J. Math. Anal. Appl.* 65 (1978), no. 2, 339-343. (Peter W. Day) **80b:26023** 26D15 (28D05)
- Martin, Philippe A. (with Gruber, Ch.; Lugin, Ch.) Equilibrium equations for classical systems with long range forces and application to the one-dimensional Coulomb gas. *Helv. Phys. Acta* 51 (1978), no. 5-6, 829-866 (1979). (Authors' summary) **80h:82015** 82A15
- (with Buffet, Emmanuel) Erratum: "Dynamics of the open BCS model" (J. Statist. Phys. 18 (1978), no. 6, 585-632). *J. Statist. Phys.* 20 (1979), no. 3, 347. (Editor) **80f:82040** 82A55 (58F10)
- Martin, Robert H., Jr. Asymptotic stability and critical points for nonlinear quasimonotone parabolic systems. *J. Differential Equations* 30 (1978), no. 3, 391-423. (S. Leela) **80g:35011** 35B35 (35K55)
- Asymptotic behavior for semilinear differential equations in Banach spaces. *SIAM J. Math. Anal.* 9 (1978), no. 6, 1105-1119. (D. Ramakrishna Rao) **80a:35015** 35B40 (35K45, 45M99, 45N05)
- A maximum principle for semilinear parabolic systems. *Proc. Amer. Math. Soc.* 74 (1979), no. 1, 66-70. (Lu-San Chen) **80b:35079** 35K50
- Martin, Robert P. Tensor products for  $SL_2(k)$ . *Trans. Amer. Math. Soc.* 239 (1978), 197-211. (G. W. Mackey) **80k:22033** 22E45 (22E50)
- Downes-Martin, S. See Downes-Martin, S.
- Martindale, W. S., III (with Baxter, W. E.) Central closure of semiprime nonassociative rings. *Comm. Algebra* 7 (1979), no. 11, 1103-1132. (Ernest Stitzinger) **80f:17002** 17A99 (17A60)
- (with Baxter, W. E.) Jordan homomorphisms of semiprime rings. *J. Algebra* 56 (1979), no. 2, 457-471. (E. W. Wallace) **80f:16008** 16A12
- Martin-Deschamps, Mireille (with Lewin-Ménégaux, Renée) Applications rationnelles séparables dominantes sur une variété de type général. (English summary) *Bull. Soc. Math. France* 106 (1978), no. 3, 279-287. (Lucile Bégueri) **80m:14008** 14E05
- (with Lewin-Ménégaux, Renée) Surfaces de type général dominées par une variété fixe. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 16, A765-A767. (G. Horrocks) **80e:14011** 14J10
- Martineau, André ★ Oeuvres de André Martineau. With an introduction by André Hirschowitz and a biographical sketch by Laurent Schwartz. *Éditions du Centre National de la Recherche Scientifique (CNRS)*, Paris, 1977. 879 pp. (1 plate). ISBN 2-222-01846-3 (Carlos A. Berenstein) **80h:01038** 01A75 (32-03, 46-03)
- Martineau, E. (with Iazeolla, Giuseppe G.) Some notes on the queueing analysis of the SCAN policy of the walking server. *Calcolo* 15 (1978), no. 1, 27-40. (Authors' summary) **80a:90071** 90B22
- Martinielli, Enrico (with Iazeolla, Giuseppe G.; Pranevicius, Henrikas) A method for the analytical representation of discrete event simulation models. (Russian and Latvian summaries) *Statist. Problemy Upravleniya—Trudy Sem. Processy Optimal. Upravleniya V*



- Sekcija No. 33* (1979), 75-90, 114. (Authors' summary) **80f:93007** 93A10 (68J10)
- Martineau, Marija D.** (with Martynenko, M. D.) Fundamental matrices of some second-order elliptic systems with a parameter in a Riemannian space. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1978, no. 6, 48-53, 140. (V. Djuriković) **80i:35056** 35J15 (53C21)
- Martinez Crespo, H.** See **Martinez Crespo, Juan**
- Martinet, Jacques** Tours de corps de classes et estimations de discriminants. *Séminaire de Théorie des Nombres* (1976-1977), Exp. No. 12, 4 pp., CNRS, Talence, 1977. (K. Masuda) **80f:12009** 12A65
- Corps de nombre de classes 1. *Séminaire de Théorie des Nombres* 1977-1978, Exp. No. 12, 8 pp., CNRS, Talence, 1978. (J. C. Lagarias) **80k:12009** 12A50
- Petits discriminants. *Séminaire Delange-Pisot-Poitou, 19e année: 1977/78, Théorie des nombres, Fasc. 1*, Exp. No. 14, 5 pp., Secrétariat Math., Paris, 1978. (J. C. Lagarias) **80c:12009** 12A45 (10H08)
- Ramirez Martinez, Alcedo A.** See **Ramirez Martinez, Alcedo A.**
- Martinez, Jorge** (with Holland, W. Charles) Accessibility of torsion classes. *Algebra Universalis* 9 (1979), no. 2, 199-206. (V. K. Zaharov) **80g:06021** 06F15 (20D30, 20F60)
- Martinez, José Mario** Three new algorithms based on the sequential secant method. *BIT* 19 (1979), no. 2, 236-243. (Author's summary) **80d:65056** 65H10
- Generalization of the methods of Brent and Brown for solving nonlinear simultaneous equations. *SIAM J. Numer. Anal.* 16 (1979), no. 3, 434-448. (A. O. Garder) **80c:65114** 65H10
- Martinez Alonso, L.** (with Galindo, A.) Kernels and ranges in the variational formalism. *Lett. Math. Phys.* 2 (1977/78), no. 5, 385-390. (Alexander A. Pankov) **80g:58035a** 58F07 (35Q99, 49A21)
- Group-theoretical foundations of classical and quantum mechanics. II. Elementary systems. *J. Math. Phys.* 20 (1979), no. 2, 219-230. (Author's summary) **80g:81027** 81C40 (58F05, 81G40)
- (with Abellanas, L.) Invariants in enveloping algebras under the action of Lie algebras of derivations. *J. Math. Phys.* 20 (1979), no. 3, 437-440. (C. J. Henrich) **80h:17009** 17B35 (81G20)
- On the Noether map. *Lett. Math. Phys.* 3 (1979), no. 5, 419-424. (Author's summary) **80h:81040** 81D99 (49H05)
- (with Abellanas, L.; Galindo, A.) On a paper by J. Rosen: "Necessity and sufficiency of  $f$  being a divergence for vanishing of variational derivatives of  $f$ : general case" [*Lett. Math. Phys.* 3 (1979), no. 3, 237-240; MR 80d:49003]. *Lett. Math. Phys.* 3 (1979), no. 6, 453. (From the text) **80k:49018** 49B99 (58F07)
- Martinez-Amores, Pedro** An application of the invariance principle in functional-differential equations of neutral type. (Spanish) *Rev. Mat. Hisp.-Amer.* (4) 38 (1978), no. 1, 23-37. (F. I. Ize) **80a:34114** 34K20
- Martinez Cegarra, A.** ★Homología y triplets. (Spanish) [Homology and triples] *Álgebra*, 24. Universidad de Santiago de Compostela, Departamento de Álgebra y Fundamentos, Santiago de Compostela, 1978. iv + 137 pp. ISBN 84-7191-046-2 (M. L. Laplaza) **80a:18006** 18C15
- Martinez Crespo, Juan** On some statistical distances between populations. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 3, 38-43, 85. (Tomáš Havránek) **80m:62060** 62H30
- Martinez Gadea, Pedro** (with Rosendo, J. L.) Integrable case of almost tangent structure of order  $K$ . *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 3, 437-448. (F. Brickell) **80j:53042** 53C15
- Martinez-Herrero, R.** Expansion of complex degree of coherence. (Italian and Russian summaries) *Nuovo Cimento B* (11) 54 (1979), no. 1, 205-210. (Author's summary) **80k:78004** 78A10
- Martinez Moreno, J.** JV-algebras. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 1, 47-50. (B. Yood) **80m:46050** 46K05 (17C65)
- Martinez Naveira, Antonio** (with Gray, Alfred; Barros, M.; Vanhecke, Lieven) The Chern numbers of holomorphic vector bundles and formally holomorphic connections of complex vector bundles over almost complex manifolds. *J. Reine Angew. Math.* 314 (1980), 84-98. (Bang-yen Chen) **80m:32010** 32C10 (53C15, 57R20)
- Martinez T., Wilfrido** (with García-Máñez, A.) Unicoherent plane Peano sets are  $\alpha$ -unicoherent. *Pacific J. Math.* 82 (1979), no. 2, 493-497. (M. M. McWaters) **80k:54071** 54F55 (54F25)
- Martinez Verduch, J. R.** (with Torres Iglesias, M.) Existence and conjugation of certain injectors in finite  $\alpha$ -solvable groups. (Spanish) *Rev. Mat. Hisp.-Amer.* (4) 38 (1978), no. 1, 38-45. (M. Jesús Iranzo) **80c:20033** 20D25 (20D10)
- Martini, Franca** An extension of Poincaré's duality theorem. (Italian. English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 24 (1979), 17-24. (L. Kaup) **80f:55001** 55M05 (32C35)
- Martini, R.** (with Besjes, J.) A generalization of Hartogs theorem. *Differential equations and applications (Proc. Third Scheveningen Conf., Scheveningen, 1977)*, pp. 223-235, North-Holland Math. Studies, 31, North-Holland, Amsterdam, 1978. (B. A. Taylor) **80c:35039** 35J99 (32D20)
- Martynjuk, A. A.** (with Obolenskii, A. Ju.) Investigation of the stability of autonomous comparison systems. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 28* (1978), 24 pp. (A. Somolinos) **80j:34059** 34D20
- (with Kosolapov, V. I.) The comparison principle and the averaging method in the problem of the stability of nonasymptotic steady-state motions under constantly acting perturbations. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 33* (1978), 26 pp. (A. Somolinos) **80j:34060** 34D20 (34C29)
- (with Obolenskii, A. Ju.) A Poincaré-Schur algorithm in stability theory. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 11, 1980-1989, 2107. (A. Somolinos) **80c:34056** 34D20 (34A25)
- Technical stabilization of controlled motions. (Russian) *Mat. Fiz. No. 24* (1978), 22-27, 121. (Author's review) **80c:93102** 93D05 (34D20)
- (with Mitropol'skii, Ju. O.) Some trends in studies of the stability of periodic motions and the theory of nonlinear oscillations. (Russian) *Prikl. Meh.* 14 (1978), no. 3, 1-13, 140. (Authors' summary) **80h:70023** 70K20 (34C15)
- A theorem on the averaging principle in nonlinear mechanics. (Russian) *Prikl. Meh.* 14 (1978), no. 10, 129-132, 144. (Snezana Hristova) **80a:34066** 34D10 (70D99)
- (with Kosolapov, V. I.) The stability of mechanical systems in a variable communications model. (Russian) *Prikl. Meh.* 14 (1978), no. 12, 125-128, 144. (A. I. Panasyuk) **80c:93097** 93D05 (34D20)
- (with Mitropol'skii, Ju. O.) Some questions on the comparison method in nonlinear mechanics. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 6, 823-829, 862. (D. Bobrowski) **80b:34063** 34D20 (34C11)
- (with Gutowski, Roman) ★Интегральные неравенства и устойчивость движения. (Russian) [Integral inequalities and stability of motion] *"Naukova Dumka", Kiev*, 1979. 271 pp. (C. Avramescu) **80k:34070** 34D20 (26D10, 34C11, 34D10, 39C05, 70K20)
- The Ljapunov-Caplygin comparison principle for standard systems. (Russian) *Mat. Fiz. No. 25* (1979), 49-53, 119. (R. R. Ahmerov) **80k:34075** 34D15 (34C29)
- Martynjuk, A. E.** Some applications of methods of Galerkin's type and combined type to nonlinear equations. (Russian) *Mat. Fiz. No. 24* (1978), 27-33, 121. (B. Jankó) **80m:65046** 65J15
- The Galerkin-Krylov method and its rate of convergence. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 6, 757-767, 861. (Ja. I. Al'ber) **80b:65076** 65J10 (47A50)
- Martynjuk, V. T.** Some questions of the approximation of functions in the Hausdorff metric. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 3, 318-325, 427. (V. Veselinov) **80h:42005** 42A50
- Martin-Löf, Anders** The equivalence of ensembles and the Gibbs phase rule for classical lattice systems. *J. Statist. Phys.* 20 (1979), no. 5, 557-569. (Nicolae Angelescu) **80h:82007** 82A05
- di Martino, Lino** See **Di Martino, Lino**
- de Martino, S.** (with de Siena, S.; Marra, R.) A note on some confinement criteria. (Italian and Russian summaries) *Nuovo Cimento A* (11) 48 (1978), no. 3, 279-289. (W.-H. Steeb) **80a:82010** 82A05 (00A89)
- Furioli Martinoli, Antonella** See **Furioli Martinoli, Antonella**
- Martinov, T. L.** (with Kibal'nikova, S. I.) Solution of a planar problem of static thermoelasticity for an anisotropic body with a cavity in the presence of a given heat flux density on its surface. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 9 (1979), 103-110, 133. (Authors' summary) **80d:73122** 73U05
- Martin Pelaez, Elena** Norm properties of operators in relation to the absolute summability of a Hilbert space. (Spanish) *Rev. Mat. Hisp.-Amer.* (4) 38 (1978), no. 4-5, 242-250. (D. A. Herrero) **80h:47027** 47B10
- Martins, J. S.** Embeddings of Sobolev spaces of fractional order. *Proc. Roy. Soc. Edinburgh Sect. A* 79 (1977/78), no. 1-2, 1-24. (Pavel Doktor) **80a:46018** 46E35
- Martins, L. C.** (with Podio-Guidugli, Paolo) A new proof of the representation theorem for isotropic, linear constitutive relations. *J. Elasticity* 8 (1978), no. 3, 319-322. (J. Dunwoody) **80a:73005** 73B10 (22E43)
- Martins, Pedro de A. P.** Determination of large-order spherical Coulomb functions with an argument lying between the origin and the common point of inflection. *J. Comput. Phys.* 31 (1979), no. 2, 293-299. (M. Lawrence Glasser) **80f:33012** 33A45 (34A50)
- Martins, Roberto Vieira** Some aspects of resonance problems of celestial mechanics. (Portuguese) *Proceedings of the Ninth Brazilian Mathematical Colloquium (Póços de Caldas, 1973)*, Vol. II (Portuguese), pp. 301-309, Inst. Mat. Pura Apl., São Paulo, 1977. (Editors) **80c:70016** 70F15 (34E15, 70H05)
- Sur la classification des orbites périodiques instables d'après Poincaré. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 21, A1023-A1025. (Author's summary) **80b:70035** 70M10 (58E05, 58F22)
- Martinson, L. K.** (with Granik, I. S.) Motion of boundary of support of generalized solution in magnetic rheology problems. *Magnit. Gidrodinamika* No. 1 (1978), 13-16. (Russian); translated as *Magnetohydrodynamics* 14 (1978), no. 1, 9-13. (A. S. Aleksiev) **80g:35120** 35Q99 (76W05)
- Martirosojan, Z. A.** The axially symmetric contact problem for two cylinders. (Russian. English and Armenian summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* 32 (1979), no. 2, 14-25, 85. (Author's summary) **80f:73078** 73T05
- Martos, Katalin** (with Körner, János) How to encode the modulo-two sum of binary sources. *IEEE Trans. Inform. Theory* 25 (1979), no. 2, 219-221. (N. C. Mohanty) **80c:94009** 94A29
- A coding theorem for the discrete memoryless broadcast channel. *IEEE Trans. Inform. Theory* 25 (1979), no. 3, 306-311. (M. C. Cheng) **80c:94003** 94A05 (94A24)
- Martusins, B.** (with Pol'skii, B. S.) Numerical solution of one-dimensional steady-state problems of the theory of semiconductor devices. (Russian) *Latv. Mat. Eģeodzinik* No. 22 (1978), 133-143, 282. (From the introduction) **80c:78023** 78A55
- Martyn, Jerzy** A study of job routing behavior in an operating system. (Polish. English and Russian summaries) *Podstawy Sterowania* 8 (1978), no. 4, 445-453. (Author's summary) **80f:68028** 68B20 (90B35)
- Balance problems of processing capacity in a hierarchical queueing network. (Polish. English and Russian summaries) *Podstawy Sterowania* 9 (1979), no. 2, 105-123. (W. Kwasowicz) **80h:68024** 68C15 (90B22)
- Martynenko, M. A.** (with Ulitko, A. F.) Stress condition near the top of a spherical cut in an infinitely elastic medium. (Russian) *Prikl. Meh.* 14 (1978), no. 9, 15-23, 141. (Authors' summary) **80b:73049** 73M20
- Martynenko, M. D.** See **Martineau, Marija D.**
- Martynenko, M. D.** (with Mitenko, V. S.) A boundary value problem for the Lamé system in a space with a smooth slit. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1978, no. 4, 121-124, 140. (Authors' summary) **80c:73030** 73C99 (35Q99)
- (with Martineau, Marija D.) Fundamental matrices of some second-order elliptic systems with a parameter in a Riemannian space. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1978, no. 6, 48-53, 140. (V. Djuriković) **80i:35056** 35J15 (53C21)
- (with Sipka, I. G.) A boundary value problem for a metaharmonic fourth-order equation in regions with a gap. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 5, 396-398, 475. (G. Widenhain) **80k:31003** 31A30 (30E25, 35J40)
- Martynjuk, A. A.** See **Martynjuk, A. A.**
- Martynjuk, A. E.** See **Martynjuk, A. E.**
- Martynjuk, V. T.** See **Martynjuk, V. T.**
- Martynov, G. V.** ★Критерии омега-квадрата. (Russian) [Omega-square tests] *"Nauka", Moscow*, 1978. 79 pp. (Sándor Csörgő) **80g:62028** 62G10

- Martynov, I. I. (with Petrovskii, G. N.) The asymptotic behavior of the solutions of a linear differential system with a periodic coefficient matrix of the second kind. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 12, 2279–2281, 2304. (G. P. Los') 80c:34067 34D03
- Martynov, I. P. (with Jablonskii, A. I.) On the solutions of a class of third-order systems. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 10, 1774–1782, 1917. (E. S. Čičkin) 80c:34068 34A25
- Properties of the solutions of a third-order differential equation. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 9, 780–783, 859. (E. S. Čičkin) 80m:34036 34C05
- Martynovič, T. L. See Martynovič, T. L.
- Maruoka, Akira (with Kimura, Masayuki) Injectivity and surjectivity of parallel maps for cellular automata. *J. Comput. System Sci.* 18 (1979), no. 1, 47–64. (E. Ikaunienka) 80c:68044 68D20
- Maruševič, I. On  $\alpha$ -convex functions. *Mathematica (Cluj)* 19(42) (1977), no. 2, 163–178 (1978). (J. V. Ryff) 80c:26014 26A51
- On bilinear programming. *Anal. Numer. Theor. Approx.* 7 (1978), no. 1, 67–79. (From the introduction) 80c:90078 90C20
- Cutting plane method for determining the pre-optimal solution in a linear program. (Romanian. English summary) *Stud. Cerc. Mat.* 30 (1978), no. 2, 169–179. (S. Cruceanu) 80j:90077 90C05
- Marušák, Pavel On oscillation of solutions of differential inequalities with retarded argument. (Czech and Russian summaries) *Časopis Pěst. Mat.* 104 (1979), no. 3, 281–294, 311. (N. P. Bhatia) 80c:34097 34K15 (34A40)
- Maruyama, Masaki On algebraic vector bundles. (Japanese) *Sūgaku* 29 (1977), no. 4, 322–333 (1978). (T. Oda) 80c:14004 14F05
- Marvill, Earl Convergence results for Schubert's method for solving sparse nonlinear equations. *SIAM J. Numer. Anal.* 16 (1979), no. 4, 588–604. (John B. Kiousleidis) 80c:65057 65H10
- Marx, K. D. (with Cordey, J. G.; McCoy, M. G.; Mirin, A. A.; Rensink, M. E.) A new expansion method for computing  $\omega$  for reactant distribution functions. *J. Comput. Phys.* 28 (1978), no. 1, 115–121. (From the introduction) 80c:65032 65D15
- at Mary, D. F. See St. Mary, D. F.
- Maryanski, Fred J. (with Thomason, Michael G.) Properties of stochastic syntax-directed translation schemata. *Internat. J. Comput. Inform. Sci.* 8 (1979), no. 2, 89–110. (Authors' summary) 80c:68289 68F15 (68D25, 94A15)
- Maryland, Wallace, Jr. Decomposition of finite connected partially ordered sets. *J. Combin. Inform. System Sci.* 3 (1978), no. 4, 238–244. (Pavol Hell) 80m:06002 06A10 (05C20)
- März, Roswitha Parametrische Ein- und Mehrschrittverfahren für Anfangswertaufgaben. *Berichte der Tagung "Numerische Behandlung Gewöhnlicher Differentialgleichungen" (Humboldt Univ., Berlin, 1978), pp. 50–70, Seminarberichte, 11, Humboldt Univ., Berlin, 1978. (Eckehard Wagenführer) 80j:65026 65L05*
- Marziani, Marziano (with Borrelli, Alessandra) Resonance effects in the interaction between radio waves in a magneto-active plasma. (Italian. English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 24 (1979), 147–166. (Authors' summary) 80c:78014 78A40 (82A45)
- Marzullo, Angelo See Topics in artificial intelligence, 80c:68102
- Marzulli, Pietro Bilateral approximation of the solutions of equations and systems using interval analysis. (Italian. English summary) *Boll. Un. Mat. Ital. B (5)* 15 (1978), no. 1, 1–8. (E. R. Hansen) 80c:65094 65G05 (65H10)
- Masahke, Kanno Endomorphisms of modules over maximal orders. *Proceedings of the 10th Symposium on Ring Theory (Shinsu Univ., Matsumoto, 1977), pp. 95–98, Okayama Univ., Okayama, 1978. (Lawrence S. Levy) 80i:16006 16A08*
- Maslov, L. A. Instability of minimal cones in Lobachevskii space. (Russian) *Ukrain. Geom. Sb. No. 21 (1978), 72–81, 3. (Esther Portnoy) 80c:53070 53C42 (53A35)*
- Dimensions of stable domains on certain minimal submanifolds of a sphere. (Russian) *Ukrain. Geom. Sb. No. 22 (1979), 103–108, 4. (Claudia Simionescu) 80j:53054 53C40*
- Maslov, S. O. Certain infinite systems in wave diffraction theory. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 2 (1979), 86–89, 155. (V. E. Korepin) 80g:78011 78A45 (35C99)*
- Masani, P. An outline of vector graphs and conditional Banach spaces. *Linear spaces and approximation (Proc. Conf., Math. Res. Inst., Oberwolfach, 1977), pp. 71–89, Internat. Schriftenreihe Numer. Math., 40, Birkhäuser, Basel, 1978. (J. F. Smith) 80d:46038 46B99 (46A99)*
- Propagators and dilations. *Probability theory on vector spaces (Proc. Conf., Trzebiezowice, 1977), pp. 95–117, Lecture Notes in Math., 656, Springer, Berlin, 1978. (R. Shonkwiler) 80g:47004 47A20 (60G10)*
- Masat, Francis E. A generalization of right simple semigroups. *Fund. Math.* 101 (1978), no. 2, 159–170. (J. B. Kim) 80g:20072 20M10
- A generalization of right simple semigroups. *Nanta Math.* 11 (1978), no. 1, 22–34. (S. Sribala) 80c:20079 20M10
- A useful characterization of a normal subgroup. *Math. Mag.* 52 (1979), no. 3, 171–173. (From the text) 80c:20001 20–01
- Mascherbauer, N. D. A. (with Prado, L. O. C.) A Bayesian approach to edge detection in images. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 36–43. (Authors' summary) 80m:68080 68G10 (94A05)
- Mas-Colell, Andreu (with Araujo, Aloisio) Notes on the smoothing of aggregate demand. *J. Math. Econom.* 5 (1978), no. 2, 113–127. (G. Chichilnisky) 80c:90032 90A16 (58C25)
- A selection theorem for open graph correspondences with star-shaped values. *J. Math. Anal. Appl.* 68 (1979), no. 1, 273–275. (Douglass L. Grant) 80c:54059 54H25 (46A30, 54E60, 90A16)
- Homeomorphisms of compact, convex sets and the Jacobian matrix. *SIAM J. Math. Anal.* 10 (1979), no. 6, 1105–1109. (G. Chichilnisky) 80c:55005 55M20 (57R50, 90A10)
- Mase, Shigeru Random compact convex sets which are infinitely divisible with respect to Minkowski addition. *Adv. in Appl. Probab.* 11 (1979), no. 4, 834–850. (Franz Streit) 80c:60021 60D05
- Mascherick, Peter H. Désintégration à densité  $L_p$  et mesures singulières. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 2, A63–A64. (Author's summary) 80g:28007 28A50
- Mashhood, Asif On pure-high subgroups of abelian groups. *Kyungpook Math. J.* 18 (1978), no. 1, 11–15. (E. A. Walker) 80b:20078 20K35 (20K40)
- Mashhour, A. S. (with Tantawy, O. A.) Pairwise-Aull and Thron axioms. (Arabic summary) *Bull. Fac. Sci. Assiut Univ.* 3 (1974), no. 1, 341–350 (1978). (C. E. Aull) 80d:54038 54E55
- (with Tantawy, O. A.) A note on pairwise-normality. (Arabic summary) *Bull. Fac. Sci. Assiut Univ.* 3 (1974), no. 1, 351–356 (1978). (C. E. Aull) 80d:54037 54E55
- de Masl, A. See De Masl, A.
- Masli, Samuel On the fixed point index and the Nielsen fixed point theorem of symmetric product mappings. *Fund. Math.* 102 (1979), no. 2, 143–158. (Gilles Fournier) 80i:55002 55M20 (54H25)
- Masilov, M. M. ★Уравнение геодезических сетей. (Russian) [Smoothing of geodesic nets] "Nedra", Moscow, 1979. 368 pp. (Editor's description) 80c:86006 86A30 (51M15, 51N20, 65S05)
- Masja, Vladimir See Mas'ja, V. G.
- Maskin, Eric (with Fishburn, Peter C.; Gehrlein, William V.) A progress report on Kelly's majority conjectures. *Econom. Lett.* 2 (1979), no. 4, 313–314. (Authors' summary) 80g:90011 90A08
- Mas'kin, N. M. Transversality conditions of matrix impulses. (Russian) *Questions of applied mathematics and mechanics*, No. 5 (Russian), pp. 82–89, 208, Curaf. Gos. Univ., Cheboksary, 1977. (From the text) 80c:93098 93C99 (49B99)
- See also Current problems of geometry and its applications, 80c:53001
- Maskit, B. (with Jorgensen, T.; Marden, A.) The boundary of classical Schottky space. *Duke Math. J.* 46 (1979), no. 2, 441–446. (A. D. Mednyh) 80c:32028 32G15 (30F40)
- (with Marden, A.) On the isomorphism theorem for Kleinian groups. *Invent. Math.* 51 (1979), no. 1, 9–14. (C. Earle) 80i:30037 30F40 (57M99)
- Maslov, M. V. (with Kuz'mina, M. G.) Asymptotic characteristics of a polarized radiation field in the case of small absorption. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 4, 868–872. (Nina B. Maslova) 80g:82048 82A70 (45M05, 85A25)
- Massey, John Myron Class numbers of real cyclic number fields with small conductor. *Compositio Math.* 37 (1978), no. 3, 297–319. (Wells Johnson) 80c:12005 12A35
- On the first factor of the class number of prime cyclotomic fields. *J. Number Theory* 10 (1978), no. 3, 273–290. (T. Metsänkylä) 80i:12004 12A35 (12A50)
- Masljankina, L. A. (with Frijazinov, I. V.) Approximation of an elliptic and a parabolic equation on an arbitrary grid. (Russian) *Čisl. Metody Meh. Splošn. Sredy* 8 (1977), no. 5, 132–146. (B. I. Kvasov) 80g:65104 65N20
- Maslov, B. P. (with Horoiun, L. P.) Foundations of a theory for predicting electromechanical properties of inhomogeneous piezoelectrics. (Russian) *Prikl. Meh.* 15 (1979), no. 8, 3–7, 140. (Authors' summary) 80i:73062 73R05
- Maslov, E. M. (with Karpman, V. I.) Evolution of solitons of the modified Korteweg-de Vries equation under the action of perturbations. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 3, 581–583. (Piero Bassanini) 80c:81031 81C12 (35Q20, 86A10)
- Maslov, S. Ju. Macroevolution as deduction process. Automaton-theoretical foundations of psychology and biology. II. *Synthese* 39 (1978), no. 3, 417–434. (Philip L. Quinn) 80b:92018 92A10 (03D03)
- Maslov, V. I. (with Dobrohotov, S. Ju.) Asymptotic behavior of a spectral boundary value problem for a nonlinear equation for a semi-conductor. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 4, 897–900. (Erich Miersemann) 80d:35121 35P30 (78A99)
- Maslov, V. P. (with Cupin, V. A.) Necessary conditions for the existence of infinitely narrow solitons in gas dynamics. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 2, 298–300. (A. A. Arsen'ev) 80i:76036 76N15 (35Q20)
- (with Karasev, M. V.) Quasiclassical soliton solutions of the Hartree equation. Newtonian interaction with screening. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 2, 235–244. (Authors' summary) 80i:81078 81G99 (45K05)
- (with Dobrohotov, S. Ju.) Resonance phenomena in the nonlinear equation of a regular semiconductor  $\hbar^2 \Delta u = \sinh(u)$ . (Russian. English summary) Boundary value problems of mathematical physics and related questions in the theory of functions. II. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 84 (1979), 35–44, 310–311, 317. (Authors' summary) 80c:82065 82A65 (78A40)
- Maslova, M. I. On Toeplitz games. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* 1978, no. 4, 63–67. (Irinel Dragan) 80c:90130 90D05
- Maslova, N. B. Stationary problems for the Boltzmann equation for large Knudsen numbers. (Russian) *Aerodynamics of rarefied gases*, No. 9 (Russian), pp. 139–155, 239, Leningrad. Univ., Leningrad, 1978. (Author's summary) 80m:7604b 76P05 (45K05)
- Maslova, N. V. (with Štelik, V. G.) Mathematical models of the optimal quality production level in a production unit. (Russian. English summary) *Issled. Operacij i ASU No. 13* (1979), 13–20, 132. (Authors' summary) 80g:90122 90C50 (90C11)
- Maslovskaja, L. V. The convergence of a difference scheme for the problem of the strong bending of thin plates. (Russian) *Čisl. Metody Meh. Splošn. Sredy* 9 (1978), no. 1. *Modelirovanie*, 113–124. (Author's summary) 80b:73036 73K10 (65P05)
- The convergence of variational-difference methods for a nonlinear boundary value problem of the theory of flexible plates. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 4, 943–950, 1068. (A. Ženišek) 80i:73059 73K10 (65N10)
- Maslowe, S. A. (with Benney, D. J.) The evolution in space and time of nonlinear waves in parallel shear flows. *Stud. Appl. Math.* 54 (1975), no. 3, 181–205. (Zbl 322:76028) 80m:76045 76E99
- Maslowski, A. Finite elements concept in state identification of large scale distributed parameters systems. *Modeling, identification and control in environmental systems (Proc. IFIP Working Conf. Modeling and Simulation of Land, Air and Water Resources Systems, Ghent, 1977), pp. 61–77, North-Holland, Amsterdam, 1978. (Marwan Simaan) 80b:93045 93B30 (65N30)*
- dal Maso, Gianni See Dal Maso, Gianni
- Mason, A. W. (with Majed, Abdul) Solvable-by-finite subgroups of  $GL(2, F)$ . *Glasgow Math. J.* 19 (1978), no. 1, 45–48. (Ulrich Dempwolff) 80c:20050 20G20
- (with Stothers, W. W.) Remarks on a theorem of L. Greenberg on the modular



- group. *Pacific J. Math.* **78** (1978), no. 2, 385-395. (K. Wohlfahrt) **80c:20959** 20H10  
(with Dickson, N. K.) On maximal nonparabolic normal subgroups of the modular group. *Proc. Amer. Math. Soc.* **77** (1979), no. 2, 167-173. (W. W. Siethers) **80j:20047** 20H05 (10D07, 20H10)
- Mason, D. P. The electromagnetic field tensor in the MHD approximation in general relativity. *Tensor (N.S.)* **32** (1978), no. 3, 272-274. (Elisa Udeschini Brinis) **80b:83031** 83C50
- Mason, E. A. (with Weinert, U.) Generalized Ernst-Einstein relations for nonlinear transport coefficients. *Phys. Rev. A* (3) **21** (1980), no. 2, 681-690. (Authors' summary) **80c:82083** 82A70 (82A35)
- Mason, J. C. Near-best  $L_\infty$  and  $L_1$  approximations to analytic functions on two-dimensional regions. *Multivariate approximation (Sympos., Univ. Durham, Durham, 1977)*, pp. 115-135, Academic Press, London, 1978. (C. Dierieck) **80c:41001** 41A10 (30E10)
- Mason, J. H. Matroids as the study of geometrical configurations. *Higher combinatorics (Proc. NATO Advanced Study Inst., Berlin, 1976)*, pp. 133-176, NATO Adv. Study Inst. Ser., Ser. C: Math. and Phys. Sci., 31, Reidel, Dordrecht, 1977. (Thomas Brylawski) **80c:05037** 05B35
- Mason, Robert L. (with Gunst, Richard F.) Some considerations in the evaluation of alternate prediction equations. *Technometrics* **21** (1979), no. 1, 55-63. (A. I. Khuri) **80c:62048** 62J05
- Masotto, G. (with Gutkowski, D.; Valdes, M. V.) On the sufficiency of Bell's conditions. (Italian and Russian summaries) *Nuovo Cimento B* (11) **50** (1979), no. 2, 323-343. (L. Streit) **80c:81004** 81B05
- Matsuyoshi, N. K. (with Hainullin, E.) A system of integro-differential equations with a contour integral. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* **1979**, no. 1, 41-47, 91. (Hans Kaper) **80c:45018** 45K05
- Maur, Elias (with Cambanis, Stamatis) Signal identification after noisy nonlinear transformations. *IEEE Trans. Inform. Theory* **26** (1980), no. 1, 50-58. (Authors' summary) **80c:94010** 94A12
- Maus, Enrico (with Morro, Angelo) A dynamical approach to relativistic continuum thermodynamics. (French summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* **29** (1978), no. 4, 423-454 (1979). (Gérard A. Maugin) **80c:80001** 80A05
- Relative continuum mechanics in general relativity. I. Kinematical foundations. (Italian summary) *Ann. Mat. Pura Appl.* (4) **117** (1978), 311-337. (Author's summary) **80c:83045** 83C55 (58D30)
- Relative continuum mechanics in general relativity. II. The Lagrangian viewpoint. *Ann. Mat. Pura Appl.* (4) **121** (1979), 59-76. (Author's summary) **80c:83033** 83C99 (73B05)
- (with Bampi, Franco) A note on the definition of spatial volumes in relativistic continuum mechanics. (Italian summary) *Boll. Un. Mat. Ital. A* (5) **16** (1979), no. 1, 68-75. (Gérard A. Maugin) **80c:83031** 83C55 (58A25)
- Maus, Silvio Approximation of fixed points by Cesàro's means of iterates. (Italian summary) *Rend. Istit. Mat. Univ. Trieste* **9** (1977), no. 1-2, 127-133 (1978). (I. A. Rus) **80c:47049** 47H10
- (with Roux, Delfina) A fixed point theorem for generalized nonexpansive mappings. (Italian summary) *Boll. Un. Mat. Ital. A* (5) **15** (1978), no. 3, 624-634. (Norman Dancer) **80c:47088** 47H10
- Masabó, Ivar Positive eigenvalues for elliptic equations with discontinuous nonlinearities. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **15** (1978), no. 3, 814-827. (J. R. Kuttler) **80c:35051** 35J65
- (with Stuart, Charles A.) Elliptic eigenvalue problems with discontinuous nonlinearities. *J. Math. Anal. Appl.* **66** (1978), no. 2, 261-281. (Y. I. Kannai) **80f:35102** 35P30 (35J65)
- (with Stuart, Charles A.) Positive eigenvectors of  $k$ -set contractions. *Nonlinear Anal.* **3** (1979), no. 1, 35-44 (1978). (Norman Dancer) **80c:47073** 47H09
- Masaretti, A. (with Aiello, A.; Burattini, E.; Ventriglia, F.) Towards a general principle of evaluation for approximate algorithms. (French summary) *RAIRO Inform. Théor.* **13** (1979), no. 3, 227-239. (From the summary) **80c:68027** 68C25
- Masner, D. W. Polynomial interpolation in several complex variables. *J. Approx. Theory* **24** (1978), no. 1, 18-34. (Michel Waldschmidt) **80d:10054** 10F35 (14K22, 32A30)
- (with Neumann, Michael) On the square roots of strictly quasi-accretive complex matrices. *Linear Algebra Appl.* **28** (1979), 135-140. (G. N. de Oliveira) **80j:15011** 15A24 (15A48, 15A57)
- Massey, B. S. (with Clayton, B. R.) Exact similar solution for an axisymmetric laminar boundary layer on a circular cone. *AIAA J.* **17** (1979), no. 7, 785-786. (G. Wilks) **80f:76011** 76D10 (35Q10)
- Massey, Fred A. (with Worth, R. E.) Interior equilibrium solutions of optimal control problems. *Math. Biosci.* **42** (1978), no. 1-2, 31-35. (J. M. Skowronski) **80c:92031** 92A15 (49A10)
- Massey, W. A. (with Morrison, J. A.) Calculation of steady-state probabilities for content of buffer with correlated inputs. *Bell System Tech. J.* **57** (1978), no. 9, 3097-3117. (Authors' summary) **80m:94093** 94C10
- Masmino, F. M. (with Bahar, Leon Y.; Kwatny, Harry G.) Direct and inverse variational characterization of linear nonconservative systems. *Hadronic J.* **1** (1978), no. 3, 976-1011. (Authors' summary) **80c:81078** 81G25
- (with Kwatny, Harry G.; Bahar, Leon Y.) Linear nonconservative systems with asymmetric parameters derivable from a Lagrangian. *Hadronic J.* **2** (1979), no. 5, 1159-1177. (T. K. Caughey) **80j:70010** 70H35
- Masmon, André (with Strauss-Kahn, Dominique) Le temps dans l'analyse des phénomènes économiques: processus stochastiques et interprétation des données synchroniques. (English and Spanish summaries) *Ann. I.N.S.E.E.* No. 29 (1978), 63-114. (Authors' summary) **80c:90045** 90A20
- Mason, Gerald M. (with Agarwal, Vinod K.) A functional form approach to test set coverage in tree networks. *IEEE Trans. Comput.* **28** (1979), no. 1, 50-52. (G. Saucier) **80c:94048** 94C15
- (with Agarwal, Vinod K.) Recursive coverage projection of test sets. *IEEE Trans. Comput.* **28** (1979), no. 11, 865-870. (Authors' summary) **80j:94036** 94C10
- Martin, C. Wayne (with Thompson, Joe F.) Elliptic systems and numerical transformations. *J. Math. Anal. Appl.* **62** (1978), no. 1, 52-62. (N. D. Kopčevskij) **80c:65134** 65N99
- Mastjanica, V. S. (with Šelko, M. A.) Construction of a quadrature formula for the integral with a Cauchy kernel with the aid of polygons. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* **1978**, no. 3, 18-21, 86. (H. M. Möller) **80c:65025** 65D30
- Application of parabolic splines to the approximate computation of a singular integral. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 2, 124-126, 143. (Walter Gautschi) **80f:65028** 65D32
- Mastrangelo, Michèle Ser Mastrangelo-Dehen, Michèle
- Mastrangelo, Victor (with Mastrangelo-Dehen, Michèle) Entropie, paramètres thermodynamiques, information associée aux événements et aux expériences. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **30** (1979), no. 4, 295-314. (N. D. Sengupta) **80m:94028** 94A17 (62B10)
- (with Mastrangelo-Dehen, Michèle) Information associée à une expérience. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 17, A855-A858. (Authors' summary) **80c:94009** 94A15
- (with Mastrangelo-Dehen, Michèle) Expériences informatives et expériences nodales. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 18, A883-A884. (Authors' summary) **80c:94007** 94A15
- Mastrangelo-Dehen, Michèle (with Mastrangelo, Victor) Entropie, paramètres thermodynamiques, information associée aux événements et aux expériences. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **30** (1979), no. 4, 295-314. (N. D. Sengupta) **80m:94028** 94A17 (62B10)
- Propriété de Lindeberg sur les ouverts fins. (English summary) *Bull. Sci. Math. (2)* **103** (1979), no. 4, 401-407. (Mark Pinsky) **80c:60101** 60J65 (31C15)
- (with Mastrangelo, Victor) Information associée à une expérience. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 17, A855-A858. (Authors' summary) **80c:94009** 94A15
- (with Mastrangelo, Victor) Expériences informatives et expériences nodales. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 18, A883-A884. (Authors' summary) **80c:94007** 94A15
- Processus de diffusion multigroupe dans un domaine fixe ou variable. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 23, A1071-A1074. (Author's summary) **80c:60100** 60J60
- Différentiabilité stochastique des fonctions finement harmoniques. (English summary) *Invent. Math.* **51** (1979), no. 1, 15-27. (J. C. Taylor) **80c:60006** 60J45 (31B05)
- Mastroianni, Giuseppe On the approximation of continuous functions by linear operators. (Italian. English summary) *Calcolo* **14** (1977), no. 4, 343-368 (1978). (D. D. Stancu) **80c:41018** 41A35 (41A63)
- (with Occorsio, Mario Rosario) A generalization of the Bernstein operator. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) **44** (1977), 151-169 (1978). (D. D. Stancu) **80c:41019** 41A35 (41A10, 41A25)
- Masubuchi, Masami (with Furusho, Junji; Kanoh, Hideaki) Observers for bilinear distributed parameter processes. *Control of distributed parameter systems (Proc. Second IFAC Sympos., Coventry, 1977)*, pp. 219-229, IFAC, Düsseldorf, 1978. (Authors' summary) **80c:93045** 93B07
- Masuda, Etsuo (with Noshita, Kohei; Machida, Hajime) On the expected behaviors of the Dijkstra's shortest path algorithm for complete graphs. *Inform. Process. Lett.* **7** (1978), no. 5, 237-243. (From the introduction) **80c:68022** 68C05 (68-04, 68E10)
- Masuda, Tatsuya (with Fujii, Katsuhiko) An approach to dynamic optimal control problem with multiple criteria. *Tech. Rep. Osaka Univ.* **29** (1979), no. 1492-1516, 383-393. (Authors' summary) **80c:90081** 90C31
- Masunaga, Yoshifumi A probabilistic automaton model of the NRM, HDX HDLC procedure. *Comput. Networks* **2** (1978), no. 6, 442-453. (From the summary) **80c:94004** 94A05 (68D35)
- Masur, E. F. (with Mróz, Z.) Nonstationary optimality conditions in structural design. *Internat. J. Solids and Structures* **15** (1979), no. 6, 503-512. (Authors' summary) **80c:73053** 73K99
- Masur, Howard (with Hubbard, John) Quadratic differentials and foliations. *Acta Math.* **142** (1979), no. 3-4, 221-274. (C. Earle) **80c:30047** 30F99 (32G15, 57R30)
- Masuyama, Hiroshi (with Ae, Tadashi; Yoshida, Noriyoichi) On the realization of hazardless asynchronous sequential circuits. *Systems-Comput.-Controls* **8** (1977), no. 3, 59-66 (1979). (Jan Grabowski) **80c:94034** 94C10 (68D20)
- (with Yoshida, Noriyoichi) On the realization of a fault-tolerant asynchronous sequential circuit protected against multi-faults. *Systems-Comput.-Controls* **8** (1977), no. 3, 67-76 (1979). (Jan Grabowski) **80c:94035** 94C10 (68D20)
- machado Mata, Jesus A. See Machado Mata, Jesus A.
- Matahachi, Tomomi (with Tsutsumi, Masayoshi) On a periodic problem for pseudo-parabolic equations of Sobolev-Galpern type. *Math. Japon.* **22** (1977/78), no. 5, 535-553. (D. Ramakrishna Rao) **80c:34086** 34G10 (35K99)
- (with Tsutsumi, Masayoshi) Periodic solutions of semilinear pseudoparabolic equations in Hilbert space. *Funkcial. Ekvac.* **22** (1979), no. 1, 51-66. (R. E. Showalter) **80j:34085** 34G99 (34A60, 35K99, 47H05)
- (with Tsutsumi, Masayoshi) On some nonlinear pseudoparabolic equations. *J. Differential Equations* **32** (1979), no. 1, 65-75. (R. E. Showalter) **80c:34083** 34G20 (35K70, 47H17)
- Matalon, Moshe (with Ludford, G. S. S.) The asymptotic derivation of inola and S responses for chambered diffusion flames. *SIAM J. Appl. Math.* **37** (1979), no. 1, 107-123. (Authors' summary) **80d:80015** 80A25
- Matsuno, Hiroshi Convergence of solutions of one-dimensional semilinear parabolic equations. *J. Math. Kyoto Univ.* **18** (1978), no. 2, 221-227. (N. Chafee) **80c:35016** 35B40 (35K55)
- (with Yamaguti, Masaya) Euler's finite difference scheme and chaos. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 3, 78-80. (P. J. Holmes) **80d:58043** 58F13 (34A50, 39A10)
- Asymptotic behavior and stability of solutions of semilinear diffusion equations. *Publ. Res. Inst. Math. Sci.* **15** (1979), no. 2, 401-454. (Jagdish Chandra) **80c:35046** 35K60 (35B40, 92A09)
- Matarasso, Silvano Elliptic problems on the plane in Sobolev spaces with a weight. (Italian) *Ricerche Mat.* **27** (1978), no. 1, 3-31. (E. Giusti) **80c:35049** 35J40
- (with Troisi, Mario) Elliptic differential operators in Sobolev spaces with a weight.



- (Italian) *Ricerche Mat.* 27 (1978), no. 1, 83-108. (G. Geymonat) **80k:35035** 35J40
- Matas, V. Curves of zero relative velocity in a generalized restricted problem of three bodies. (Russian summary) *Bull. Astronom. Inst. Czechoslovakia* 30 (1979), no. 1, 52-58. (Author's summary) **80k:70011** 70F07
- Matasov, V. I. Movable singularities of a second-order system. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 11, 2076-2078, 2110. (Author's summary) **80d:34034** 34C05 (34A20)
- Mateev, M. D. (with Volobuev, I. P.; Kadyševskii, V. G.; Mir-Kasimov, R. M.) Equations of motion for scalar and spinor fields in four-dimensional non-Euclidean momentum space. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 3, 363-372. (Authors' summary) **80i:81089** 81M05
- Matej, Henryk (with Gnot, Stanisław; Szulga, Teofil) An accurate test for testing the Hardy-Weinberg equilibrium hypothesis. (Polish) *Mat. Stat.* (3) 15 (1979), 99-105. **80j:92005** 92A10 (62F03)
- Matějčková, V. Eine interessante Beziehung zwischen der Bahn eines Punktes und dem Oval. *Vorträge von der Tagung Geometrie und Anwendungen (Gaussig, 1977)*, pp. 70-72. *Weiterbildungszentrum Math. Kybernet. Rechenztech.*, 28, Tech. Univ. Dresden, Dresden, 1978. (J. Hoschek) **80m:51005** 51E15
- Mateos Mateos, Felipe Classification of congruent symmetric matrices defined over a finite field. (Spanish) *Gaceta Mat.* (1) (Madrid) 30 (1978), no. 3-4, 74-85. (B. Levinger) **80b:15034** 15A63
- Materna, Pavel Theory of types and data description. *Kybernetika (Prague)* 14 (1978), no. 5, 313-327. (P. Štěpánek) **80b:68119** 68H05 (03B99)
- An intensional approach to questions. *Kybernetika (Prague)* 15 (1979), no. 3, 161-192. (N. B. Cocchiarella) **80m:03062** 03B60
- Matoran, Zoré See Matheron, Georges
- Matoronjan, R. H. (with Gribanov, Ju. I.) Completion of normed spaces. (Russian) *The constructive theory of functions and functional analysis (Russian)*, pp. 28-32. Kazan. Univ., Kazan, 1977. (From the text) **80e:46041** 46M35 (46B99)
- Mathai, A. M. (with Saxena, Ram Kishore) ★The  $H$ -function with applications in statistics and other disciplines. *Halsted Press [John Wiley & Sons]*, New York-London-Sidney, 1978. xii + 192 pp. ISBN 0-470-26380-6 (R. G. Buschman) **80a:33007** 33A35 (62E10, 62H05)
- A new approach to multivariate statistical distributions. *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. 1 (Portuguese), pp. 319-330. *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Yasuko Chikuse) **80e:62034** 62H10
- An axiomatic foundation for the multivariate measure of affinity with applications in social statistics. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 353-357. *Academia, Prague*, 1978. (Alfred E. Tong) **80f:62056** 62H05 (62P25)
- On the non-null distributions of test statistics connected with exponential populations. *Comm. Statist. A—Theory Methods* 8 (1979), no. 1, 47-55. (Mir Ali) **80f:62013** 62E15
- The exact distributions and the exact percentage points for testing equality of variances in independent normal populations. *J. Statist. Comput. Simulation* 9 (1979), no. 3, 169-182. (P. R. Krishnaiah) **80m:62048** 62H10
- de Mathan, Bernard (with Fresnel, Jean) Algèbres  $L^1$   $p$ -adiques. (English summary) *Bull. Soc. Math. France* 106 (1978), no. 3, 225-260. (Neal Koblitz) **80d:12014** 12B40 (43A25)
- Sur un problème de densité modulo 1. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 5, A277-A279. (Author's summary) **80a:10072** 10K05 (10L10)
- Mathar, John N. Area preserving twist homeomorphism of the annulus. *Comment. Math. Helv.* 54 (1979), no. 3, 397-404. (Carl P. Simon) **80k:58068** 58F10 (54H25, 55M99)
- Matheron, G. The infinitesimal erosions. *Geometrical probability and biological structure: Buffon's 200th anniversary (Proc. Buffon Bicentenary Symp., Paris, 1977)*, pp. 251-269. *Lecture Notes in Biomath.*, 23, Springer, Berlin, 1978. (L. A. Santaló) **80b:52008** 52A20 (53C65)
- Matheron, Georges ★Случайные множества и интегральная геометрия. (Russian) [Random sets and integral geometry] Translated from the English by V. P. Nosko. Edited by V. M. Maksimov. "Mir", Moscow, 1978. 318 pp. (Editors) **80f:60014** 60D05
- Matheson, A. A multiplier theorem for analytic functions of slow mean growth. *Proc. Amer. Math. Soc.* 77 (1979), no. 1, 53-57. (V. Kabailla) **80j:30048** 30D55
- Mathews, J. A. Primal and dual game theoretic solutions with applications to decentralized control. *Differential games and control theory (Proc. Third Kingston Conf., Part A, Univ. Rhode Island, Kingston, R.I., 1978)*, pp. 171-195. *Lecture Notes in Pure and Appl. Math.*, 44, Dekker, New York, 1979. (Authors' summary) **80g:90144** 90D99 (90C50)
- Mathewson, Frank (with Kotowitz, Yehuda) Advertising, consumer information, and product quality. *Bell J. Econom.* 10 (1979), no. 2, 566-588. (Authors' summary) **80g:90004** 90A05
- Mathias, A. R. D.  $0^*$  and the  $p$ -point problem. *Higher set theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1977)*, pp. 375-384. *Lecture Notes in Math.*, 669, Springer, Berlin, 1978. (A. Kanamori) **80f:03062** 03E55 (54A35)
- Mathiesen, P. E. Prediction functions. *Scand. J. Statist.* 6 (1979), no. 1, 1-21. (John E. Hewitt) **80b:62004** 62A10 (62F99)
- Mathieu, Jean (with Gence, J. N.; Schon, J. P.) Justification des approximations de Boussinesq pour la description d'une turbulence thermique et cinématique homogène. (English summary) *J. Mécanique* 17 (1978), no. 2, 299-321. (J. D. Atkinson) **80b:76014** 76F05 (65N99)
- Mathis, F. H. (with Reddien, G. W.) Ritz-Treffitz approximations in optimal control. *SIAM J. Control Optim.* 17 (1979), no. 2, 307-310. (Ja. I. Al'ber) **80e:49022** 49D15 (41A15)
- Mathon, Rudolf A note on the graph isomorphism counting problem. *Inform. Process. Lett.* 8 (1979), no. 3, 131-132. (Toshimasa Watanabe) **80b:68056** 68C25
- Mathur, Asha A note on  $S$ -closed spaces. *Proc. Amer. Math. Soc.* 74 (1979), no. 2, 350-352. (Robert A. Herrmann) **80e:54024** 54D20 (54G05)
- Mathur, B. L. (with Krishna, Shri) Some results involving the multiple  $H$  function. *Kyungpook Math. J.* 18 (1978), no. 2, 239-244. (C. K. Sharma) **80a:33008** 33A35
- Results involving the product of Laguerre polynomials and the generalized function of  $n$  variables. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 22 (1979), no. 1, 21-24. (Author's summary) **80b:33020** 33A65
- Mathur, K. C. (with Kashyap, B. R. K.) A generalised information generating function. *J. Math. Sci.* 10 (1975), 13-20 (1976). (Authors' summary) **80g:94030** 94A17
- Matheider-Matibet, O. See Matheider-Matibet, O.
- Matignon, Michel Sous-corps fermés du complété de la clôture algébrique d'un corps local. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 23, A1051-A1054. (Author's summary) **80e:12019** 12B15
- Matijević, Ju. V. See Aho, A.; et al., **80g:68036** and *Studies in constructive mathematics and mathematical logic*, **80j:03005**
- Matijević, J. (with Anderson, D. D.) Graded  $\pi$ -rings. *Canad. J. Math.* 31 (1979), no. 3, 449-457. (R. M. Fossum) **80b:13023** 13F99 (16A03)
- Matkovskii, A. P. The solvability of a boundary value problem for equations with bounded operator coefficients. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 3, 320-325, 336. (M. Ráb) **80k:34020** 34B05 (34G10)
- Matkowski, J. Integrable solutions of a linear functional inequality. *General inequalities (Proc. First Internat. Conf., Math. Res. Inst., Oberwolfach, 1976)*, I, pp. 213-215. *Birkhäuser, Basel*, 1978. (B. Crstici) **80b:39006** 39C05 (39B10)
- Matkovsky, Bernard J. (with Sivašinskii, G. I.) Propagation of a pulsating reaction front in solid fuel combustion. *SIAM J. Appl. Math.* 35 (1978), no. 3, 465-478. (Richard J. Field) **80e:80009** 80A25 (35B32)
- (with Kapila, A. K.) Reactive-diffuse systems with Arrhenius kinetics: multiple solutions, ignition and extinction. *SIAM J. Appl. Math.* 36 (1979), no. 2, 373-389. (Richard J. Field) **80e:80009** 80A30
- (with Schuss, Zeev) The exit problem: a new approach to diffusion across potential barriers. *SIAM J. Appl. Math.* 36 (1979), no. 3, 604-623. (Authors' summary) **80e:82011** 82A05 (60J70)
- (with Sivašinskii, G. I.) Acceleration effects on the stability of flame propagation. *SIAM J. Appl. Math.* 37 (1979), no. 3, 669-685. (Authors' summary) **80g:80005** 80A25 (35B99, 76E15)
- (with Sivašinskii, G. I.) An asymptotic derivation of two models in flame theory associated with the constant density approximation. *SIAM J. Appl. Math.* 37 (1979), no. 3, 686-699. (Authors' summary) **80g:80006** 80A25 (35B99, 76N15)
- Matlis, Eben The higher properties of  $R$ -sequences. *J. Algebra* 50 (1978), no. 1, 77-112. (B. Stenström) **80a:13013** 13C15 (13D99, 18G10)
- de Matos, Mário Carvalho The uniform compact-ported topology on spaces of holomorphic mappings. (Portuguese) *Proceedings of the Tenth Brazilian Mathematical Colloquium (Poços de Caldas, 1975)* (Portuguese), Vol. 1, pp. 279-287. *Cons. Nac. Desenvolvimento Ci. Tec., Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Richard M. Aron) **80g:46042** 46G20 (58C10)
- On separately holomorphic and Silva holomorphic mappings. *Advances in holomorphy (Proc. Sem. Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 509-520. *North-Holland Math. Studies*, 34, North-Holland, Amsterdam, 1979. (Ph. Noverraz) **80j:46073** 46G20 (32A99)
- Matrosov, V. M. (with Anapol'skii, L. Ju.; Irtegov, V. D.) Methods of constructing Lyapunov functions. (Hungarian) *Alkalmaz. Mat. Lapok* 3 (1977), no. 3-4, 405-456 (1978). (Editors) **80k:34076** 34D20 (70K15, 93D05)
- (with Vasil'ev, S. N.) Comparison principle for automatic derivation of theorems. I. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 2, 60-69, 220 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 2, 39-49 (1979). (Authors' summary) **80e:68067** 68G15
- (with Vasil'ev, S. N.) A comparison principle for theorem deducing. II. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 4, 40-49 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 4, 32-40 (1979). (Authors' introduction) **80j:68078** 68G15 (93A10)
- (with Vasil'ev, S. N.; Karatuev, V. G.; Novikov, M. A.; Sumenkov, E. A.; Jadykin, S. A.) Machine deduction of theorems on dynamic properties with vector functions of Lyapunov. *Kybernetika (Kiev)* 1979, no. 2, 27-36 (Russian); translated as *Cybernetics* 15 (1979), no. 2, 184-194. (Authors' summary) **80m:68082** 68G15
- Matsuba, Ikuo (with Suzuki, Masuo; Sogo, Kiyoshi; Ikeda, Hiroshi; Chikama, Terumi; Takano, Hiroshi) Real-space renormalization group approach to critical dynamics. Migdal approximation and other new methods. *Progr. Theoret. Phys.* 61 (1979), no. 3, 864-880. (Authors' summary) **80e:82022** 82A25
- Matsubara, Masakazu (with Watanabe, N.) An infeasible method of large-system optimization by direct coordination of subsystem inputs. *J. Optim. Theory Appl.* 24 (1978), no. 3, 437-448. (D. E. Catlin) **80b:65142** 65K10
- (with Onogi, Katsuki) Point-transformation analysis of relay control systems. *IEEE Trans. Automat. Control* 24 (1979), no. 5, 730-735. (Authors' summary) **80j:93085** 93C99
- Matsubara, Takeo (with Kamiya, Kenji) Self-consistent Einstein model and theory of anharmonic surface vibration. I. One-dimensional model. *Progr. Theoret. Phys.* 58 (1977), no. 3, 767-776. (Authors' summary) **80i:82051** 82A67
- Matsuda, Akira Transformations from concurrent charts into tangential contact circular charts. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 24(28) (1978), no. 1-2, 47-51. (J. Hoschek) **80d:53046** 53C99 (53A04)
- An algebraic addition-theorem for Weierstrass' elliptic function and nomograms. (Czech and Russian summaries) *Apl. Mat.* 24 (1979), no. 5, 372-381. (Y. L. Luke) **80i:33004** 33A25 (65D99)
- Matsuda, Isao Correction to my article: "Dirichlet series corresponding to Siegel modular forms of degree 2, level  $N$ " [Sci. Papers College Gen. Ed. Univ. Tokyo 28 (1978), no. 1, 21-49; MR 58 116530]. *Sci. Papers College Gen. Ed. Univ. Tokyo* 29 (1979), no. 1, 29-30. (J. Spilker) **80b:10036** 10D20
- Matsuda, Michihiko The group of automorphisms of a differential algebraic function field. *Nagoya Math. J.* 74 (1979), 87-94. (K. Okugawa) **80b:12022** 12H05
- Matsuda, Minoru On general defining points and the unique positive extension of certain positive linear functionals. *Publ. Res. Inst. Math. Sci.* 14 (1978), no. 2, 321-325. (A. J. Lazar) **80e:46034** 46E15 (46A55)
- Inequalities for Green functions and logarithmic capacities. *Rep. Fac. Sci. Shizuoka*

- Unio. 12 (1978), 7-12. (H. Renggli) **80k:31002** 31A15 (30C85, 31A10)
- Matsumoto, Ryūki Torsion-free abelian semigroup rings. V. *Bull. Fac. Sci. Ibaraki Univ. Ser. A No. 11* (1979), 1-37. (Saraswathi Subbiah) **80g:20081** 20M25
- Matsumoto, T. A variational analysis of the collision of solitary solutions. *Lett. Nuovo Cimento* (2) 24 (1979), no. 7, 207-211. (From the text) **80e:81113** 81M05 (49H05)
- Matsumoto, Takehiko (with Takatsu, Shinzo) Characterization of satisficing decision criterion. *Inform. Sci.* 17 (1979), no. 2, 131-151. (Ernst-Wilhelm Zachow) **80i:90174** 90D35
- (with Takatsu, Shinzo) Algebraic properties of satisficing decision criterion. *Inform. Sci.* 17 (1979), no. 3, 221-237. (Dennis J. Packard) **80g:90065** 90A05
- Matsumoto, Toshimitsu On the equivariant self-homotopy equivalences of spheres. *J. Math. Soc. Japan* 31 (1979), no. 1, 69-83. (Czes Kosniowski) **80h:55010** 55Q05 (57S17)
- Matsumoto, Kineo (with Hirayama, Kazuo) Some properties of the minimum feedback arc set for a directed graph. *Mem. Defense Acad.* 18 (1978), no. 2, 79-85. (D. H. Younger) **80j:05070** 05C20 (05C38)
- Matsumoto, H. (with Wadati, Miki; Takahashi, Yasushi; Umezawa, H.) Quantum field theory of crystals and dislocations. *Fortschr. Phys.* 26 (1978), no. 6, 357-396. (P. M. van den Broek) **80k:82037** 82A60 (35Q99)
- Matsumoto, Kōzō On hypersurfaces of almost product Riemannian manifolds. *Bull. Yamagata Univ. Natur. Sci.* 9 (1979), no. 4, 515-521. (Bang-yan Chen) **80k:53076** 53C25 (53C40)
- On certain connections in almost paracontact manifolds. *TRU Math.* 15 (1979), no. 1, 23-30. (J. R. Vanstone) **80k:53054** 53C15
- Matsumoto, Makoto Finsler spaces with the  $h$ -curvature tensor  $P_{ijk}$  of a special form. *Rep. Math. Phys.* 14 (1978), no. 1, 1-13. (M. Yoshida) **80k:53019** 53B40
- (with Shimada, Hideo) On Finsler spaces with 1-form metric. *Tensor (N.S.)* 32 (1978), no. 2, 161-169. (Hassan Akbar-Zadeh) **80e:53030** 53B40
- (with Hōjō, Shun-ichi) A conclusive theorem on C-reducible Finsler spaces. *Tensor (N.S.)* 32 (1978), no. 2, 225-230. (Siegfried Steiner) **80k:53046** 53B40
- (with Shibata, Chōkō) On semi-C-reducibility,  $T$ -tensor=0 and  $S$ -likeness of Finsler spaces. *J. Math. Kyoto Univ.* 19 (1979), no. 2, 301-314. (J. K. Beem) **80k:53045** 53B40
- Matsumoto, Masamichi Functional equations in emitting atmospheres. *Astrophys. and Space Sci.* 59 (1978), no. 2, 373-387. (From the text) **80a:85002** 85A20 (39B05, 45K05)
- Matsumoto, Masao (with Kanamori, Hitoshi) Correlation of irreducible representations in symplectic space groups and their application to morphic effects on two-phonon infrared and Raman spectra. *Mem. Kyoto Tech. Univ. Sci. Tech.* 27 (1978), 50-68. (Authors' summary) **80e:82054** 82A99 (20C35)
- Matsumoto, Naoki (with Takahashi, Shin-ichi) On the realizability of state equations with RC 3-terminal network. *IEEE Trans. Circuits and Systems* 27 (1980), no. 1, 53-57. (Authors' summary) **80m:94076** 94C05
- Matsumoto, Shigenori There are two isotopic Morse-Smale diffeomorphisms which cannot be joined by simple arcs. *Invent. Math.* 51 (1979), no. 1, 1-7. (S. Ju. Piljugin) **80d:58033** 58F09 (58F14)
- Matsumoto, Takashi (with Chua, Leon O.; Makino, Atsuhiko) On the implications of capacitor-only cutsets and inductor-only loops in nonlinear networks. *IEEE Trans. Circuits and Systems* 26 (1979), no. 10, 828-845. (Authors' summary) **80h:94044** 94C05
- Matsumoto, Yukio On the equivalence of algebraic formulations of knot cobordism. *Japan. J. Math. (N.S.)* 3 (1977), no. 1, 81-103. (J. P. Levine) **80k:57016** 57Q45
- Secondary intersectional properties of 4-manifolds and Whitney's trick. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 2*, pp. 99-107. *Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I., 1978.* (R. C. Kirby) **80e:57017** 57N99 (57R20)
- Wild embeddings of piecewise linear manifolds in codimension two. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 393-428. *Academic Press, New York*, 1979. (Paul F. Duval) **80k:57012** 57N45 (57Q35)
- (with Venema, Gerard A.) Failure of the Dehn lemma on contractible 4-manifolds. *Invent. Math.* 51 (1979), no. 3, 205-218. (R. C. Kirby) **80k:57013** 57M35 (57N15)
- Matsumaga, Hiromichi On equivariant line bundles over some surfaces. *Mem. Fac. Sci. Shimane Univ.* 12 (1978), 15-18. (Knud Lønsted) **80a:14007** 14F05
- Matsumo, Hiroshi (with Tanaka, Hatsuaki; Kaneko, Seiko) Efficient encoding of sources with memory. *IEEE Trans. Inform. Theory* 25 (1979), no. 2, 221-225. (Authors' summary) **80h:94019** 94A29 (68B15)
- Matsumshima, Hiroshi (with Okamoto, Kiyosato) Nonexistence of torsion free flat connections on a real semisimple Lie group. *Hiroshima Math. J.* 9 (1979), no. 1, 59-60. (Y. Matsumshima) **80f:53026** 53C05 (22E60)
- Matsumshima, Yozo On the intermediate cohomology group of a holomorphic line bundle over a complex torus. *Osaka J. Math.* 16 (1979), no. 3, 617-631. (D. Lieberman) **80j:32046** 32L10 (14K20, 14K30)
- Matsumyama, Katsuke (with Kawamura, Ryohkichi; Hamada, Takao) On the alternation of explanatory variables in the single equation econometric model. (Japanese. English summary) *Rep. Univ. Electro-Comm.* 29 (1978/79), no. 1, 97-105. (Takeaki Kariya) **80g:62081** 62P20
- (with Kawamura, Ryohkichi; Takahashi, Jun-ichi) On multicollinearity. *Rep. Univ. Electro-Comm.* 29 (1978/79), no. 2, 241-250. (Authors' summary) **80i:62092** 62P20
- Matsumzaki, Nagi Statistical structure with admitting transformation group. *Bull. Tokyo Gakuji Univ.* (4) 30 (1978), 41-50. (A. L. Rukhin) **80h:62007** 62A05
- On additivity of informations. *Bull. Tokyo Gakuji Univ.* (4) 30 (1978), 51-53. (I. Vajda) **80e:62008** 62B10 (94A17)
- Matsumzaki, Toshiro The deficient sphere formula described in *Jugai-roku*. (Japanese) *Sigakushi Kenkyū No. 81* (1979), 1-3. (S. Hitotumatu) **80k:01015** 01A32 (51-03)
- On *San-pō ketsugi shō*. (Japanese) *Sigakushi Kenkyū No. 81* (1979), 34-47. (S. Hitotumatu) **80k:01016** 01A32 (51-03)
- Matsumzawa, Kazumitsu (with Tohma, Yoshihiro) A method of multiple-error-correction for computer main memory. *Systems-Comput.-Controls* 8 (1977), no. 5, 71-78 (1978). (Authors' summary) **80h:68001** 68A05 (94B35)
- Matsumzawa, T. Construction of fundamental solutions of hypoelliptic equations by the use of a probabilistic method. *Nagoya Math. J.* 72 (1978), 103-126. (E. M. Saak) **80d:35038** 35H05 (60J99)
- Matz, A. (with Abdrabbo, N. A.) A cusum test for detecting change in the transfer functions of open loop stochastic systems. *J. Comput. Appl. Math.* 4 (1978), no. 2, 147-154. (Tata Subba Rao) **80e:62151** 62M15
- Mattai, Giulio The gravitational instability, in the sense of Jeans, of a dissipative plasma in the presence of the Hall effect. (Italian. English summary) *Ann. Mat. Pura Appl.* (4) 117 (1978), 387-395. (Attay Kovetz) **80g:85004** 85A30
- Jeans's gravitational instability of an anisotropic plasma with generalized polytropic equations of state. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 64 (1978), no. 2, 170-176. (Author's summary) **80i:83023** 83C55
- Mattai, Jean-François (with Moussu, Robert) Intégrales premières d'une forme de Pfaff analytique. (English summary) *Ann. Inst. Fourier (Grenoble)* 28 (1978), no. 4, 229-237, xi. (Antoinette Sec) **80h:58003** 58A10 (32C25, 32L99, 57R30)
- (with Moussu, Robert) Existence d'intégrales premières faibles d'un germe de forme intégrable, holomorphe. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 6, A383-A385. (Authors' summary) **80e:58044** 58F14 (34A20, 58A15)
- Matthes, Klaus (with Warmuth, Walter; Mecke, Joseph) Bemerkungen zu einer Arbeit: "Integral and differential characterizations of the Gibbs process" [Math. Nachr. 88 (1979), 105-115; MR 80i:60081a] von Nguyen Xuan Xanh und Hans Zessin. *Math. Nachr.* 88 (1979), 117-127. (Olav Kallenberg) **80i:60081b** 60C55 (60K35)
- Matthews, Geoffrey Sausages and bananas. *Math. Gaz.* 62 (1978), no. 421, 145-156. (1 plate). (Richard L. Francis) **80e:90002** 00A05
- Matthews, Laurence Matroids on the edge sets of directed graphs. *Optimization and operations research (Proc. Workshop, Univ. Bonn, Bonn, 1977)*, pp. 193-199. *Lecture Notes in Econom. and Math. Systems*, 157. Springer, Berlin, 1978. (J. M. S. Simões-Pereira) **80a:05103** 05C20 (05B35)
- Duality in independence systems. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978), Section 2*, pp. 173-179. *Operations Research Verfahren*, 32. Hain, Meisenheim, 1979. (C. H. Scott) **80j:05043** 05B35 (90C10)
- Matthews, P. T. (with Feldman, G.) Mass splitting in SU(4). *Ann. Physics* 115 (1978), no. 1, 24-42. (T. Janssen) **80e:81104** 81G20 (22E70)
- Matthias, Hans-Heinrich Eine Differentialmetrik auf  $S^2$  mit nur zwei geschlossenen Geodätischen. *Beiträge zur Differentialgeometrie, Heft 1*, pp. 27-50. *Bonner Math. Schriften*, 102. Univ. Bonn, Bonn, 1978. (John J. O'Sullivan) **80d:53042** 53C60 (58E10, 58F05)
- Matthies, H. (with Strang, Gilbert; Christiansen, E.) The saddle point of a differential program. *Energy methods in finite element analysis*, pp. 309-318. Wiley, Chichester, 1979. (I. B. Medvedevskii) **80e:49019** 49B40 (73E20)
- Matthies, Hermann Existence theorems in thermoplasticity. (French and German summaries) *J. Mécanique* 18 (1979), no. 4, 695-712. (Author's summary) **80k:73032** 73E99
- Matthiesen, G. A heterogeneous algebraic approach to some problems in automata theory, many-valued logic and other topics. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 193-211. *Heya, Klagenfurt*, 1979. (Cristian Calude) **80h:68050** 68D30 (18Bxx)
- Mattila, Kirti Normal operators and proper boundary points of the spectra of operators on a Banach space. *Ann. Acad. Sci. Fenn. Ser. A I Math. Dissertationes No. 19* (1978), 48 pp. (T. A. Gillespie) **80j:47031** 47B15 (47A10)
- On proper boundary points of the spectrum and complemented eigenspaces. *Math. Scand.* 43 (1978), no. 2, 363-368 (1979). (J. P. Williams) **80i:47003** 47A10 (46H99, 47B15)
- Mattila, Pertti Densities of measures on the real line. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 1, 53-61. (Ivan Dobrakov) **80e:28006** 28A12
- Mattlioli, Franco Wave-induced oscillations in harbours of variable depth. *Comput. & Fluids* 6 (1978), no. 3, 161-172. (Author's summary) **80e:76012** 76B99 (65R20)
- Some integral formulations of the scalar Helmholtz equation. *Lett. Nuovo Cimento* (2) 21 (1978), no. 8, 288-290. (Philip W. Schaefer) **80e:35017** 35J05 (35C15)
- Mattlioli, G. (with Cini, M.; De Maria, M.; Nicolò, F.) Wave packet reduction in quantum mechanics: a model of a measuring apparatus. *Found. Phys.* 9 (1979), no. 7-8, 479-500. (Authors' summary) **80g:81005** 81B10
- Fruta-Mattos, Luis A. See Fruta-Mattos, Luis A.
- Mattos, Don A. Discrete subsets of proximity spaces. *Canad. J. Math.* 31 (1979), no. 2, 225-230. (William Lindgren) **80k:54028** 54E05
- (with Hatzenbuehler, James) On Hausdorff compactifications of non-locally compact spaces. *Internat. J. Math. Math. Sci.* 2 (1979), no. 3, 481-486. (H. Herrlich) **80k:54039** 54D35 (54D15)
- Matula, David W. Basic digit sets for radix representation of the integers. *Proceedings of the 4th IEEE Symposium on Computer Arithmetic (Santa Monica, Calif., 1978)*, pp. 1-9. *IEEE, Long Beach, Calif.*, 1978. (Author's summary) **80g:68007** 68A05 (10A30)
- (with Kornerup, Peter) A feasibility analysis of binary fixed-slash and floating-slash number systems. *Proceedings of the 4th IEEE Symposium on Computer Arithmetic (Santa Monica, Calif., 1978)*, pp. 29-38. *IEEE, Long Beach, Calif.*, 1978. (Authors' summary) **80g:68008** 68A05 (65G05)
- (with Kornerup, Peter) A feasibility analysis of fixed-slash rational arithmetic. *Proceedings of the 4th IEEE Symposium on Computer Arithmetic (Santa Monica, Calif., 1978)*, pp. 39-47. *IEEE, Long Beach, Calif.*, 1978. (Authors' summary) **80g:68009** 68A05 (65Gxx, 68C25)
- Subgraph connectivity numbers of a graph. *Theory and applications of graphs (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976)*, pp. 371-383. *Lecture Notes in Math.*, 642. Springer, Berlin, 1978. (D. R. Lick) **80a:05123** 05C35 (05C10)
- k-blocks and ultrablocks in graphs. *J. Combin. Theory Ser. B* 24 (1978), no. 1, 1-13. (D. R. Lick) **80a:05122** 05C35
- Matumoto, Takao Triangulation of manifolds. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 2*, pp. 3-6. *Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I.*, 1978. (N. Martin) **80e:57019** 57Q15
- (with Siebenmann, L.) The topological  $s$ -cobordism theorem fails in dimension 4 or 5. *Math. Proc. Cambridge Philos. Soc.* 84 (1978), no. 1, 85-87. (J. W. Vick) **80e:57012** 57N75
- On the minimal ordered Morse functions on compact simply-connected manifolds. *Publ. Res. Inst. Math. Sci.* 14 (1978), no. 3, 673-684. (Robert Wells) **80m:57028** 57R70 (57R50, 57R65)



- On homotopy equivalences of  $S^2 \times \mathbb{R}P^2$  to itself. *J. Math. Kyoto Univ.* **19** (1979), no. 1, 1–17. (Martin Scharlemann) **80j:57019** 57Q25
- Matunobu, Yano'o Two-dimensional viscous flow accompanied by a stagnation point on a plane wall. *J. Phys. Soc. Japan* **47** (1979), no. 4, 1354–1360. (W. O. Crimale, Jr.) **80j:76014** 76B99
- Matunov, P. P. (with Abrašins, V. N.) Difference schemes for nonlinear hyperbolic equations with piecewise-smooth solutions. I. (Russian) *Differentsial'nye Uravnenija* **14** (1978), no. 12, 2223–2239, 2301. (I. N. Molčanov) **80c:65189** 65N10
- Accuracy of difference schemes for nonlinear equations of gas dynamics. (Russian. Lithuanian and English summaries) *Differentsial'nye Uravnenija i Primenen.—Trudy Sem. Protsessy Optimal. Upravlenija i Sekcija No. 21* (1978), 47–60, 105. (Author's summary) **80c:65235** 65P05 (76N15)
- Matunov, V. E. Fixed points of multivalent mappings in partially ordered spaces. (Russian) *Tskent. Gos. Univ. Sb. Nauch. Trudov No. 573 Funktsional. Anal.* (1978), 37–39, 109. (Author's summary) **80k:47066** 47H10
- Matuš, Josef Der rechts- und linksseitige Wert einer Distribution im Punkte. *Publ. Math. Debrecen* **25** (1978), no. 1–2, 89–95. (S. Łojasiewicz) **80i:46035** 46F10
- Matyszewska, Wanda Władysław Orlicz: a review of his scientific work. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* **1** (1978), 1–17 (1 plate). (M. S. Ramanujan) **80a:01035** 01A70 (46–03)
- Matyszewski, A. (with Pleszczyńska, E.; Kowalski, A.) Decision schemes of parameter identification in time series analysis. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* **9** (1978), no. 1, 73–83. (Roch Roy) **80d:62006** 62M10
- (with Kowalczyk, T.; Kowalski, A.; Pleszczyńska, E.) Screening and monotonic dependence functions in the multivariate case. *Ann. Statist.* **7** (1979), no. 3, 607–614. (Rashid Ahmad) **80i:62040** 62G99 (62H20)
- Matveev, A. S. (with Jakubović, V. A.) Optimal control of certain systems with distributed parameters. (Russian) *Sibirsk. Mat. Ž.* **19** (1978), no. 5, 1109–1140, 1215. (L. von Wolfersdorf) **80b:49015** 49B22 (93C30)
- Matveev, G. G. (with Balkov, V. I.) Shear-free motions in a gravitational field. (Russian) *Gravitacija i Teor. Otinosiel'nosti No. 14–15* (1978), 147–155. (A. Staruszkiewicz) **80d:83049** 83C55 (53C80, 58F17)
- The motion of an elastic, rotating body in general relativity theory. (Russian) *Gravitacija i Teor. Otinosiel'nosti No. 14–15* (1978), 188–198. (J. Lawrynowicz) **80i:83011** 83C10
- Matveev, P. N. Quasipolynomial functions of a vector argument with integral operators. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1979**, no. 1, 15–17, 77. (A. Haimovici) **80c:35018** 35C15 (33A70)
- Matveev, V. A. (with Muradjan, R. M.; Tavhelidze, A. H.) Method of quark counting for inclusive processes. (Russian. English summary) *Teoret. Mat. Fiz.* **40** (1979), no. 3, 329–339. (Authors' summary) **80i:81055** 81G05
- Matvievskaja, G. P. (with Sirizdinov, S. H.) ★Абстракт Райкан Беруян и его математически труды. (Russian) [al-Biruni and his mathematical works. "Provečenie", Moscow, 1978. 95 pp. (E. S. Kennedy) **80m:01011** 01A30
- Matvičuk, K. S. Existence and uniqueness of solutions for the Kirkwood-Salzburg operator integral equations for the Bose and Fermi systems of quantum statistical physics. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 7* (1979), 510–516, 589. (Author's summary) **80i:82020** 82A15 (45H05)
- Matyśiak, Stanisław A static two-dimensional crack problem in a linear Cosserat medium with free rotations. (Polish. Russian and English summaries) *Rozprawy Inst.* **26** (1978), no. 2, 245–257. (B. Sundelius) **80a:73006** 73B25 (35Q99)
- (with Olesiak, Zbigniew) Axially symmetric problems of Boussinesq type for a heated stamp on a micropolar half-space. (Polish. Russian and English summaries) *Rozprawy Inst.* **27** (1979), no. 1, 181–190. (Authors' summary) **80a:73007** 73B25
- Matz, Bernd Heinrich Konstruktion von Zahlkörpern mit der Galoisgruppe  $M_{11}$  über  $\mathbb{Q}(\sqrt{-1})$ . (English summary) *Manuscripta Math.* **27** (1979), no. 1, 103–111. (Jack Sonn) **80m:12008** 12A55 (12A90)
- Matzeu, Michele (with Boccardo, Lucio; Capuzzo Dolcetta, Italo) Nouveaux résultats d'existence, perturbation et homogénéisation de quelques problèmes non linéaires. *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis (Rome, 1978)*, pp. 115–130. *Pitagora, Bologna*, 1979. (T. Zolezzi) **80c:49004** 49A22
- (with Vivaldi, Maria Agostina) On the regular solution of a nonlinear parabolic quasivariational inequality related to a stochastic control problem. *Comm. Partial Differential Equations* **4** (1979), no. 10, 1123–1147. (Emmanuel Nicholas Barron) **80b:49005** 49A29 (93C99)
- Matzeu, Paolo Maria Linear algebra on Galois planes. (Italian. English summary) *Rend. Sem. Fac. Sci. Univ. Cagliari* **48** (1978), suppl., 87–105. (L. A. Rosati) **80a:51005** 51E20
- (with Arca, Giuseppe) On the Laplacian of the sphere. (Italian. French summary) *Rend. Sem. Fac. Sci. Univ. Cagliari* **48** (1978), no. 1–2, 81–85. (Francesco Mercuri) **80a:53052** 53C20 (58G25)
- (with Arca, Giuseppe) Hypersphères portant un champ tangentiel quasi-parallèle par rapport à la normale. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 2, 183–186. (D. Mekero) **80b:53021** 53B25
- Matzner, Richard A. (with Centrella, Joan) Plane-symmetric cosmologies. *Astrophys. J.* **230** (1979), no. 2, part 1, 311–324. (N. Rosen) **80c:83055** 83F05 (53C25)
- (with Zamorano, Nelson; Sandberg, Vernon D.) Instability of the Cauchy horizon of Reissner-Nordström black holes. *Phys. Rev. D* **3** (1979), no. 10, 2821–2826. (Authors' summary) **80i:83048** 83D05
- (with Barrow, John D.) Size of a bouncing mixmaster universe. *Phys. Rev. D* **3** (1980), no. 2, 336–340. (Authors' summary) **80c:83052** 83F05
- Mamzer, Giancarlo (with Figà-Talamanca, Alessandro) A characterization of nonatomic Hilbert algebras. *Proc. Amer. Math. Soc.* **72** (1978), no. 3, 468–472. (Marc A. Rieffel) **80b:46063** 46K15 (22D25)
- (with De-Michele, Leonede) On the Fourier-Stieltjes algebra of Euclidean motion groups. *Rend. Mat.* **(6)** **11** (1978), no. 1, 33–38. (Pierre Eymard) **80a:43005** 43A35 (22D25, 46J10)
- (with De-Michele, Leonede)  $L^p$  multipliers on the Heisenberg group. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 2, pp. 355–359. *Proc. Sympos. Pure Math., XXXV, Part 2, Amer. Math. Soc., Providence, R.I.*, 1979. (Ian R. Inglis) **80j:43003a** 43A22 (43A80)
- (with De-Michele, Leonede)  $L^p$  multipliers on the Heisenberg group. *Michigan Math. J.* **26** (1979), no. 3, 361–371. (Ian R. Inglis) **80j:43003b** 43A22 (43A80)
- Maudsley, D. Errors in the finite difference solution of hyperbolic partial differential equations. *Control of distributed parameter systems (Proc. Second IFAC Sympos., Coventry, 1977)*, pp. 193–200. *IFAC, Düsseldorf*, 1978. (From the introduction) **80d:65109** 65N20
- Maufray, G. (with Le Maire, B.) Chaînes de Markov non homogènes à causalité constante: matrices d'écart d'homogénéité. *Publ. Inst. Statist. Univ. Paris* **22** (1977), no. 1–2, 83–107. (Zbl 383:60061) **80b:60087** 60J10
- Maugeri, Antonino The third boundary value problem for linear equations of parabolic type with discontinuous coefficients. (Italian. English summary) *Ricerche Mat.* **27** (1978), no. 2, 223–233. (V.-V. Olariu) **80c:35061** 35R05 (35K20)
- Mauguin, Gérard A. Sur l'admissibilité physique de l'équilibre d'une sphère élastique dans son propre champ de gravitation. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 13, A903–A906. (Author's summary) **80i:83029** 83C99
- A phenomenological theory of ferroliquids. *Internat. J. Engrg. Sci.* **16** (1978), no. 12, 1029–1044. (J. Dunwoody) **80a:76052** 76W05 (35Q99)
- Relation between wave speeds in the crust of dense magnetic stars. *Proc. Roy. Soc. London Ser. A* **364** (1978), no. 1719, 537–552. (George Debnay) **80c:83022** 83C55
- Théorie et applications de l'élasticité en relativité générale. (English and Serbo-Croatian summaries) *Teor. Primen. Meh.* **No. 4** (1978), 115–123. (Alan Barnes) **80i:83037** 83C99 (73B99)
- Nonlocal theories or gradient-type theories: a matter of convenience? (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* **31** (1979), no. 1, 15–26. (Xanthippi Markenscopp) **80i:73008** 73B99
- Théorie des rayons en élasticité relativiste anisotrope. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 10, A549–A552. (Author's summary) **80m:73011** 73C30 (83C99)
- Formation de chocs dans les solides en relativité. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 11, A587–A589. (Author's summary) **80c:83036** 83C99 (76L05)
- Sur l'objectivité des entités électromagnétiques dans un corps matériel en mouvement à l'approximation galiléenne. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 12, B205–B208. (Author's summary) **80a:78011** 78A25
- Vectorial internal variables in magnetoelasticity. (French summary) *J. Mécanique* **18** (1979), no. 3, 541–563. (P. D. S. Verma) **80j:73032** 73R05
- The method of virtual power in continuum mechanics: application to coupled fields. (German summary) *Acta Mech.* **35** (1980), no. 1–2, 1–70. (Author's summary) **80m:73006** 73B99
- Mauldin, R. Daniel Some effects of set-theoretical assumptions in measure theory. *Adv. in Math.* **27** (1978), no. 1, 45–62. (J. J. Uhl, Jr.) **80i:28021** 28B05 (03E50, 46E30)
- (with Cenzer, Douglas) Measurable parametrizations and selections. *Trans. Amer. Math. Soc.* **245** (1978/79), 399–408. (C. J. Himmelberg) **80i:28010** 28A20 (04A15, 54H05)
- The existence of non-measurable sets. *Amer. Math. Monthly* **86** (1979), no. 1, 45–46. (Wolfgang Adamski) **80b:28016** 28C15
- Borel parametrizations. *Trans. Amer. Math. Soc.* **250** (1979), 223–234. (A. H. Stone) **80i:54033** 54H05 (04A15, 28A05)
- Mäurer, Helmut (with Lempio, F.) Differentiable perturbations of infinite optimization problems. *Optimization and operations research (Proc. Workshop, Univ. Bonn, Bonn, 1977)*, pp. 181–191. *Lecture Notes in Econom. and Math. Systems*, 157, Springer, Berlin, 1978. (B. G. Pachpatte) **80a:49016** 49A99
- (with Zowe, Jochem) Optimality conditions for the programming problem in infinite dimensions. *Optimization and operations research (Proc. Workshop, Univ. Bonn, Bonn, 1977)*, pp. 261–270. *Lecture Notes in Econom. and Math. Systems*, 157, Springer, Berlin, 1978. (D. J. van Wyk) **80a:90131** 90C30
- Involutorische Automorphismen von Laguerre-Ebenen mit genau zwei Fixpunkten. (English summary) *Monatsh. Math.* **86** (1978/79), no. 2, 131–142. (G. Pickert) **80d:51008** 51B15
- Perspektive Involutionen in der Geometrie der quadratischen Polynome. *Math. Z.* **164** (1979), no. 3, 261–269. (D. Betten) **80b:51009** 51D99
- Maurer, Hermann (with Albert, Jürgen; Rozenberg, Grzegorz) Simple EOL forms under uniform interpretation generating CF languages. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978)*, pp. 1–14. *Lecture Notes in Comput. Sci.*, 62, Springer, Berlin, 1978. (Gheorghe Păun) **80d:68081** 68F05
- (with Rozenberg, Grzegorz) Increasing the similarity of EOL form interpretations. *Inform. and Control* **38** (1978), no. 3, 330–342. (A. Salomaa) **80c:68090** 68F05
- (with Salomaa, Arto K.; Wood, Derick) Relative goodness of EOL forms. *RAIRO Inform. Théor.* **12** (1978), no. 4, 291–304. (K. P. Lee) **80b:68092** 68F05
- (with Salomaa, Arto K.; Wood, Derick) Context-dependent L forms. *Inform. and Control* **42** (1979), no. 1, 97–118. (Authors' summary) **80c:68188** 68F05
- (with Culik, Karel, II) Secure information storage and retrieval using new results in cryptography. *Inform. Process. Lett.* **8** (1979), no. 4, 181–186. (James W. Snively, Jr.) **80b:68010** 68B15 (68H05)
- (with Penttonen, Martti; Salomaa, Arto K.; Wood, Derick) On non-context-free grammar forms. *Math. Systems Theory* **12** (1979), no. 4, 297–324. (S. Ginsburg) **80b:68062** 68F05
- Maurer, I. Gy. Observations concernant les  $\Omega$ -groupes distributifs et cycliques. *Mathematica (Cluj)* **19**(42) (1977), no. 2, 179–181 (1978). (David M. Clark) **80a:68006** 08A99 (20N99)
- (with Virág, I.) Sur les classes de tolérance d'une algèbre universelle. *Publ. Math. Debrecen* **25** (1978), no. 3–4, 237–240. (M. Gould) **80a:08003** 08A30
- Maurer, J. (with Ionescu-Pallas, Nicholas; Popa, D.; Bárna, Oana) Schrödinger-Pauli wave equation without approximation. (French summary) *Rev. Roumaine Phys.* **23** (1978), no. 7–8, 727–742. (Jules Beckers) **80a:81015** 81C05 (35Q20)
- Maurer, R. N. (with Oulton, D. B.; Wollkind, D. J.) A stability analysis of a prototype moving boundary problem in heat flow and diffusion. *Amer. Math. Monthly* **86** (1979),



- no. 3, 175–186. (D. A. Nield) **80i:80006** 80A20 (35K05)
- Mauw, Stephen B. (with Slater, Peter J.) On  $k$ -minimally  $n$ -edge-connected graphs. *Discrete Math.* **24** (1978), no. 2, 185–195. (András Frank) **80c:05094** 05C40 (05C20)
- Maurey, Bernard (with Davis, William J.) The distance of a symmetric space from some  $l_p$  space. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics* (Leipzig, 1977), pp. 58–68, Teubner, Leipzig, 1978. (Gunnar Hans Olsen) **80i:46013** 46B20
- (with Johnson, W. B.; König, Hermann; Retherford, J. R.) Eigenvalues of  $p$ -summing and  $l_p$ -type operators in Banach spaces. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics* (Leipzig, 1977), pp. 100–105, Teubner, Leipzig, 1978. (From the text) **80b:47028** 47B10 (47A70)
- Plongement de  $H_1$  dans un espace à base inconditionnelle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 13, A865–A867. (Author's summary) **80c:60065** 60G46 (46E99)
- (with Carl, B.; Puhl, J.) Grenzzordnungen von absolut- $(r, p)$ -summierenden Operatoren. *Math. Nachr.* **82** (1978), 205–218. (Theodore S. Bolis) **80b:47032** 47B10 (46A45)
- Isomorphismes entre espaces  $H_1$ . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 4, A271–A273. (Author's summary) **80a:60067** 60G46 (30D55, 46E15)
- Construction de suites symétriques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 14, A679–A681. (Author's summary) **80c:46020** 46B15 (05A05)
- (with Krivine, Jean-Louis) Espaces de Banach stables. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 14, A679–A681. (Authors' summary) **80c:46022** 46B20
- (with Schechtman, G.) Some remarks on symmetric basic sequences in  $L_1$ . *Compositio Math.* **38** (1979), no. 1, 67–76. (P. Wojtaszczyk) **80c:46039** 46E30 (46B15)
- (with Johnson, W. B.; König, Hermann; Retherford, J. R.) Eigenvalues of  $p$ -summing and  $l_p$ -type operators in Banach spaces. *J. Funct. Anal.* **32** (1979), no. 3, 353–380. (A. Pietsch) **80i:47033** 47B10 (47A70, 47G05)
- Mauri, Gian Carlo (with Bertoni, Alberto; Haus, G.; Torelli, Mauro) Analysis and compacting of musical texts. *J. Cybernet.* **8** (1978), no. 3–4, 257–272. (N. G. Zagorulkov) **80a:68077** 68G05 (68C25)
- (with Bertoni, Alberto; Torelli, Mauro) Three efficient algorithms for counting problems. *Inform. Process. Lett.* **8** (1979), no. 1, 50–53. (From the introduction) **80c:68055** 68C25 (68E10, 68F05)
- Maurin, Krzysztof See Komorowski, Jacek, **80c:00002** and Mathematical physics and physical mathematics, **80i:00006**
- Maurin, Sady A decomposition scheme for the Hamilton-Jacobi equation. *Optimization techniques* (Proc. 8th IFIP Conf., Würzburg, 1977), Part 1, pp. 158–165, *Lecture Notes in Control and Information Sci.*, 6, Springer, Berlin, 1978. (Author's summary) **80a:49059** 49C99
- Maurene, Philip A. (with Phares, Alain J.) On the asymptotic behavior of the derivatives of Airy functions. *J. Math. Phys.* **20** (1979), no. 11, 2191. (Authors' summary) **80j:33014** 33A60
- Maurya, R. P. (with Prasad, Y. N.) On a generalized multiple L-H transform. (Hindi. English summary) *Vijnana Parishad Amsandhan Patrika* **21** (1978), no. 4, 373–381. (S. D. Bajpai) **80m:44012** 44A20 (33A30)
- (with Prasad, Y. N.) Basic properties of the generalized multiple L-H transform. (Hindi. English summary) *Vijnana Parishad Amsandhan Patrika* **22** (1979), no. 1, 73–83. (H. M. Srivastava) **80j:44008** 44A30 (33A35)
- Mautz, Joseph R. (with Harrington, Roger F.) Computational methods for transmission of waves through apertures. *Electromagnetic scattering*, pp. 429–470, Academic Press, New York, 1978. (From the summary) **80m:78016** 78A40 (65N05)
- Mavrides, Lazaros P. Nonlinear programming with cumulatively bounded variables. *J. Comput. Appl. Math.* **5** (1979), no. 3, 163–169. (D. M. Topkis) **80j:90096** 90C30
- Mavromaras, Kostas Gr. Insurance and protection of irreplaceable commodities: the case of one's own life. *Econom. Lett.* **3** (1979), no. 1, 9–13. (Author's summary) **80a:90041** 90A16 (90A05)
- Mavrommatis, E. Evaluation of some integrals encountered in calculations in many-fermion systems. *J. Inst. Math. Appl.* **22** (1978), no. 3, 255–260. (Author's introduction) **80c:81130** 81G35
- Mawaziny, A. H. See El Mawaziny, A. H.
- Mawhin, Jean Recent trends in nonlinear boundary value problems. *VII. Internationale Konferenz über Nichtlineare Schwingungen* (Berlin, 1975), Band I, Teil 2, pp. 51–70, *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977, 4, Akademie-Verlag, Berlin, 1977. (K. Schmitt) **80b:58024** 58E05
- (with Walter, Wolfgang) Periodic solutions of ordinary differential equations with one-sided growth restrictions. *Proc. Roy. Soc. Edinburgh Sect. A* **82** (1978/79), no. 1–2, 95–106. (A. Halanay) **80i:34063** 34C25 (34K15)
- ★ Topological degree methods in nonlinear boundary value problems. Expository lectures from the CBMS Regional Conference held at Harvey Mudd College, Claremont, Calif., June 9–15, 1977. CBMS Regional Conference Series in Mathematics, 40. *American Mathematical Society, Providence, R.I.*, 1979. v+122 pp. ISBN 0-8218-1690-X (K. Schmitt) **80c:47055** 47H15 (34–02, 55M25, 58C30)
- Boundary value problems at resonance for vector second-order nonlinear ordinary differential equations. *Equadiff IV* (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977), pp. 241–249, *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (Piero Bassanini) **80b:47070** 47H15 (34B15, 34G20)
- Maxfield, J. E. (with Howroyd, T.) Functional equations with extrema. *J. Math. Anal. Appl.* **64** (1978), no. 1, 135–141. (Roman Ger) **80d:39004** 39B20 (49C15)
- Maxim-Rilleaux, Liliana The manifold of symplectic structures on a compact manifold. *An. Stiint. Univ. "Al. I. Cuza" Iași Sect. I a Mat. (N.S.)* **25** (1979), no. 1, 81–87. (Tudor S. Ratiu) **80c:58033** 58D17 (53C15, 58F05)
- Maxones, Walter (with Rindler, Harald) Asymptotisch gleichverteilte Massfolgen in Gruppen vom Heisenberg-Typ. *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* **185** (1976), no. 8–10, 485–504 (1977). (L. Corwin) **80c:22005** 22D05 (10K05)
- (with Rindler, Harald) Bemerkungen zu: "Gleichverteilung auf lokalkompakten Gruppen" [Math. Nachr. **71** (1976), 249–260; MR **53** #6231] von P. Gerl. *Math. Nachr.* **79** (1977), 193–199. (Harald Niederreiter) **80c:22005** 22D99 (10K99)
- (with Rindler, Harald) Asymptotisch gleichverteilte Netze von Wahrscheinlichkeitsmassen auf lokalkompakten Gruppen. *Colloq. Math.* **40** (1978/79), no. 1, 131–145. (Harald Niederreiter) **80m:43001** 43A05 (10K05)
- Maxson, Carlton J. (with Hartfil, D. J.) Groups which are isomorphic to a semigroup of a linear nonsingular subautomaton. *Discrete Math.* **22** (1978), no. 2, 105–109. (Václav Koubek) **80b:68073** 68D30
- (with Smith, Kirby C.) The centralizer of a group automorphism. *J. Algebra* **54** (1978), no. 1, 27–41. (John D. P. Meldrum) **80b:16029** 16A76
- Rigid rings. *Proc. Edinburgh Math. Soc. (2)* **21** (1978/79), no. 2, 95–101. (J. F. Watters) **80c:16016** 16A45
- (with Smith, Kirby C.) The centralizer of a group endomorphism. *J. Algebra* **57** (1979), no. 2, 441–448. (Richard Davitt) **80i:20031** 20D99
- (with Smith, Kirby C.) Automorphisms of linear automata. *J. Comput. System Sci.* **19** (1979), no. 1, 18–26. (Václav Koubek) **80b:68034** 68D15
- Maxwell, C. J. (with Halliday, I. G.; Beever, R. R.) Wave packets and the space-time structure of production processes. *Nuclear Phys. B* **149** (1979), no. 1, 61–89. (Authors' summary) **80b:82063** 82A70
- Maxwell, Charles N. The degree of multiple-valued maps of spheres. *Algebraic and geometric topology* (Proc. Sympos., Univ. California, Santa Barbara, Calif., 1977), pp. 123–141, *Lecture Notes in Math.*, 664, Springer, Berlin, 1978. (Ju. G. Borisovici) **80f:55004** 55M25
- Maxwell, George On the automorphism groups of space groups. *Comm. Algebra* **6** (1978), no. 14, 1489–1496. (Ascher Wagner) **80c:20068** 20H15
- Hyperbolic trees. *J. Algebra* **54** (1978), no. 1, 46–49. (Joseph A. Thas) **80f:05048** 05C25
- Maxwell, James Clerk See D'Agostino, Salvo, **80j:01014**
- Maxwell, William L. (with Engelbrecht-Wiggans, Richard) Analysis of the time indexed list procedure for synchronization of discrete event simulations. *Management Sci.* **24** (1977/78), no. 13, 1417–1427. (Adam Wolisz) **80c:68118** 68J05
- May, C. Ping (with Ismail, Mourad E.-H.) On a family of approximation operators. *J. Math. Anal. Appl.* **63** (1978), no. 2, 446–462. (J. R. Rice) **80i:41017** 41A35
- (with Ismail, Mourad E.-H.) Special functions, infinite divisibility and transcendental equations. *Math. Proc. Cambridge Philos. Soc.* **85** (1979), no. 3, 453–464. (M. Lawrence Glasser) **80d:33005** 33A40 (60E07)
- A saturation theorem for modified Bernstein polynomials in  $L_p$ -spaces. *SIAM J. Math. Anal.* **10** (1979), no. 2, 321–330. (P. C. Sikkema) **80c:41012** 41A40
- May, J. P.  $H_\infty$  ring spectra and their applications. *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 2, pp. 229–243, *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (J. F. Adams) **80c:55014** 55P42 (55N20)
- $A_\infty$  ring spaces and algebraic K-theory. *Geometric applications of homotopy theory* (Proc. Conf., Evanston, Ill., 1977), II, pp. 240–315, *Lecture Notes in Math.*, 658, Springer, Berlin, 1978. (Donald W. Kahn) **80c:55015** 55N20 (18F25, 55P47)
- (with Cohen, F. R.; Taylor, Laurence R.) Splitting of certain spaces  $CX$ . *Math. Proc. Cambridge Philos. Soc.* **84** (1978), no. 3, 465–496. (V. P. Snaith) **80a:55010** 55P47 (55Q35)
- (with Thomason, Robert W.) The uniqueness of infinite loop space machines. *Topology* **17** (1978), no. 3, 205–224. (J. F. Adams) **80c:55015** 55P42 (55N22, 55P35)
- The spectra associated to permutative categories. *Topology* **17** (1978), no. 3, 225–228. (J. F. Adams) **80c:55015** 55P42 (55N20, 55P35)
- May, Jerrold H. Solving nonlinear programs without using analytic derivatives. *Oper. Res.* **27** (1979), no. 3, 457–484. (John J. Dinkel) **80i:90123** 90C30
- May, Robert M. (with Beddington, J. R.; Horwood, J. W.; Shepherd, J. G.) Exploiting natural populations in an uncertain world. *Math. Biosci.* **42** (1978), no. 3–4, 219–252. (Authors' summary) **80a:92039** 92A17 (92A15)
- May, Warren Endomorphism rings of abelian groups with ample divisible subgroups. *Bull. London Math. Soc.* **10** (1978), no. 3, 270–272. (Sheila Brenner) **80d:20047** 20K30
- Modular group algebras of totally projective  $p$ -primary groups. *Proc. Amer. Math. Soc.* **76** (1979), no. 1, 31–34. (Uno Kaljula) **80i:20011** 20C20 (20C30)
- Maybeck, Peter S. ★ Stochastic models, estimation, and control. Vol. I. Mathematics in Science and Engineering, 141. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xix+423 pp. ISBN 0-12-480701-1 (T. Tobias) **80j:93116** 93E11 (93E20)
- Mayeda, Hirokazu (with Yamada, Takashi) Strong structural controllability. *SIAM J. Control Optim.* **17** (1979), no. 1, 123–138. (Devendra P. Garg) **80c:93031** 93B05
- Mayeda, Wataru (with Trick, Timothy N.; Sakla, Adel A.) Calculation of parameter values from node voltage measurements. Special issue on automatic analog fault diagnosis. *IEEE Trans. Circuits and Systems* **26** (1979), no. 7, 466–474. (Authors' summary) **80c:94049** 94C05
- (with Onaga, Kenji) A Boolean theory of network flows and metrics and its applications to particle transmission and clustering. *Networks* **9** (1979), no. 3, 249–281. (W.-K. Chen) **80j:94051** 94C15 (90B10)
- Mayer, D. H. Spectral properties of certain composition operators arising in statistical mechanics. *Comm. Math. Phys.* **68** (1979), no. 1, 1–8. (Derek W. Robinson) **80b:47040** 47B38 (82A67)
- On Ruelle's  $\xi$ -function for exponentially decreasing potentials. *Lett. Math. Phys.* **3** (1979), no. 4, 335–341. (Helaman R. P. Ferguson) **80j:82026** 82A67 (30D30, 58F20)
- Mayer, Daniel George Green—founder of the mathematical theory of electrical and magnetic phenomena. (Czech. Russian and English summaries) *DFT—Dějiny Věd Tech.* **11** (1978), no. 4, 208–215. (I. Netuka) **80j:01020** 01A55 (01A70, 31–03, 78–03)
- (with Ryjáček, Zdeněk) On asymptotic stability of linear circuits with lumped parameters. *Acta Tech. ČSAV* **24** (1979), no. 4, 459–465. (Authors' summary) **80j:94033** 94C05
- Mayer, Jacques Isometries in Banach spaces of functions, holomorphic in the unit disc and smooth up to its boundary. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **2** (1979), 37–41, 102. (S. V. Hruščev) **80c:46023** 46E15 (47B38)
- Mayer, Jean Une propriété des graphes minimaux dans le problème des quatre couleurs. (English summary) *Problèmes combinatoires et théorie des graphes* (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 291–295, *Colloques Internat. CNRS*, 260, CNRS,

- Paris, 1978. (K. Appel) **80m:05042** 05C15
- Mayer, Karl Heinz (with Erle, Dieter; Plesser, Theodor) The existence of stable limit cycles for enzyme catalyzed reactions with positive feedback. *Math. Biosci.* **44** (1979), no. 3-4, 191-208. (Kuang-Ho Chen) **80h:92002** 92A05 (34C25, 80A30, 92A40)
- Mayer, Meinhard Characteristic classes and solutions of gauge theories. *Differential geometrical methods in mathematical physics, II* (Proc. Conf., Univ. Bonn, Bonn, 1977), pp. 81-104. *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (Franco Strocchi) **80c:81069** 81E10 (53C05, 58E15)
- Mayer, Otto A framework for producing deterministic canonical bottom-up parsers. *Mathematical foundations of computer science, 1978* (Proc. Seventh Sympos., Zakopane, 1978), pp. 355-363. *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (A. V. Anisimov) **80d:68111** 68F25
- (with Ginsburg, Seymour; Leong, Benton; Wotschke, Detlef) On strict interpretations of grammar forms. *Math. Systems Theory* **12** (1978/79), no. 3, 233-252. (Anton Nijholt) **80f:68083** 68F05 (68F25)
- On deterministic canonical bottom-up parsing. *Inform. and Control* **43** (1979), no. 3, 280-303. (Author's summary) **80c:68067** 68F25
- Maynard, Hugh B. A Radon-Nikodým theorem for finitely additive bounded measures. *Pacific J. Math.* **83** (1979), no. 2, 401-413. (Jan Pachl) **80k:28007** 28A15 (28A25)
- Mayne, D. Q. (with Polak, Elijah) On the finite solution of nonlinear inequalities. *IEEE Trans. Automat. Control* **24** (1979), no. 3, 443-445. (Authors' summary) **80c:65138** 65K10
- (with Maratos, N.) A first order, exact penalty function algorithm for equality constrained optimization problems. *Math. Programming* **16** (1979), no. 3, 303-324. (Michael Minkoff) **80h:90127** 90C30
- (with Polak, Elijah; Trahan, R.) Combined phase I-phase II methods of feasible directions. *Math. Programming* **17** (1979), no. 1, 61-73. (Michael Minkoff) **80h:90131** 90C30 (90C05)
- Mayné, F. (with George, Cl.; Henin, F.; Prigogine, Ilya) New quantum rules for dissipative systems. *Hadronic J.* **1** (1978), no. 2, 520-573. (P. Caldwell) **80a:81042** 81C99 (47B99, 82A30)
- Mayné, Georges (with Boulanger, Philippe) Modèles intégraux différentiels en électrodynamique linéaire des continus. (English summary) *Acad. Roy. Belg. Bull. Cl. Sci.* (5) **64** (1978), no. 4, 153-168. (N. D. Sengupta) **80e:78006** 78A25 (45K05)
- (with Boulanger, Philippe) Linear viscoelastic materials of the integro-differential type. *Z. Angew. Math. Mech.* **59** (1979), no. 5, T113-T114. (J. Meixner) **80f:73227** 73F05 (45J05)
- garcía-Maynez, A. See García-Maynez, A.
- Mays, Michael E. Counting abelian, nilpotent, solvable, and supersolvable group orders. *Arch. Math. (Basel)* **31** (1978/79), no. 6, 536-538. (John F. Bowers) **80g:20088** 20P05 (10A21)
- Maystre, D. (with Roger, A.) The perfectly conducting grating from the point of view of inverse diffraction. *Optica Acta* **26** (1979), no. 4, 447-460. (Authors' summary) **80d:78031** 78A45 (65R20)
- Mazlov, V. V. Investigation of an equation for optimal risk. (Russian) *Control of dynamical systems* (Russian), pp. 129-135, 316-317. *Leningrad. Univ., Leningrad*, 1978. (Author's summary) **80e:93146** 93E20
- Mazan, Michel Complément d'un espace vectoriel topologique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 6, A389-A391. (Author's summary) **80j:46011** 46A30 (46A20)
- Mazanov, G. A. A structure defined by two commuting affinors. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* **1979**, no. 7, 87-90. (Adrian C. Albu) **80m:53030** 53C10
- Maidukova, E. L. (with Zaprianov, Z. D.) The solution of a boundary value problem in the theory of jets. (Bulgarian. Russian and English summaries) *Teoret. Prilož. Meh.* **9** (1978), no. 3, 50-55, 4, 8. (Editors) **80a:76029** 76D25 (35Q99)
- Mazenko, Gene F. Renormalization group approach to dynamic critical phenomena. *Correlation functions and quasiparticle interactions in condensed matter* (Proc. NATO Advanced Study Inst., Wayzata, Minn., 1977), pp. 99-234. *NATO Adv. Study Inst. Ser., Ser. B: Physics*, 35, Plenum, New York, 1978. (P. Rudra) **80k:82033** 82A25 (82A77)
- Maset, Pierre Sur le multiplicateur de Schur du groupe de Mathieu  $M_{22}$ . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 14, A659-A661. (Author's summary) **80m:20032** 20E34 (20D05)
- Mazhar, S. M. A generalization of Riesz-Fischer theorem. *Arch. Math. (Brno)* **14** (1978), no. 1, 51-53. (S. K. Chatterjee) **80j:42046** 42C15
- Maz'ja, V. G. Local square summability of a convolution. (Russian. English summary) *Investigations on linear operators and the theory of functions, VIII. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **73** (1977), 211-216, 236 (1978). (Author's summary) **80a:47081** 47G05
- (with Nagel, Jürgen) Über äquivalente Normierung der anisotropen Funktionalräume  $H^s(\mathbb{R}^n)$ . *Beiträge Anal.* **12** (1978), 7-17. (Hans G. Feichtinger) **80e:46025** 46E35
- (with Morozov, N. F.; Plamenevskii, B. A.) The stressed-strained state in the neighborhood of a crack apex at nonlinear bending of a plate. (Russian) *Dokl. Akad. Nauk SSSR* **243** (1978), no. 4, 889-892. (R. Kodnár) **80g:35121** 35Q99 (73M05)
- Behaviour of solutions to the Dirichlet problem for the biharmonic operator at a boundary point. *Equadiff IV* (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977), pp. 250-262. *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (Michel Cotsaftis) **80e:35026** 35J67 (31B20)
- (with Sapónnikova, T. O.) Multipliers in spaces of functions with fractional derivatives. (Russian) *Dokl. Akad. Nauk SSSR* **244** (1979), no. 5, 1065-1067. (V. S. Rabinovitch) **80j:46057** 46E35
- (with Kresin, G. I.) The essential norm of an operator of the double-layer potential type in the space  $C_{\alpha}$ . (Russian) *Dokl. Akad. Nauk SSSR* **246** (1979), no. 2, 272-275. (A. Ramm) **80e:47065** 47G05
- (with Sapónnikova, T. O.) Traces and extensions of the multipliers in the space  $w_1^p$ . (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 2(206), 205-206. (Ja. A. Roitberg) **80j:46058** 46E35
- Bessis-Mazloun, Nadine See Bessis-Mazloun, Nadine
- Mazmili, A. I. ★ Теория ошибок и метод наименьших квадратов. (Russian) [The theory of errors and the method of least squares] "Nedra", Moscow, 1978. 311 pp.
- (Editors) **80f:86001** 86-01 (65D15)
- Mazo, J. E. On the independence theory of equalizer convergence. *Bell System Tech. J.* **58** (1979), no. 5, 963-993. (Bradley W. Dickinson) **80k:94007** 94A05
- Some theoretical observations on spread-spectrum communications. *Bell System Tech. J.* **58** (1979), no. 9, 2013-2023. (Author's summary) **80h:94002** 94A05
- Mazo, Robert M. Aspects of the theory of Brownian motion. *Stochastic processes in nonequilibrium systems* (Lectures, Fifth Stites Internat. School Statist. Mech., Stites, 1978), pp. 53-81. *Lecture Notes in Phys.*, 84, Springer, Berlin, 1978. (G. A. Skorobogatov) **80g:82014** 82A05 (60J65)
- Mazodier, Pascal (with Trognon, Alain) Heteroscedasticity and stratification in error components models. (French and Spanish summaries) Colloque International du CNRS sur l'Économétrie des Données Individuelles Temporelles (Paris, 1977). *Ann. I.N.S.E.E.* **No. 30-31** (1978), 451-482, 729, 743. (Jerry A. Hausman) **80d:62094** 62P20
- Mazorova, O. S. (with Popov, Ju. P.) An algorithm for the numerical solution of two-dimensional Navier-Stokes equations. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 37* (1979), 31 pp. (From the text) **80e:65116** 65P05 (76D05)
- An iteration method for solving two-dimensional matrix equations. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 48* (1979), 21 pp. (J. Segethová) **80k:65036** 65F10 (65N20)
- (with Popov, Ju. P.) Completeness of conservative schemes for two-dimensional equations of gas dynamics. (Russian) *Differentsial'nye Uravnenija* **15** (1979), no. 7, 1318-1331, 1344. (Authors' summary) **80f:65134** 65P05 (76N15)
- Mazumdar, H. P. On the pressure fluctuations associated with a general type of turbulence. *Appl. Sci. Res.* **35** (1979), no. 5-6, 367-371. (From the text) **80m:76054** 76F99
- Mazumdar, J. (with Jones, R.; Cheung, Y. K.) Vibration and buckling of plates at elevated temperatures. *Internat. J. Solids and Structures* **16** (1980), no. 1, 61-70. (Authors' summary) **80f:73032** 73H05
- Mazur, B. Modular curves and the Eisenstein ideal. *Inst. Hautes Études Sci. Publ. Math.* **No. 47** (1977), 33-186 (1978). (M. Ohta) **80c:14015** 14G25 (10D05)
- Rational isogenies of prime degree (with an appendix by D. Goldfeld). *Invent. Math.* **44** (1978), no. 2, 129-162. (V. V. Sokurov) **80k:14022** 14K07 (10D35, 14G25)
- Mazur, P. (with van der Zwan, G.) Brownian motion in a fluid near its critical point. *Fundamental problems in statistical mechanics, IV* (Proc. Fourth Internat. Summer School, Jadwin, 1977), pp. 469-492. *Ossolineum, Wrocław*, 1978. (Katsuhiko Fujii) **80b:82047** 82A50
- (with Garisto, Frank) Brownian motion near the Bénard-Rayleigh instability. *Phys. A* **94** (1978), no. 3-4, 365-384. (H. S. Green) **80d:76058** 76N05
- (with Sokolowski, L. M.) Second-order phase transitions in black-hole thermodynamics. *J. Phys. A* **13** (1980), no. 3, 1113-1120. (Authors' summary) **80m:83035** 83C99 (80A99, 82A25)
- Mazurkiewicz, Z. (with Nagórski, R.) On equations of net shells of revolution subjected to rotationally-symmetric loads. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stas.)* **30** (1978), no. 3, 243-257. (T. Bryant Moodie) **80c:73058** 73L99
- Maz'ya, V. G. See Maz'ja, V. G.
- Mazzotto, Gerald (with Szpirglas, Jacques) Modèle général de filtrage non linéaire et équations différentielles stochastiques associées. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 22, A1067-A1070. (Authors' summary) **80b:60061** 60G35 (93E11)
- (with Kőrežlioglu, Hayri; Szpirglas, Jacques) Équations du filtrage non linéaire pour des processus à deux indices. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 13, A891-A893. (Authors' summary) **80c:60055** 60G35
- (with Szpirglas, Jacques) Calcul stochastique pour des semi-martingales de Poisson à deux paramètres. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 20, A953-A956. (Authors' summary) **80c:60072** 60H05 (60G35, 60G44)
- (with Szpirglas, Jacques) Équations du filtrage non linéaire pour un processus de Poisson mélangé à deux paramètres. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 3, A229-A232. (Authors' summary) **80k:60052** 60G35 (94A12)
- Mazzocco, Renzo More on the characteristic ring of extensions of Lie algebras. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **63** (1977), no. 5, 372-374 (1978). (R. E. Stong) **80m:57017** 57R20 (17B55)
- Mazzoleni, Piero A solution procedure for computing an economic equilibrium in a function space. *Third Symposium on Operations Research* (Univ. Mannheim, Mannheim, 1978), Section 4, pp. 241-250. *Operations Research Verfahren*, 34, Hain, Meisenheim, 1979. (Author's introduction) **80g:90021** 90A14
- Mbom Abane, Samuel Calculation of Oseen flows past a circular cylinder at low Reynolds numbers. *Appl. Sci. Res.* **34** (1978), no. 4, 413-426. (Author's summary) **80c:76018** 76D99
- McAllister, D. B. E-unitary inverse semigroups over semilattices. *Glasgow Math. J.* **19** (1978), no. 1, 1-12. (Joseph Chacron) **80b:20075** 20M10
- McAllister, Byron L. Hyperspaces and multifunctions, the first half century (1900-1950). *Nieuw Arch. Wisk.* (3) **26** (1978), no. 2, 309-329. (A. G. Hitchcock) **80g:54001** 54-03 (01A60, 54B20, 54C60)
- McAllister, G. T. (with McAllister, M. N.; Rohde, S. M.) Constructive solution of the 1918 problem of Lord Rayleigh. *Proc. Amer. Math. Soc.* **76** (1979), no. 1, 60-66. (Authors' summary) **80c:49002** 49A10 (76A99)
- McAllister, M. N. (with Rohde, S. M.; McAllister, G. T.) Constructive solution of the 1918 problem of Lord Rayleigh. *Proc. Amer. Math. Soc.* **76** (1979), no. 1, 60-66. (Authors' summary) **80c:49002** 49A10 (76A99)
- McAllister, Paul R. (with Holland, Burt S.) On O.L.S. estimation in singular linear models with general positive definite dispersion matrix. *Comm. Statist. A—Theory Methods* **8** (1979), no. 3, 299-302. (J. Kleffe) **80j:62064** 62J05
- McAlone, Kenneth Consistency statements and number theories. *Colloque International de Logique* (Clermont-Ferrand, 1975), pp. 199-207. *Colloques Internat. CNRS*, 249, CNRS, Paris, 1977. (Jeffrey Paris) **80b:03110** 03H15
- A combinatorial characterization of inaccessible cardinals. *Higher set theory* (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1977), pp. 385-390. *Lecture Notes in Math.*, 669, Springer, Berlin, 1978. (P. Štěpánek) **80b:03084** 03E55
- Diagonal methods and strong cuts in models of arithmetic. *Logic Colloquium '77* (Proc. Conf., Wrocław, 1977), pp. 171-181. *Studies in Logic and Foundations of Math.*, 96, North-Holland, Amsterdam, 1978. (A. J. Wilkie) **80k:03068** 03H15



- McAsey, Michael (with Muhly, Paul S.; Saito, Kichi-Suke) Nonselfadjoint crossed products. *Hilbert space operators (Proc. Conf., Calif. State Univ., Long Beach, Calif., 1977)*, pp. 121–124, *Lecture Notes in Math.*, 693, Springer, Berlin, 1978. (William Paschke) **80j:46101a** 46L10  
(with Muhly, Paul S.; Saito, Kichi-Suke) Nonselfadjoint crossed products (invariant subspaces and maximality). *Trans. Amer. Math. Soc.* **248** (1979), no. 2, 381–409. (William Paschke) **80j:46101b** 46L10
- McBeth, Rod See Hickman, John L. **80b:40003**
- McBride, Adam C. A theory of fractional integration for generalised functions. II. *Proc. Roy. Soc. Edinburgh Sect. A* **77** (1977), no. 3–4, 335–349. (Z. Ditzian) **80g:46036** 46F10 (26A33)  
The Hankel transform of some classes of generalized functions and connections with fractional integration. *Proc. Roy. Soc. Edinburgh Sect. A* **81** (1978), no. 1–2, 95–117. (J. N. Pandey) **80j:44004** 44A15
- McBryan, O. (with Jonsson, T.; Zirilli, Francesco; Hubbard, J.) An existence theorem for multimeron solutions to classical Yang-Mills field equations. *Comm. Math. Phys.* **68** (1979), no. 3, 259–273. (Francesco Guerra) **80k:81100** 81E10 (35J65)
- McCabe, B. P. M. (with Harrison, M. J.) A test for heteroscedasticity based on ordinary least squares residuals. *J. Amer. Statist. Assoc.* **74** (1979), no. 366, part 1, 494–499. (Andrew Harvey) **80h:62049** 62J05
- McCabe, J. H. (with Cheney, E. W.; Phillips, G. M.) A mixed-norm bivariate approximation problem with applications to Lewanowicz operators. *Multivariate approximation (Sympos., Univ. Durham, Durham, 1977)*, pp. 315–323, Academic Press, London, 1978. (Werner Haussmann) **80i:41027** 41A63 (65J05)  
(with Holland, A. S. B.; Phillips, G. M.; Sahney, Badri N.) Best simultaneous  $L_1$  approximations. *J. Approx. Theory* **24** (1978), no. 4, 361–365. (Geetha S. Rao) **80j:41028** 41A28  
(with Phillips, G. M.; Cheney, E. W.) On simultaneous Chebyshev approximation. *J. Approx. Theory* **27** (1979), no. 1, 93–98. (Anthony Holland) **80m:41014** 41A28
- McCall, J. D. (with Frick, G. H.; Beyer, W. A.) Reminders of power series. *Internat. J. Math. Math. Sci.* **2** (1979), no. 2, 239–250. (M. E. Noble) **80k:30003** 30B10
- McCall, Storrs The strong future tense. *Notre Dame J. Formal Logic* **20** (1979), no. 3, 489–504. (N. B. Cocchiarella) **80g:03018** 03B45
- McCalla, Clement Zeros of the solutions of first-order functional-differential equations. *SIAM J. Math. Anal.* **9** (1978), no. 5, 843–847. (Thomas S. Angell) **80h:34095** 34K15  
Oscillatory and asymptotic behavior of second-order functional differential equations. *Nonlinear Anal.* **3** (1979), no. 3, 283–291. (Erwin Kozakiewicz) **80h:34122** 34K15
- McCallum, Duncan (with Avis, David) A linear algorithm for finding the convex hull of a simple polygon. *Inform. Process. Lett.* **9** (1979), no. 5, 201–206. (From the introduction) **80k:68021** 68C05
- McCann, Roger C. Separatrices for dynamical systems. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 267–271, Academic Press, New York, 1979. (L. Reizig) **80i:34042** 34C05 (58F14)  
Asymptotically stable dynamical systems are linear. *Pacific J. Math.* **81** (1979), no. 2, 475–479. (A. Pelczar) **80k:54077** 54H20  
Dynamical systems whose orbit spaces are nearly Hausdorff. *Proc. Amer. Math. Soc.* **76** (1979), no. 2, 258–262. (J. Auslander) **80g:54048** 54H20 (34C35, 54C35)  
Asymptotic equivalence of dynamical systems. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 1, 15–18. (W. R. Utz) **80d:54050** 54H20
- McCartan, S. D. Minimal  $T_{ES}$ -spaces and minimal  $T_{EF}$ -spaces. *Proc. Roy. Irish Acad. Sect. A* **79** (1979), no. 2, 11–13. (Roland E. Larson) **80e:54034** 54D99
- McCarthy, David (with Singh, N. M.; Vanstone, S. A.) A graph-theoretical approach to embedding  $(r, 1)$ -designs. *Graph theory and related topics (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 289–304, Academic Press, New York, 1979. (R. C. Mullin) **80i:05038** 05B30  
(with Vanstone, S. A.) On the structure of regular pairwise balanced designs. *Discrete Math.* **25** (1979), no. 3, 237–244. (Derek Smith) **80k:05019** 05B05  
See also *Proceedings: Southeastern Conference on Combinatorics, Graph Theory and Computing*, **80a:05004** and *Proceedings: Manitoba Conference on Numerical Mathematics and Computing*, **80g:65005**
- McCarthy, Donald Locks, keys and majority voting. *Math. Mag.* **52** (1979), no. 3, 168–171. (From the text) **80e:90015** 90A08 (05A05)
- McCarthy, M. F. (with Chen, P. J.) Unsteady flow of incompressible fluids in deformable tubes. (German summary) *Acta Mech.* **33** (1979), no. 3, 189–197. (S. Drobot) **80k:76055** 76L05  
(with Tiersten, H. F.) The growth of wave discontinuities in piezoelectric semiconductors. *J. Math. Phys.* **20** (1979), no. 12, 2682–2691. (Peter J. Chen) **80k:73068** 73R05
- McCarthy, M. H. Kant's application of the analytic/synthetic distinction to imperatives. *Dialogue* **18** (1979), no. 3, 373–391. **80g:03005** 03A05
- McCarthy, Patrick J. Existence of strong Bäcklund transformations in four or more dimensions and generalization of a family of Bäcklund transformations. *Lett. Math. Phys.* **2** (1977/78), no. 6, 493–498. (Francesco Calogero) **80a:81025** 81C10 (35A30, 58A15)  
Hyperfunctions and asymptotic symmetries. *Proc. Roy. Soc. London Ser. A* **358** (1978), no. 1695, 495–498. (A. O. Barut) **80k:83034** 83E15 (22E70)
- McCarthy, Timothy (with Gottlieb, Dale) Substitutional quantification and set theory. *J. Philos. Logic* **8** (1979), no. 3, 315–331. (Authors' introduction) **80m:03012** 03A05 (03E99)
- McCauley, Joseph L., Jr. Phase space quantisation of interacting vortices in two dimensions. *J. Phys. A* **12** (1979), no. 11, 1999–2013. (A. K. Rajagopal) **80k:81201** 81J05 (76C05)
- McClamroch, N. H. See Rao, M. V. C.; et al., **80i:93048**
- McClave, James T. (with Littell, Ramon C.; Offen, Walter W.) Goodness-of-fit tests for the two parameter Weibull distribution. *Comm. Statist. B—Simulation Comput.* **8** (1979), no. 3, 257–269. (Authors' summary) **80e:62025** 62G10
- McClure, Stephen H. (with Holland, W. Charles) Solvability of the word problem in free lattice-ordered groups. *Houston J. Math.* **5** (1979), no. 1, 99–105. (George Hutchinson) **80i:06018** 06F15 (03D40)
- McClendon, J. F. Classifying subgroups of solvable groups. *Publ. Res. Inst. Math. Sci.* **14** (1978), no. 3, 557–574. (R. W. Carter) **80e:20022** 20D10
- McClure, J. P. (with Wong, R.) Explicit error terms for asymptotic expansions of Stieltjes transforms. *J. Inst. Math. Appl.* **22** (1978), no. 2, 129–145. (G. M. Habibullah) **80a:44003** 44A15 (41A60, 42A38)  
(with Wong, R.) Infinite systems of differential equations. II. *Canad. J. Math.* **31** (1979), no. 3, 596–603. (C. Avramescu) **80k:34005** 34G20 (34G10)  
(with Wong, R.) Exact remainders for asymptotic expansions of fractional integrals. *J. Inst. Math. Appl.* **24** (1979), no. 2, 139–147. (Authors' summary) **80i:68027** 65D30
- McCluskey, Edward J. Logic design of multivalued I<sup>2</sup>L logic circuits. *IEEE Trans. Comput.* **28** (1979), no. 8, 546–559. (Authors' summary) **80e:94030** 94C30  
See also David, René; et al., **80e:94024**
- McColl, William F. Complexity hierarchies for Boolean functions. *Acta Inform.* **11** (1978/79), no. 1, 71–77. (Claus-Peter Schnorr) **80b:94041** 94C10 (68C25)  
The circuit depth of symmetric Boolean functions. *J. Comput. System Sci.* **17** (1978), no. 1, 108–115. (A. D. Koršunov) **80a:94061** 94C10
- McCollum, Gln (with Finkelstein, David) Unified quantum theory. *Quantum theory and the structures of time and space (Conf., Feldafing, 1974)*, pp. 15–54, Hanser, Munich, 1975. (Authors' summary) **80e:81008** 81B05 (81C99)  
Physical operations, diagram operations. *Internat. J. Theoret. Phys.* **18** (1979), no. 2, 113–128. (Authors' summary) **80m:93011** 93A99 (05C99, 81B05)
- McConnell, James Correlation functions for spherical harmonics resulting from rotational Brownian motion of a linear molecule. *Proc. Roy. Irish Acad. Sect. A* **78** (1978), no. 11, 87–97. (Michel Romero) **80i:82010** 82A05 (33A45)  
(with Ford, G. W.; Lewis, J. T.) Rotational Brownian motion of an asymmetric top. *Phys. Rev. A* (3) **19** (1979), no. 2, 907–919. (Authors' summary) **80k:82003** 82A05 (34E05)
- McCool, J. L. Analysis of single classification experiments based on censored samples from the two-parameter Weibull distribution. *J. Statist. Plann. Inference* **3** (1979), no. 1, 39–68. (A. C. Cohen) **80m:62023** 62F03 (62F25)
- McCormick, Garth P. An idealized exact penalty function. *Nonlinear programming, 3 (Proc. Sympos., Special Interest Group Math. Programming, Univ. Wisconsin, Madison, Wis., 1977)*, pp. 165–195, Academic Press, New York, 1978. (Pierre Lorian) **80a:90125** 90C30  
(with Mancini, Louis J.) Bounding global minima with interval arithmetic. *Oper. Res.* **27** (1979), no. 4, 743–754. (J. A. Grant) **80h:65028** 65G10 (65K05)
- McCormick, S. F. A revised mesh refinement strategy for Newton's method applied to nonlinear two-point boundary value problems. *Numerical treatment of differential equations in applications (Proc. Meeting, Math. Res. Center, Oberwolfach, 1977)*, pp. 15–23, *Lecture Notes in Math.*, 679, Springer, Berlin, 1978. (Authors' summary) **80c:65168** 65L10
- McCoy, B. J. (with Carbonell, R. G.) Tunneling and transport problems for a quantum mechanical Brownian particle. *J. Statist. Phys.* **21** (1979), no. 3, 301–311. (Francesco Guerra) **80k:82020** 82A15 (35Qxx, 82A70)
- McCoy, Barry M. (with Wu, Tai Tsun) Nonperturbative quantum field theory. *Sci. Sinica* **22** (1979), no. 9, 1021–1032. (Gerhard Hegerfeldt) **80m:81059** 81E15
- McCoy, John J. On an extended parabolic-coherence function propagation model. *J. Acoust. Soc. Amer.* **64** (1978), no. 6, 1703–1709. (E. Meister) **80d:76078** 76Q05 (78A05)
- McCoy, M. G. (with Cordey, J. G.; Marx, K. D.; Mirin, A. A.; Rensink, M. E.) A new expansion method for computing  $\sigma$  for reactant distribution functions. *J. Comput. Phys.* **28** (1978), no. 1, 115–121. (From the introduction) **80k:65032** 65D15
- McCoy, Peter A. Extremal properties of real biaxially symmetric potentials in  $E^{2n+n+2}$ . *Pacific J. Math.* **74** (1978), no. 2, 381–389. (D. H. Armitage) **80c:31004** 31B99  
Approximation and harmonic continuation of axially symmetric potentials in  $E^3$ . *Pacific J. Math.* **81** (1979), no. 2, 481–491. (N. I. Skiba) **80j:31009** 31B15  
Mean boundary value problems for a class of elliptic equations in  $E^3$ . *Proc. Amer. Math. Soc.* **76** (1979), no. 1, 123–128. (G. Geymonat) **80k:35013** 35C10 (35J99)
- McCoy, R. A. Characterization of pseudocompactness by the topology of uniform convergence on function spaces. *J. Austral. Math. Soc. Ser. A* **26** (1978), no. 2, 251–256. (C. M. Păreș) **80a:54019** 54C35
- McCoy, T. L. Functions of unit modulus on boundary portions of domains with a certain circular symmetry. *Illinois J. Math.* **23** (1979), no. 2, 307–318. (Vazgain Avanianian) **80i:32022** 32A40
- McCracken, M. F. (with Peskin, C. S.) A vortex-grid method for blood flow through heart valves. *Sixth International Conference on Numerical Methods in Fluid Dynamics (Proc. Conf., Tbilisi, 1978)*, pp. 377–384, *Lecture Notes in Phys.*, 90, Springer, Berlin, 1979. (From the introduction) **80e:76013** 76D05 (92A07)
- McCrea, J. D. (with O'Brien, G.) Spin precession in the relativistic two-body problem. *Gen. Relativity Gravitation* **9** (1978), no. 12, 1101–1118. (A. Raychaudhuri) **80d:83032** 83C35 (58D30)  
(with O'Brien, G.) Synge's equations of motion applied to a perfect fluid. *J. Phys. A* **12** (1979), no. 4, 503–516. (Richard Sigal) **80d:83028** 83C25 (53B50)
- McCrea, W. H. Ebenezer Cunningham. *Bull. London Math. Soc.* **10** (1978), no. 1, 116–126 (1 plate). (Editors) **80a:01036** 01A70
- McCrinmon, K. (with Brewer, J. W.; Costa, D. L.) Seminormality and root closure in polynomial rings and algebraic curves. *J. Algebra* **58** (1979), no. 1, 217–226. (Ezio Stagnaro) **80i:13002** 13B20 (13B25)
- McCrory, Clint Stratified general position. *Algebraic and geometric topology (Proc. Sympos., Univ. California, Santa Barbara, Calif., 1977)*, pp. 142–146, *Lecture Notes in Math.*, 664, Springer, Berlin, 1978. (B. J. Sanderson) **80m:57016** 57Q65 (14F45, 32B25)  
Geometric homology operations. *Studies in algebraic topology*, pp. 119–141, *Advances in Math., Suppl. Studies*, 5, Academic Press, New York, 1979. (Mitsuyoshi Kato) **80j:57016** 57N65 (57Q55)  
(with Banchoff, T.) A combinatorial formula for normal Stiefel-Whitney classes. *Proc. Amer. Math. Soc.* **76** (1979), no. 1, 171–177. (E. C. Turner) **80k:57031** 57R20  
(with Blanton, John D.) An axiomatic proof of Stiefel's conjecture. *Proc. Amer. Math. Soc.* **77** (1979), no. 3, 409–414. (E. C. Turner) **80k:55052** 55R40 (57R20)
- McCullough, Laurence B. Leibniz and traditional philosophy. (German summary) *Studia*



- Leibniziana* 10 (1978), no. 2, 254-270. (David W. Miller) 80d:03003 03-03 (01A45, 03A05)
- McCurdy, C. William Complex-coordinate calculation of matrix elements of the resolvent of the Born-Oppenheimer Hamiltonian. *Phys. Rev. A* (3) 21 (1980), no. 2, 464-470. (Author's summary) 80d:81193 81G55
- McDanel, Willie L., Jr. (with Mitchell, Jerrel R.; Nail, James B.) Computation of cofactors of  $[I - A]$  with applications. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 637-638. (Authors' summary) 80d:93005 93A10 (15A15)
- McDermott, J. P. J. (with Camina, Alan R.) On  $\frac{1}{2}$ -transitive Frobenius regular groups. *J. London Math. Soc.* (2) 20 (1979), no. 2, 205-214. (David B. Surowski) 80j:20001 20B10 (20D05)
- McDiarmid, Colin Blocking, antiblocking, and pairs of matroids and polymatroids. *J. Combin. Theory Ser. B* 25 (1978), no. 3, 313-325. (András Frank) 80a:05059 05B35
- McDonald, B. R. Automorphisms of  $GL_n(R)$ . *Trans. Amer. Math. Soc.* 246 (1978), 155-171. (E. F. Robertson) 80a:20054 20G99
- McDonald, David R. (with Athreya, K. B.; Ney, Peter E.) Coupling and the renewal theorem. *Amer. Math. Monthly* 85 (1978), no. 10, 809-814. (Allan Gut) 80j:60115 60K05
- (with Athreya, K. B.; Ney, Peter E.) Limit theorems for semi-Markov processes and renewal theory for Markov chains. *Ann. Probab.* 6 (1978), no. 5, 788-797. (Esa Nummelin) 80f:60076 60K15 (60J10)
- On semi-Markov and semiregenerative processes. II. *Ann. Probab.* 6 (1978), no. 6, 995-1014 (1979). (Esa Nummelin) 80a:60113b 60K15
- On semi-Markov and semi-regenerative processes. I. *Z. Wahrsch. Verw. Gebiete* 42 (1978), no. 4, 261-277. (Esa Nummelin) 80a:60113a 60K15
- A local limit theorem for large deviations of sums of independent, nonidentically distributed random variables. *Ann. Probab.* 7 (1979), no. 3, 526-531. (Werner Wolf) 80d:60033 60F10
- On local limit theorem for integer valued random variables. (Russian summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 3, 607-614. (Sujit K. Basu) 80i:60024 60F05
- McDonald, Gerard The maximal ideal space of  $H^\infty + C$  on the ball in  $C^n$ . *Canad. J. Math.* 31 (1979), no. 1, 79-86. (D. Sarason) 80f:46055 46J15 (32A35)
- Toeplitz operators on the ball with piecewise continuous symbol. *Illinois J. Math.* 23 (1979), no. 2, 286-294. (Kenneth R. Davidson) 80j:47042 47B35 (32A35)
- (with Sundberg, C.) Toeplitz operators on the disc. *Indiana Univ. Math. J.* 28 (1979), no. 4, 595-611. (R. G. Douglas) 80a:47034 47B35 (32A35, 46J15)
- McDonald, J. N. (with Weiss, N. A.) An infinite particle system with continual input and random death. *Adv. in Appl. Probab.* 10 (1978), no. 4, 764-787. (S. C. Port) 80e:60119 60K35 (60F05)
- McDonald, James B. (with Ransom, Michael R.) Alternative parameter estimators based upon grouped data. *Comm. Statist. A—Theory Methods* 8 (1979), no. 9, 899-917. (Jerry A. Hausman) 80a:62044 62F10
- McDonald, M. A. (with Zweben, Stuart H.) An optimal method for deletion in one-sided height-balanced trees. *Comm. ACM* 21 (1978), no. 6, 441-445. (A. T. Amin) 80a:68054 68E10 (68B05, 68C25)
- McDonald, Roderick P. A note on the factor analysis of partial covariance matrices. *Psychometrika* 43 (1978), no. 1, 121-122. (Author's summary) 80a:62067 62H25
- McDonough, James (with Majda, Andrew; Osher, Stanley) The Fourier method for nonsmooth initial data. *Math. Comp.* 32 (1978), no. 144, 1041-1061. (H.-O. Kreiss) 80a:65197 65M10
- McDowell, Kenneth (with Bulman-Fleming, Sydney) The category of mono-unary algebras. *Algebra Universalis* 9 (1979), no. 3, 339-345. (G. H. Wenzel) 80i:00005 08A60
- McDuff, Dusa The lattice of normal subgroups of the group of diffeomorphisms or homeomorphisms of an open manifold. *J. London Math. Soc.* (2) 18 (1978), no. 2, 353-364. (Hideki Omori) 80e:58006 58D05
- McDonough, Philip Some aspects of the Smoluchowski process. *J. Appl. Probab.* 15 (1978), no. 4, 663-674. (S. K. Srinivasan) 80f:60075 60J80 (82A05)
- Estimating the law of randomly moving particles by counting. *J. Appl. Probab.* 16 (1979), no. 1, 25-35. (S. K. Srinivasan) 80f:60072 60J70 (62F10, 82A05)
- McEliece, Robert J. (with Rodemich, E. R.; Rumsey, H. C., Jr.) The Lovász bound and some generalizations. *J. Combin. Inform. System Sci.* 3 (1978), no. 3, 134-152. (László Lovász) 80a:05168 05C99 (05B20, 94A24)
- (with Baumert, Leonard D.; Tilborg, Henk C. A.) Symbol synchronization in convolutionally coded systems. *IEEE Trans. Inform. Theory* 25 (1979), no. 3, 362-365. (Sat Narain Gupta) 80j:94027 94B10
- McEnnis, Brian W. Purely contractive analytic functions and characteristic functions of noncontractions. *Acta Sci. Math. (Szeged)* 41 (1979), no. 1-2, 161-172. (J. Bögnár) 80i:47049 47B50 (47A45)
- McFall, John D. Elementary divisors of transformations related to tensor powers. *Linear and Multilinear Algebra* 7 (1979), no. 1, 13-25. (R. Merris) 80d:15032 15A69
- How to compute the elementary divisors of the tensor product of two matrices. *Linear and Multilinear Algebra* 7 (1979), no. 3, 193-201. (J. A. Dias da Silva) 80h:15007 15A33 (15A23)
- McFall, Nancy A. (with Best, Michael J.) The projection method of optimization applied to engineering plasticity problems. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing* (Univ. Manitoba, Winnipeg, Man., 1977), pp. 219-233. *Congress. Numer., XX, Utilitas Math., Winnipeg, Man., 1978.* (Authors' summary) 80j:73032 73E99 (90C05)
- (with Best, Michael J.) The projection method of optimization applied to engineering plasticity problems. *J. Optim. Theory Appl.* 29 (1979), no. 1, 53-65. (Authors' summary) 80h:90160 90C50 (73C99, 90C20)
- McGehee, O. Carruth Lipschitz classes and restrictions of Fourier transforms. *Math. Ann.* 239 (1979), no. 3, 223-227. (R. Kaufman) 80e:43004 43A25 (43A46)
- McGehee, Richard (with Easton, Robert W.) Homoclinic phenomena for orbits doubly asymptotic to an invariant three-sphere. *Indiana Univ. Math. J.* 28 (1979), no. 2, 211-240. (Ju. E. Giklikh) 80e:58017 58F15 (34C35)
- McGillivray, A. Russell (with Silver, Edward A.) Some concepts for inventory control under substitutable demand. (French summary) *INFOR—Canad. J. Oper. Res. Inform.*
- Process.* 16 (1978), no. 1, 47-63. (Authors' summary) 80i:90049 90B05
- McGinn, Collin (with Hart, W. D.) On propositions. *Notre Dame J. Formal Logic* 19 (1978), no. 2, 299-306. (M. Rogava) 80i:03007 03A05 (03B45)
- McGinn, Robert J. Approximations by exponential sums on discrete and continuous domains. *J. Approx. Theory* 25 (1979), no. 1, 65-88. (Dietrich Braess) 80j:41032 41A30
- McGlothlin, Gerald E. Controllability, observability, and duality in a distributed parameter system with continuous and point spectrum. *IEEE Trans. Automat. Control* 23 (1978), no. 4, 687-690. (S. G. Tzafestas) 80a:93009 93C20 (93B05)
- Optimal control of distributed parameter systems defined on a semi-infinite spatial interval. *Internat. J. Control* 30 (1979), no. 1, 107-119. (J. E. Rubio) 80f:49023 49C10 (93C15)
- McGovern, Richard J. (with Bankston, Paul) Topological partitions. *General Topology Appl.* 10 (1979), no. 3, 215-229. (N. Hindman) 80i:54007 54B15
- McGrath, James H. A formal statement of the Einstein-Podolsky-Rosen argument. *Internat. J. Theoret. Phys.* 17 (1978), no. 7, 557-571. (Author's summary) 80d:81006 81B99
- McGrath, Joseph F. Gaussian product-type quadratures. *Appl. Math. Comput.* 5 (1979), no. 3, 265-280. (Henning Esser) 80f:65025 65D32
- McGregor, J. J. Relational consistency algorithms and their application in finding subgraph and graph isomorphisms. *Inform. Sci.* 19 (1979), no. 3, 229-250. (Author's summary) 80i:68052 68E10
- McGrew, J. Michael An unusual example of a sphere. *Math. Mag.* 52 (1979), no. 3, 158-162. (John G. Hocking) 80h:57010 57N05 (01A60)
- McGuire, Stephen A. (with Johnson, Dallas E.; Milliken, George A.) Estimating  $\sigma^2$  in the presence of outliers. *Technometrics* 20 (1978), no. 4, part 1, 441-455. (Authors' summary) 80a:62039 62F10
- McIntire, D. D. (with Gray, H. L.; Kelley, G. D.) A new approach to ARMA modeling. With comments by John W. Tukey, Hirotugu Akaike, Enders A. Robinson and C. W. J. Granger and with a rejoinder by the authors. *Comm. Statist. B—Simulation Comput.* 7 (1978), no. 1, 1-96. (P. A. Moretino) 80e:62059 62M10 (62M20)
- McIntosh, Alan Functions and derivations of  $C^*$ -algebras. *J. Funct. Anal.* 30 (1978), no. 2, 264-275. (Hisashi Choda) 80a:46054 46L05
- McIntosh, Clifton Skolem's criticisms of set theory. *Noûs* 13 (1979), no. 3, 313-334. (I. Grattan-Guinness) 80j:03012 03A05 (01A60, 04-03)
- McIntyre, David R. A linear time and space ordering algorithm for irregular shaped finite element systems. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing* (Univ. Manitoba, Winnipeg, Man., 1978), pp. 371-404. *Congress. Numer., XXII, Utilitas Math., Winnipeg, Man., 1979.* (Richard E. Ewing) 80h:65025 65F30 (65N30)
- McIntyre, M. E. (with Andrews, D. G.) An exact theory of nonlinear waves on a Lagrangian-mean flow. *J. Fluid Mech.* 89 (1978), no. 4, 609-646. (Alberto Valli) 80e:76055 76U05 (35Q20)
- (with Andrews, D. G.) On wave-action and its relatives. *J. Fluid Mech.* 89 (1978), no. 4, 647-664. (Authors' summary) 80e:76005 76B99 (35Q99)
- McKane, A. J. (with Wallace, D. J.) Instanton calculations using dimensional regularisation. *J. Phys. A* 11 (1978), no. 11, 2285-2304. (Don Weingarten) 80e:81070 81E10 (58D20)
- Vacuum instability in scalar field theories. *Nuclear Phys. B* 152 (1979), no. 1, 166-188. (G. Vieltiel) 80h:81049 81E10
- McKay, Brendan D. Backtrack programming and isomorph rejection on ordered subsets. *Ars Combin.* 5 (1978), 65-99. (Walter Stromquist) 80a:68033 68C05 (05A15, 68E10)
- (with Stanton, Ralph G.) Isomorphism of two large designs. *Ars Combin.* 6 (1978), 87-90. (H. Hanani) 80e:05030 05B05
- Transitive graphs with fewer than twenty vertices. *Math. Comp.* 33 (1979), no. 147, 1101-1121, *loose microfiche suppl.* (Brian Alspach) 80h:05066 05C25
- McKay, John (with Cannon, John J.; Young, Kiang Chuen) The nonabelian simple groups  $G$ ,  $|G| < 10^5$ —presentations. *Comm. Algebra* 7 (1979), no. 13, 1397-1406. (Authors' summary) 80e:20023 20D08
- The non-abelian simple groups  $G$ ,  $|G| < 10^6$ —character tables. *Comm. Algebra* 7 (1979), no. 13, 1407-1445. (Author's summary) 80e:20024 20D08
- (with Erbach, D. W.; Fisher, J.) Polynomials with  $PSL(2, 7)$  as Galois group. *J. Number Theory* 11 (1979), no. 1, 69-75. (Harvey Cohn) 80a:12004 12A55 (20B25)
- (with Young, Kiang Chuen) The nonabelian simple groups  $G$ ,  $|G| < 10^6$ —minimal generating pairs. *Math. Comp.* 33 (1979), no. 146, 812-814. (W. J. Wong) 80d:20018 20D05 (20F05)
- Some remarks on computing Galois groups. *SIAM J. Comput.* 8 (1979), no. 3, 344-347. (Harvey Cohn) 80m:12005 12A55 (20B25)
- McKay, M. D. (with Beckmann, R. J.; Conover, W. J.) A comparison of three methods for selecting values of input variables in the analysis of output from a computer code. *Technometrics* 21 (1979), no. 2, 239-245. (George Marsaglia) 80k:65012 65C10 (62E25)
- McKay, Vincent (with Levin, Deborah A.; Fliflet, Arne W.; Ma, Michael) Gaussian matrix elements of the free-particle Green's function. *J. Comput. Phys.* 28 (1978), no. 3, 416-425. (From the text) 80i:81107 81F20
- McKean, H. P. Boussinesq's equation as a Hamiltonian system. *Topics in functional analysis (essays dedicated to M. G. Krein on the occasion of his 70th birthday)*, pp. 217-226. *Advances in Math., Suppl. Studies*, 3, Academic Press, New York, 1978. (Alexander A. Pankov) 80h:58056 58F07 (35Q20)
- (with Trubowitz, E.) Hill's surfaces and their theta functions. *Bull. Amer. Math. Soc.* 84 (1978), no. 6, 1042-1085. (Alexander A. Pankov) 80b:30039 30F30 (14H45, 34B30, 35Q20)
- McKean, Joseph W. (with Hettmansperger, Thomas P.) A robust analysis of the general linear model based on one step R-estimates. *Biometrika* 65 (1978), no. 3, 571-579. (Farhad Mehran) 80e:62047 62F35
- (with Hettmansperger, Thomas P.) Statistical inference based on ranks. *Psychometrika* 43 (1978), no. 1, 69-79. (Rashid Ahmad) 80d:62036 62G10
- McKee, S. (with Gourlay, A. R.) Hopscotch methods for elliptic partial differential equations. *J. Comput. Appl. Math.* 5 (1979), no. 2, 103-110. (Authors' summary) 80e:65231 65P05

- The analysis of a variable step, variable coefficient linear multistep method for solving a singular integro-differential equation arising from the diffusion of discrete particles in a turbulent fluid. *J. Inst. Math. Appl.* 23 (1979), no. 3, 373-388. (Author's summary) **80c:65249** 65R20 (76S05)
- Cyclic multistep methods for solving Volterra integro-differential equations. *SIAM J. Numer. Anal.* 16 (1979), no. 1, 106-114. (Abha Ghoshal) **80c:65105** 65R20
- McKeller, R. J. Asymmetric connection treatment of the Einstein-Maxwell field equations. *Phys. Rev. D* (3) 20 (1979), no. 2, 356-361. (Author's summary) **80c:83006** 83C05 (53B50)
- McKevrey, Richard D. General conditions for global intransitivities in formal voting models. *Econometrica* 47 (1979), no. 5, 1085-1112. (Maurice Salles) **80j:90019** 90A08
- (with Lee, M.; Rosenthal, H.) Game theory and the French apparentements of 1951. *Internat. J. Game Theory* 8 (1979), no. 1, 27-53. (Authors' summary) **80c:90158** 90DA0 (90A08)
- McKenna, P. J. (with Cesari, Lamberto) Alternative problems and Grothendieck approximation properties. *Bull. Inst. Math. Acad. Sinica* 6 (1978), no. 2, part 2, 569-581. (R. Kent Nagle) **80c:47053** 47H15 (47H17, 58E07)
- Uniqueness of solutions for semilinear equations at resonance. *Nonlinear Anal.* 2 (1978), no. 2, 235-237. (J. Vencov) **80c:35036** 35J60
- On a superlinear elliptic boundary value problem at resonance. *Proc. Amer. Math. Soc.* 74 (1979), no. 2, 259-265. (A. Ramm) **80c:35037** 35J65
- McKennon, Kelly The quasimultiplier conjecture. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 258-260. (D. A. Herrero) **80h:46093** 46L05
- The structure space of the trigonometric polynomials on a compact group. *J. Reine Angew. Math.* 307/308 (1979), 166-172. (John R. McMullen) **80j:22003** 22D15 (22D35, 43A15)
- McKenzie, R. (with Faber, V.; Laver, Richard) Coverings of groups by abelian subgroups. *Canad. J. Math.* 30 (1978), no. 5, 933-945. (P. Erdős) **80f:20042** 20F99 (05C15, 05C25)
- (with Romanowska, Anna) Varieties of  $\sim$ -distributive bisemilattices. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 213-218. Heyn, Klagenfurt, 1979. (R. Balbes) **80c:06006** 06B20 (06A12)
- McKeon, Gerry Energy of a spin- $\frac{1}{2}$  particle in a constant coloured magnetic field. (French summary) *Canad. J. Phys.* 57 (1979), no. 7, 994-997. (Author's summary) **80f:81103** 81G05
- Canonical formulation of the free spin-2 field. (French summary) *Canad. J. Phys.* 57 (1979), no. 12, 2096-2098. (Author's summary) **80m:81043** 81D25
- An extended vector theory. *Nuclear Phys. B* 147 (1979), no. 3-4, 299-316. (A. Corcioci) **80j:81062** 81E99 (53C80, 58F06)
- McKibbin, R. (with O'Sullivan, M. J.) Onset of convection in a layered porous medium heated from below. *J. Fluid Mech.* 96 (1980), no. 2, 375-393. (Authors' summary) **80m:76073** 76S05
- McKlennan, M. A. See Székelyhidi, László **80h:39011**
- McKinley, John M. Brachistochrones, tautochrones, evolutes, and tessellations. *Amer. J. Phys.* 47 (1979), no. 1, 81-86. (Vadim Komkov) **80d:49034** 49H05
- McKiney, Michael Levels of obligation. *Philos. Stud.* 35 (1979), no. 4, 385-395. (Editors) **80h:03013** 03A05 (03B45)
- McKirahan, Richard D., Jr. Aristotle's subordinate sciences. *British J. Hist. Sci.* 11 (1978), no. 39, part 3, 197-220. (Giulio Cesare Giacobbe) **80c:01003** 01A20
- McKay, Vincent (with Lucchese, Robert R.) Application of the Schwinger variational principle to electron-ion scattering in the static-exchange approximation. *Phys. Rev. A* (3) 21 (1980), no. 1, 112-123. (Authors' summary) **80m:81079** 81F20 (49H05)
- (with Watson, D. K.; Lucchese, Robert R.; Rescigno, T. N.) Schwinger variational principle for electron-molecule scattering: application to electron-hydrogen scattering. *Phys. Rev. A* (3) 21 (1980), no. 3, 738-744. (Authors' summary) **80m:81081** 81F20
- McLachlan, G. J. (with Ganesalingam, S.) The efficiency of a linear discriminant function based on unclassified initial samples. *Biometrika* 65 (1978), no. 3, 658-662. (Chien-Pai Han) **80m:62058** 62H30
- (with Byth, K.) The biases associated with maximum likelihood methods of estimation of the multivariate logistic risk function. *Comm. Statist. A—Theory Methods* 7 (1978), no. 9, 877-890. (C. W. Chen) **80c:62088** 62H30
- McLane, Earl On the possibility of epistemic logic. *Notre Dame J. Formal Logic* 20 (1979), no. 3, 559-574. (Scott K. Lehmann) **80j:03029** 03B45 (03A05)
- McLaren, Keith R. The optimality of rational distributed lags. *Internat. Econom. Rev.* 20 (1979), no. 1, 183-191. (A. L. Nagar) **80h:90012** 90A05 (62P20)
- McLaughlin, D. W. (with Scott, Alwyn C.) Soliton perturbation theory. *Nonlinear evolution equations solvable by the spectral transform (Internat. Sympos. Acad. Lincei, Rome, 1977)*, pp. 225-243. Res. Notes in Math., 26, Pitman, London, 1978. (From the introduction) **80d:81098** 81E99 (35Q99)
- McLaughlin, T. G. (with Barbak, J.) On the intersection of regressive sets. *Pacific J. Math.* 79 (1978), no. 1, 19-35. (Charles Applebaum) **80f:60047** 03D50
- Retraceable homogeneous sets. *Fund. Math.* 103 (1979), no. 3, 223-229. (C. G. Jockusch, Jr.) **80c:03054** 03D30
- McLean, T. Bruce V-flexing the hexahexaflexagon. *Amer. Math. Monthly* 86 (1979), no. 6, 457-466. (E. Jucovic) **80f:52008** 52A25
- McLeish, Mary On the number of conjugates of  $n$ -ary quasigroups. *Canad. J. Math.* 31 (1979), no. 3, 637-654. (Tomáš Kepka) **80h:20110** 20N15
- McLennan, R. G. (with Debever, Robert; Tariq, N.) Riemannian-Maxwellian invertible structures in general relativity. *Gen. Relativity Gravitation* 10 (1979), no. 10, 853-879. (J. D. Zund) **80h:83015** 83C40 (53C10, 83C20)
- (with Carter, Brandon) Generalized total angular momentum operator for the Dirac equation in curved space-time. *Phys. Rev. D* (3) 19 (1979), no. 4, 1093-1097. (Authors' summary) **80f:81048** 81C99 (83C99)
- (with Spindel, Ph.) Quantum numbers for Dirac spinor fields on a curved space-time. *Phys. Rev. D* (3) 20 (1979), no. 2, 409-413. (M. Carmeli) **80c:81114** 81M05 (53B50)
- McLeod, A. I. On the distribution of residual autocorrelations in Box-Jenkins models. *J. Roy. Statist. Soc. Ser. B* 40 (1978), no. 3, 296-302. (O. D. Anderson) **80c:62146** 62M10 (62E20)
- McLeod, J. B. (with Lodge, A. S.; Nohel, John A.) A nonlinear singularly perturbed Volterra integro-differential equation occurring in polymer rheology. *Transactions of the Twenty-Third Conference of Army Mathematicians (Langley Res. Center, Hampton, Va., 1977)*, pp. 303-374. ARO Rep. 78, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1978. (Authors' summary) **80c:45008** 45J05 (73F05)
- (with Lodge, A. S.; Nohel, John A.) A nonlinear singularly perturbed Volterra integro-differential equation occurring in polymer rheology. *Proc. Roy. Soc. Edinburgh Sect. A* 80 (1978), no. 1-2, 99-137. (V. Lakshmikantham) **80f:45017** 45J05 (73Q05)
- (with Stuart, Charles A.) Nonlinear Sturm-Liouville problems with no secondary bifurcation. *Proc. Roy. Soc. Edinburgh Sect. A* 80 (1978), no. 3-4, 347-356. (G. A. Klaassen) **80g:34024** 34B25
- McLeod, John The Kunnet formula in equivariant  $K$ -theory. *Algebraic topology, Waterloo, 1978 (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1978)*, pp. 316-333. *Lecture Notes in Math.*, 741, Springer, Berlin, 1979. (Richard R. Patterson) **80m:55007** 55N25 (55T25)
- McLeod, Robin J. Y. On the stability of two-dimensional interpolation and high order bases for curved finite elements. *Comput. Math. Appl.* 5 (1979), no. 4, 249-265. (H. D. Mittelmann) **80k:65013** 65D05 (41A05)
- Extensions and generalisations of rational and high order transformation methods. *Comput. Math. Appl.* 5 (1979), no. 4, 267-276. (H. D. Mittelmann) **80k:65014** 65D05 (41A05)
- McLinden, L. Symmetric duality for structured convex programs. *Trans. Amer. Math. Soc.* 245 (1978/79), 147-181. (Uwe Zimmermann) **80b:90112** 90C25
- McMenamin, J. Stuart (with Pinard, Jean-Paul) Specification and estimation of dynamic demand systems incorporating polynomial price response functions. An application to U. S. clothing imports. *J. Econometrics* 7 (1978), no. 2, 147-162. (Authors' summary) **80c:62083** 62P20
- McMillan, Claude (with Glover, Fred; Klingman, Darwin) Modeling combinatorial mathematical programming problems by netflows: an illustrative application. *Nonlinear programming, 3 (Proc. Sympos., Special Interest Group Math. Programming, Univ. Wisconsin, Madison, Wis., 1977)*, pp. 303-336. Academic Press, New York, 1978. (Authors' summary) **80h:90138** 90C35 (90B10)
- McMillan, John A dynamic analysis of public intermediate goods supply in open economy. *Internat. Econom. Rev.* 19 (1978), no. 3, 665-678. (Karl Shell) **80j:90046** 90A16
- McMillen, K. L. (with Payne, W. H.) Orderly enumeration of nonsingular binary matrices applied to text encryption. *Comm. ACM* 21 (1978), no. 4, 259-263. (P. E. O'Neill) **80h:68031** 68C05
- McMorris, F. R. An algebraic problem in taxonomy. *Appl. Math. Notes* 4 (1979), no. 2, 55-61. (From the introduction) **80g:92005** 92A05 (06A12)
- McMullen, J. R. (with Price, John F.) Reversible hypergroups. (Italian summary) *Rend. Sem. Mat. Fis. Milano* 47 (1977), 67-85 (1979). (Stephen D. Smith) **80c:20010** 20C15 (20C35)
- McMullen, P. Lattice invariant valuations on rational polytopes. *Arch. Math. (Basel)* 31 (1978/79), no. 5, 509-516. (E. Hertel) **80d:52011** 52A20
- Sets homeomorphic to intersections of their translates. *Mathematika* 25 (1978), no. 2, 264-269. (Gerald Beer) **80c:52006** 52A30
- McNabb, Alex (with Schumitzky, Alan) Factorization of Fredholm operators on analytic functions. *J. Funct. Anal.* 29 (1978), no. 3, 336-374. (P. M. Anselone) **80f:47023** 47A53 (32A30, 45H05)
- McNamara, J. M. Behavior of scalar perturbations of a Reissner-Nordström black hole inside the event horizon. *Proc. Roy. Soc. London Ser. A* 364 (1978), no. 1716, 121-134. (Alan Barnes) **80f:83049** 83D05
- McNamee, J. M. Some comments on D. R. Shier's paper: "Inverting sparse matrices by tree partitioning" (*J. Res. Nat. Bur. Standards Sect. B* 80B (1976), no. 2, 245-257). *J. Res. Nat. Bur. Standards* 83 (1978), no. 5, 485-487. (Iain S. Duff) **80c:65037** 65F05 (65S05)
- McNickle, Donald C. Congestion in a simple overflow model. *New Zealand Oper. Res.* 7 (1979), no. 2, 151-157. (K. Balagopal) **80f:60093** 60K30
- McNiven, Hugh D. (with Mengi, Yalcin) A mathematical model for the linear dynamic behavior of two phase periodic materials. *Internat. J. Solids and Structures* 15 (1979), no. 4, 271-280. (J. Ignaczak) **80g:73007** 73B05
- McNulty, G. F. (with Harley, P. W. III) When is a point Borel? *Pacific J. Math.* 80 (1979), no. 1, 151-157. (E. R. Lorch) **80c:54020** 54D10 (54H05)
- McPherson, J. D. See Szatkowski, Andrzej **80d:94031**
- McPherson, John A. (with Kime, Charles R.) A two-level diagnostic model for digital systems. *IEEE Trans. Comput.* 28 (1979), no. 1, 16-27. (A. T. Amini) **80h:68082** 68J10 (68A05, 94C99)
- McShane, E. J. The calculus of variations from the beginning through optimal control theory. *Optimal control and differential equations (Proc. Conf., Univ. Oklahoma, Norman, Okla., 1977)*, pp. 3-49. Academic Press, New York, 1978. (Rolf Klötzler) **80c:01022** 01A60 (49-03)
- (with Darst, R. B.) The deterministic Itô-belated integral is equivalent to the Lebesgue integral. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 271-275. (Ralph Henstock) **80c:26009** 26A42
- Choosing a mathematical model for a system affected by noise. *Transactions of the Twenty-Fourth Conference of Army Mathematicians (Univ. Virginia, Charlottesville, Va., 1978)*, pp. 1-11. ARO Rep., 79, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Author's summary) **80d:60076** 60H05 (93E20)
- McVittie, G. C. Isothermal-Kruskal coordinates and Einstein's equations. *Comm. Roy. Soc. Edinburgh Phys. Sci. No. 16* (1979), 215-225. (Mary L. Boas) **80h:83003** 83C05 (53B30)
- McWhirter, J. G. (with Pike, E. R.) On the numerical inversion of the Laplace transform and similar Fredholm integral equations of the first kind. *J. Phys. A* 11 (1978), no. 9, 1729-1745. (Authors' summary) **80a:65277** 65R10 (65Dxx)
- Mdzinarishvili, L. D. Homology, homotopy and spectra. (Russian. English summary) *Sakharth. SSR Mecn. Akad. Math. Inst. Srom.* 59 (1978), 68-97. (I. Pop) **80c:55004** 55N20
- Functional homology. (Russian. English summary) *Sakharth. SSR Mecn. Akad. Math. Inst. Srom.* 59 (1978), 98-118. (I. Pop) **80c:55009** 55N35 (01A60, 55-03, 55N40)



- Mdzinarivili, V. V.** (with Tabadze, G. U.) Restrictions imposed on the control strategy in nonlinear stochastic systems. (Russian. Georgian and English summaries) *Sakharth. SSR Mecn. Akad. Moambe* 90 (1978), no. 2, 449-452. (O. G. Nakonečnii) 80c:93136 93E20
- (with Tavadze, G. U.) On the question of the solutions of functional equations of nonlinear stochastic control systems in a functional space. (Russian. Georgian and English summaries) *Sakharth. SSR Mecn. Akad. Moambe* 90 (1978), no. 3, 665-668. (Authors' summary) 80a:93197 93E20
- Meacham, Christopher A.** (with Estabrook, George F.) How to determine the compatibility of undirected character state trees. *Math. Biosci.* 46 (1979), no. 3-4, 251-256. (F. W. Stallmann) 80i:92007 92A10 (05C05)
- Mead, C. Alden** The special role of maximum entropy in the application of "mixing character" to irreversible processes in macroscopic systems. *Maximum entropy formalism (Conf., Mass. Inst. Tech., Cambridge, Mass., 1978)*, pp. 273-287, MIT Press, Cambridge, Mass., 1979. (Koichiro Matsuno) 80d:82018 82A05
- Mead, D. G.** The average number of weighings to locate a counterfeit coin. *IEEE Trans. Inform. Theory* 25 (1979), no. 5, 616-617. (Author's summary) 80b:68030 68C05 (05A05)
- Dissection of the hypercube into simplexes. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 302-304. (A. Florian) 80b:52069 52A25
- Mead, Jerud** Recursive prime models for Boolean algebras. *Colloq. Math.* 41 (1979/80), no. 1, 25-33. (Peter Schmitt) 80j:03050 03C65 (03D45, 03G05, 06E05)
- Mead, K. O.** (with Bain, M.; Delves, L. M.) On the rate of convergence of multidimensional orthogonal expansions. *J. Inst. Math. Appl.* 22 (1978), no. 2, 225-234. (Shri Nivas Bhatt) 80g:42012 42B05
- Mead, R.** (with Smith, R. H.) On predicting extinction in simple population models. I. Stochastic linearization. *J. Theoret. Biol.* 80 (1979), no. 2, 189-203. (Authors' summary) 80g:28030 92A15
- Meade, Nigel** Bivariate forecasting with a variable leadtime. *J. Oper. Res. Soc.* 30 (1979), no. 5, 467-475. (Author's summary) 80b:62102 62M20 (62P20)
- Meakin, John** (with Bylén, Karl; Pastijn, Francis) The fundamental four-spiral semigroup. *J. Algebra* 54 (1978), no. 1, 6-26. (M. Friedberg) 80c:20061 20M10
- The structure mappings of a regular semigroup. *Proc. Edinburgh Math. Soc.* (2) 21 (1978/79), no. 2, 135-142. (J. L. Christock) 80c:20064 20M10
- The structure mapping approach to regular and inverse semigroups. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 371-383, Colloq. Math. Soc. János Bolyai, 20, North-Holland, Amsterdam, 1979. (M. Yamada) 80j:20066 20M10
- Structure mappings, coextensions and regular four-spiral semigroups. *Trans. Amer. Math. Soc.* 255 (1979), 111-134. (T. E. Hall) 80i:20038 20M10
- Meale, L. Kenton** (with Cuthill, Elizabeth) Application of MACSYMA in the solution of boundary value problems. *Transactions of the Twenty-Third Conference of Army Mathematicians (Langley Res. Center, Hampton, Va., 1977)*, pp. 515-539, ARO Rep. 78, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1978. (Authors' summary) 80c:65163 65L10
- Meckhout, M.** Algebraic theory of the chemical potential in the case of the usual gauge group. *Ann. Physics* 123 (1979), no. 2, 317-329. (Ivan F. Wilde) 80b:82013 82A15
- (with Loupias, G.) Extension of KMS states and angular momentum. *J. Math. Phys.* 20 (1979), no. 6, 984-998. (Ola Bratteli) 80f:82009 82A05 (46L05)
- Meckhohn, Zohman** Cohomologie locale d'une hypersurface. *Fonctions de plusieurs variables complexes, III (Sém. François Norguet, 1975-1977)*, pp. 89-119, Lecture Notes in Math., 670, Springer, Berlin, 1978. (C. Bănică) 80b:32023 32C36 (32A45, 32C37)
- Mecke, Joseph** (with Matthes, Klaus; Warmuth, Walter) Bemerkungen zu einer Arbeit: "Integral and differential characterizations of the Gibbs process" [Math. Nachr. 88 (1979), 105-115; MR 80i:60081a] von Nguyen Xuan Xanh und Hans Zessin. *Math. Nachr.* 88 (1979), 117-127. (Olav Kallenberg) 80i:60081b 60G55 (60K35)
- An explicit description of Kallenberg's lattice type point process. *Math. Nachr.* 89 (1979), 185-195. (Olav Kallenberg) 80i:60079 60G55
- A remark on the construction of random measures. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 1, 111-115. (Olav Kallenberg) 80f:60049 60G57
- Mecklenburg, W.** (with O'Brien, D. P.) Gauge field masses and degenerate potentials. *Lett. Nuovo Cimento* (2) 23 (1978), no. 15, 566-570. (John Madore) 80c:81062 81E15 (53B05)
- Medanić, J. V.** (with Papavasiliopoulos, G. P.; Cruz, J. B., Jr.) On the existence of Nash strategies and solutions to coupled Riccati equations in linear-quadratic games. *J. Optim. Theory Appl.* 28 (1979), no. 1, 49-76. (Authors' summary) 80c:90170 90D25
- Medeiros, Luiz Adauto J.** (with Menzala, Gustavo Perla) Regular solutions for a nonlinear evolution problem. (Spanish) *Proceedings of the Tenth Brazilian Mathematical Colloquium (Poços de Caldas, 1975)*, Vol. 1 (Portuguese), pp. 189-197, Cons. Nac. Desenvolvimento Ci. Tec., Inst. Mat. Pura Apl., Rio de Janeiro, 1978. (W. Günttinger) 80g:35115 35Q20 (35K55)
- (with Menzala, Gustavo Perla) On global solutions of a nonlinear dispersive equation of Sobolev type. *Bol. Soc. Brasil. Mat.* 9 (1978), no. 1, 49-59. (R. E. Showalter) 80c:35090 35Q20
- On a new class of nonlinear wave equations. *J. Math. Anal. Appl.* 69 (1979), no. 1, 252-262. (R. Glassey) 80f:34057 34G20 (35L60)
- See also Contemporary developments in continuum mechanics and partial differential equations, 80a:73003
- Medek, Václav** (with Zamožik, J.) Über den Umriss der konvexen Flächen. *Vorträge von der Tagung Geometrie und Anwendungen (Gaußig, 1977)*, pp. 73-76, Weiterbildungszentrum Math. Kybernet. Rechenrech., 28, Tech. Univ. Dresden, Dresden, 1978. (Leo Botek) 80b:52004 52A15 (05C99, 51N20)
- Über eine Eigenschaft von Ovalen. (Russian summary) *Časopis Pěst. Mat.* 103 (1978), no. 3, 297-302. (T. G. Ostrom) 80a:51004 51A30
- Medetov, M. M.** (with Dzegelenok, I. I.) Determination of the complexity level of a linear classifier. (Russian) *Ž. Vyšš. Mat. i Mat. Fiz.* 18 (1978), no. 6, 1579-1588, 1631. (W. Grebliski) 80b:68071 68G10
- Medinskii, I. P.** (with Koval'čik, I. M.) A class of linear equations in functional derivatives of higher order. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 12, 1083-1086, 1151. (V. L. Makarov) 80b:35127 35R15
- Medlich, James S.** (with Fam, Adly T.) Correction to: "A canonical parameter space for linear systems design" (IEEE Trans. Automat. Control 23 (1978), no. 3, 454-458). *IEEE Trans. Automat. Control* 24 (1979), no. 1, 144. (From the text) 80c:93067 93B99 (93C05, 93D05)
- Medjanik, A. I.** A theorem of C. Miranda. (Russian) *Ukrain. Geom. Sb. No. 21* (1978), 81-85, 3. (H. W. Guggenheimer) 80a:53004 53A05 (52A15, 53C45)
- Uniqueness theorems for regular closed convex surface. (Russian) *Ukrain. Geom. Sb. No. 21* (1978), 86-88, 3. (V. I. Olikier) 80c:53075 53C45
- Medkov, K. P.** See Mihailov, V. P., 80b:35002
- Mednickii, V. G.** A general model of production and exchange (economic interpretation and criterion questions). (Russian) *Ekonom. i Mat. Metody* 14 (1978), no. 6, 1160-1172. (Ju. G. Pavlov) 80f:90022 90A11
- Mednyh, A. D.** Determination of the number of nonequivalent coverings over a compact Riemann surface. (Russian) *Dokl. Akad. Nauk SSSR* 239 (1978), no. 2, 269-271. (A. Duma) 80a:30051 30F10
- A class of difference equations with polynomial coefficients. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 6, 1315-1331, 1438. (B. Crstici) 80a:39001 39A10 (39A12)
- Unramified coverings of compact Riemann surfaces. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 3, 529-532. (B. N. Anpashov) 80d:30041 30F10 (14H30, 32G15)
- Medoviy, V. S.** (with Žulenev, S. V.) The strong law of large numbers and the normality of Kesten's procedure. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 3, 637-643. (V. Fabian) 80g:62068 62L20 (60F15)
- Medvedev, A. V.** See Learning algorithms in control systems and in data processing systems, 80d:62002
- Medvedev, B. V.** (with Logunov, A. A.; Muzafarov, L. M.; Pavlov, V. P.; Polivanov, M. K.; Suhanov, A. D.) Analytical structure of the amplitude of 3→3 forward scattering. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 2, 179-193. (Authors' summary) 80i:81050 81F15
- Medvedev, F. A.** (with Bašmakova, I. G.; Gnedenko, B. V.; Kuzičeva, Z. A.; Ožigova, E. P.; Paršin, A. N.; Rudakov, A. N.; Slavutin, E. I.; Šeinin, O. B.; Juškevič, A. P.) ★Математика XIX века. (Russian) [XIXth century mathematics] Математическая логика. Алгебра. Теория чисел. Теория вероятностей. [Mathematical logic. Algebra. Number theory. Probability theory] Edited by A. N. Kolmogorov and A. P. Juškevič. "Nauka", Moscow, 1978. 255 pp. (I. Grattan-Guinness) 80i:01010 01A55
- The axiom of choice in the works of G. Cantor on the theory of sets. (Russian) *Istor.-Mat. Issled.* No. 24 (1979), 218-225, 388. (I. Grattan-Guinness) 80j:01021 01A55 (04-03, 04A25)
- See also Correspondence: N. N. Lusin and A. Denjoy, 80c:01008
- Medvedev, G. A.** Adaptive estimation based on realizations of stochastic processes and fields. *Automat. i Telemekh.* 1978, no. 10, 87-94. (Russian. English summary); translated as *Automat. Remote Control* 39 (1978), no. 10, part 1, 1478-1484 (1979). (Author's summary) 80c:93116 93E10
- (with Hackevič, G. A.) Recursive estimates from correlated observations. *Automat. i Telemekh.* 1979, no. 8, 69-75. (Russian); translated as *Automat. Remote Control* 40 (1979), no. 8, part 1, 1155-1160 (1980). (Authors' summary) 80m:93084 93E10
- Medvedev, Ju. A.** Finite basability of varieties with a two-term identity. (Russian) *Algebra i Logika* 17 (1978), no. 6, 705-726, 747. (Harry F. Smith) 80k:17003 17A99 (08B99)
- Medvedev, Ju. I.** (with Ivenko, G. I.) Decomposable statistics and hypothesis testing. The case of small samples. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 4, 796-806. (W. Hoeffding) 80f:62028 62F05
- Medvedev, N. G.** Solvability of problems in the theory of orthotropic noncircular cylindrical shells. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 10 (1978), 908-911, 956. (Author's summary) 80c:73059 73L99 (35Q20)
- Medvedev, N. V.** ★Применение сплайнов в теории приближений. (Russian) [Application of splines in approximation theory] Чуваш. Гос. Univ., Чебоксары, 1977. 67 pp. (From the publisher's description and table of contents) 80c:41007 41A15
- Regularized stochastic splines (R-splines). (Russian) *Questions of applied mathematics and mechanics*, No. 5 (Russian), pp. 90-94, 208, Чуваш. Гос. Univ., Чебоксары, 1977. (Author's summary) 80b:41005 41A15 (60G99)
- Medvedev, P. B.** (with Aref'eva, I. Ja.; Krivoščekov, V. K.) 1/N perturbation theory and quantum conservation laws for a supersymmetric chiral field. I. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 1, 3-14. (Authors' summary) 80i:81065 81E10
- Medvedev, V. A.** (with Oleinikov, B. I.; Stepanov, B. M.; Filinov, V. N.) On the optimal discrete representation of nonstationary random processes. (Russian) *Problemy Peredat. Informacii* 14 (1978), no. 2, 99-104. (Z. A. Piranšvili) 80d:60057 60G35 (94A05)
- Medvedevskii, I. B.** (with Pšeničnyi, B. N.) Necessary conditions for the extremum in a problem with mixed constraints. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 25 Neobhodim. Uslov. Ekstremum. dlja Differencial. Vključen. i Zadač. Ubečan.* (1978), 40-46. (From the text) 80a:49048 49B99
- A minimax theorem. (Russian) *Kibernetika (Kiev)* 1978, no. 1, 137-138. (From the text) 80d:49020 49B40
- Medynskii, I. P.** See Medinskii, I. P.
- Medzko, T. V.** (with Zolotarevič, L. A.; Emel'janenko, Z. N.) Determination of the set of controllable inaccuracies in the iterative modeling of logic circuits. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1979, no. 1, 31-34, 86. (Aleksander Albicki) 80a:94062 94C99
- Meek, Dereck S.** (with Usmani, Riaz A.) Error analysis of the numerical solution of a fourth order boundary value problem. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1977)*, pp. 487-495, Congress. Numer., XX, Utilitas Math., Winnipeg, Man., 1978. (Peter Lancaster) 80f:65088 65L10
- (with Usmani, Riaz A.) On the application of a five-band matrix in the numerical solution of a boundary value problem. *Utilitas Math.* 14 (1978), 21-29. (Authors' summary) 80a:65179 65L10
- On the inverses of some matrices differing slightly from a symmetric, five-band, Toeplitz form. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1978)*, pp. 405-412, Congress. Numer., XXII, Utilitas Math., Winnipeg, Man., 1979. (Author's introduction) 80b:65018 65F05 (65D07, 65G99)



- (with Hoskins, W. D.; Walton, D. J.) High-order iterative methods for the solution of the matrix equation  $XA + AY = F$ . *Linear Algebra Appl.* 23 (1979), 121-139. (H. R. Schwarz) 80b:65043 65F10
- See also Barraud, A. Y. 80b:65033
- Meeker, Loren D. Time-optimal feedback control for small disturbances. *IEEE Trans. Automat. Control* 23 (1978), no. 6, 1095-1099. (Author's summary) 80c:93060 93C15 (93D15)
- Meeks, William H., III Representing codimension-one homology classes on closed nonorientable manifolds by submanifolds. *Illinois J. Math.* 23 (1979), no. 2, 199-210. (Roger Fenn) 80b:57067 57R95
- van der Meer, C. L. J. (with Klein Hanefeld, W. K.; Peters, R. J.) A construction method in parametric programming. *Math. Programming* 16 (1979), no. 1, 21-36. (Authors' summary) 80f:90129 90C31
- van der Meer, P. J. C. On the degree of approximation by certain linear positive operators. *Nederl. Akad. Wetensch. Indag. Math.* 40 (1978), no. 4, 467-478. (P. C. Sikkema) 80c:41013 41A44
- (with Sikkema, P. C.) The exact degree of local approximation by linear positive operators involving the modulus of continuity of the  $p$ th derivative. *Nederl. Akad. Wetensch. Indag. Math.* 41 (1979), no. 1, 63-76. (Z. Ditzian) 80b:41010 41A36
- Meerkor, Semyon M. Mathematical theory of behavior—individual and collective behavior of retardable elements. *Math. Biosci.* 43 (1979), no. 1-2, 41-106. (Author's summary) 80c:92049 92A90
- Meerov, M. V. Optimization of multivariable dynamic systems. *Automat. i Telemekh.* 40 (1979), no. 7, 36-42. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 7, part 1, 975-980. (Author's summary) 80c:93007 93A10
- See also Investigation and optimization of multiply connected systems. 80m:90001
- Meersman, R. See Meersman, Robert
- Meersman, R. See De Meersman, R.
- Meersman, Robert (with Rozenberg, Grzegorz) Cooperating grammar systems. *Mathematical foundations of computer science, 1978 (Proc. Seventh Sympos., Zakopane, 1978)*, pp. 364-373. *Lecture Notes in Comput. Sci.* 64, Springer, Berlin, 1978. (K. P. Lee) 80d:68091 68F05
- (with Rozenberg, Grzegorz) Two-level meta-controlled substitution grammars. *Acta Inform.* 10 (1978), no. 4, 323-339. (P. Deussen) 80b:68063 68F05
- (with Rozenberg, Grzegorz) Parallelism and synchronization in two-level metacontrolled substitution grammars. *Inform. Sci.* 18 (1979), no. 1, 67-82. (Authors' summary) 80i:68061 68F05
- (with Rozenberg, Grzegorz; Vermeir, D.) Persistent ETOL systems. *Inform. Sci.* 18 (1979), no. 3, 189-212. (Authors' summary) 80c:68204 68F10
- Mees, Alistair I. (with Chua, Leon O.) The Hopf bifurcation theorem and its applications to nonlinear oscillations in circuits and systems. *IEEE Trans. Circuits and Systems* 26 (1979), no. 4, 235-254. (Authors' summary) 80b:34045 34C15 (58F14, 93C99, 94C05)
- (with Allwright, D. J.) Lyapunov's method applied to the Hopf bifurcation. *J. London Math. Soc.* (2) 20 (1979), no. 2, 293-299. (M. I. Brin) 80j:34055 34D20 (34C05, 58F14)
- (with Atherton, D. P.) Domains containing the field of values of a matrix. *Linear Algebra Appl.* 26 (1979), 289-296. (G. E. Wall) 80f:15021 15A42
- (with Allwright, D. J.) Using characteristic loci in the Hopf bifurcation. *Proc. Inst. Electr. Engrs.* 126 (1979), no. 6, 628-632. (P. J. Holmes) 80j:34041 34C25 (34H05, 58F14, 93D99)
- Megan, Mihail (with Reghis, M.) On controllability and stabilizability in Hilbert spaces. (Romanian summary) *An. Univ. Timișoara Ser. Științ. Mat.* 15 (1977), no. 1, 37-54 (1978). (From the introduction) 80a:93043 93B05 (93D05)
- (with Hiriș, V.) Controllability, observability and invariant subspaces. (Romanian. English summary) *An. Univ. Timișoara Ser. Științ. Mat.* 15 (1977), no. 2, 103-111 (1978). (Authors' summary) 80d:34094 34H05 (93B05)
- On the input-output stability of linear controllable systems. *Canad. Math. Bull.* 21 (1978), no. 2, 187-195. (D. K. Hughes) 80i:93050 93D15
- On controllability, stability and the Lyapunov differential equation for linear control systems. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 13(33) (1978), no. 1, 183-198. (Ethelbert N. Chukwu) 80j:93016 93B05
- On a Lyapunov theorem for controlled systems. *Mathematica (Cluj)* 20(43) (1978), no. 2, 163-169. (From the introduction) 80j:93090 93D05
- Meghibben, Charles K. Projection-invariant subgroups of abelian groups. *Tamkang J. Math.* 8 (1977), no. 2, 177-182. (Donald Cook) 80a:20061 20K10
- Totally quasicomplete  $p$ -groups need not be torsion-complete. *Tamkang J. Math.* 9 (1978), no. 1, 1-4. (K. Honda) 80g:20064 20K10
- Megiddo, Nimrod Computational complexity of the game theory approach to cost allocation for a tree. *Math. Oper. Res.* 3 (1978), no. 3, 189-196. (Vera Winitzky de Spinadel) 80a:90183 90D45
- (with Tamir, Arie) An  $O(n \log n)$  algorithm for a class of matching problems. *SIAM J. Comput.* 7 (1978), no. 2, 154-157. (Sukhamay Kundu) 80d:68042 68C05 (68C25, 68E10)
- (with Kamien, Morton I.) An intergenerational cake eating game. *Econom. Lett.* 2 (1979), no. 1, 5-7. (Authors' summary) 80d:90110 90D45 (90A16)
- (with Galil, Zvi) A fast selection algorithm and the problem of optimum distribution of effort. *J. Assoc. Comput. Mach.* 26 (1979), no. 1, 58-64. (C. L. Liu) 80b:68082 68E99 (68C25)
- (with Galil, Zvi) On Fulkerson's conjecture about consistent labeling processes. *Math. Oper. Res.* 4 (1979), no. 3, 265-267. (Rainer Burkard) 80g:90043 90B10 (68C25)
- Combinatorial optimization with rational objective functions. *Math. Oper. Res.* 4 (1979), no. 4, 414-424. (R. N. Kaul) 80j:90104 90C32
- Megrabian, L. H. Blaschke-Darbajian type products in the upper half-plane. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 4, 807-825, 926. (W. H. J. Fuchs) 80m:30036 30D35 (30D50)
- Megrubov, A. G. Inverse problems for equations of mixed type. (Russian) *Methods of functional analysis in problems of mathematical physics (Russian)*, pp. 23-29, 180, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (P. A. Mišnevskii) 80i:35179 35R30 (35M05)
- On the determination of a set of point sources. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 6, 1303-1306. (A. S. Alekseev) 80c:78017 78A45 (31B20, 35L05)
- Megrelli, R. P. Highly efficient burst-error-correcting codes with a simple decoding algorithm. (Russian. Georgian and English summaries) *Sovetsk. Akad. Nauk Grazin. SSR* 91 (1978), no. 3, 581-584. (Author's summary) 80i:94024 94B20
- Mehdi, Fazal (with Singh, Surjet) Multiplication modules. *Canad. Math. Bull.* 22 (1979), no. 1, 93-98. (Robert Gilmer) 80i:13006 13C05 (13C13, 13F05)
- Meher, F. M. (with Misra, R. B.; Kishore, Nawal) On a recurrent Finisler manifold with a concircular vector field. *Acta Math. Acad. Sci. Hungar.* 32 (1978), no. 3-4, 287-292. (Makoto Matsumoto) 80a:53033 53B40
- Projectively flat manifolds with recurrent curvature. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 15 (1978), no. 3, 828-834. (H. D. Pande) 80f:53024 53B40
- Mohi-Mehidi, Samir See Noui-Mehidi, Samir
- Mehlhorn, Kurt Some remarks on Boolean sums. *Acta Inform.* 12 (1979), no. 4, 371-375. (Author's summary) 80j:94039 94C10
- Parsing macro grammars top down. *Inform. and Control* 40 (1979), no. 2, 123-143. (P. Deussen) 80b:68071 68F25
- (with Alt, Helmut) Complexity arguments in algebraic language theory. (French summary) *RAIRO Inform. Theor.* 13 (1979), no. 3, 217-225. (Authors' summary) 80i:68056 68F05 (68C25)
- Dynamic binary search. *SIAM J. Comput.* 8 (1979), no. 2, 175-196. (Eberhard Lüdde) 80b:68081 68H05 (68C25)
- Mehlmann, Alexander Markovian manpower models with given limiting structure. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 5, pp. 283-290. *Operations Research Verfahren*, 35, Hain, Meisenheim, 1979. (From the introduction) 80g:90119 90C50 (90C40)
- Semi-Markovian manpower models in continuous time. *J. Appl. Probab.* 16 (1979), no. 2, 416-422. (K. Dietz) 80d:60120 60K15 (92A15)
- Mehrabadi, M. M. (with Cowin, Stephen C.) Initial planar deformation of dilatant granular materials. *J. Mech. Phys. Solids* 26 (1978), no. 4, 269-284. (A. J. M. Spencer) 80m:73066 73Q05
- Mehri, B. Forced nonlinear oscillation for certain third order differential equations. *Numerical treatment of differential equations in applications (Proc. Meeting, Math. Res. Center, Oberwolfach, 1977)*, pp. 73-83. *Lecture Notes in Math.*, 679, Springer, Berlin, 1978. (N. Chafee) 80c:34015 34B15 (34C25)
- A note on periodic solutions of certain second-order nonlinear differential equations. *J. Math. Anal. Appl.* 64 (1978), no. 2, 421-424. (S. Ahmad) 80b:34057 34C25
- Mehriens, Herbert ★Die Entstehung der Verbandstheorie. *Arbor Scientiarum: Beiträge Wissenschaftsgeschichte, Reihe A: Abhandlungen*, VI. *Gerstenberg Verlag, Hildesheim*, 1979. ix + 363 pp. ISBN 3-8067-0804-5 (Manfred Stern) 80m:01028 01A55 (01A60, 03-03, 06-03, 08-03)
- Mehra, F. C. (with Sharma, Bhu Dev) Generalized band-pass sampling theorem. *Math. Balkanica* 6 (1976), 204-217 (1978). (From the summary) 80i:94004 94A12
- Bounds for truncation error in band-pass sampling expansion. (German and Russian summaries) *Elektron. Informatsionnaya Kibernetika* 14 (1978), no. 12, 639-651. (Author's summary) 80g:94014 94A12
- A general sampling expansion. *Inform. Sci.* 16 (1978), no. 1, 41-46. (Author's summary) 80b:94003 94A11 (33A65)
- Mehra, J. S. (with Swamy, P. A. V. B.; Rappoport, P. N.) Two methods of evaluating Hoerl and Kennard's ridge regression. *Comm. Statist. A—Theory Methods* 7 (1978), no. 12, 1133-1155. (R. W. Farebrother) 80b:62052 62J07
- See also Vinod, Hrishikesh D. 80b:62053
- Mehra, M. L. On  $p$ -representation of real numbers. *Acta Math. Acad. Sci. Hungar.* 34 (1979), no. 1-2, 91-100. (E. Frank) 80i:10005 10A30 (10K10, 12A15)
- Mehra, O. P. (with Maggu, P. L.) On procedure steps of complementary solutions for particular type of double-suffixed difference equations. *Math. Ed. (Sivan)* 13 (1979), no. 1, A13-A16. (R. Kodnár) 80j:39003 39A10
- Mehrtsev, M. G. (with Babaev, D. A.; Mamedov, K. Š.) Methods of constructing sub-optimal solutions of the multidimensional knapsack problem. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 18 (1978), no. 6, 1443-1453, 1628. (G. Serksnys) 80d:90053 90C10
- Mel, C. C. (with Aranha, J. A.; Yue, D. K. P.) Some properties of a hybrid element method for water waves. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 11, 1627-1641. (Murlu M. Gupta) 80m:76015 76B15 (65N30)
- Mel, H. H. W. (with Dennis, J. E., Jr.) Two new unconstrained optimization algorithms which use function and gradient values. *J. Optim. Theory Appl.* 28 (1979), no. 4, 453-482. (Nobuo Sannomiya) 80j:65025 65K10 (90C30)
- Mel, Kenneth K. (with Morgan, Michael E.; Chang, Shu Kong) Finite methods in electromagnetic scattering. *Electromagnetic scattering*, pp. 359-392, Academic Press, New York, 1978. (Authors' summary) 80k:78025 78A45 (65N30)
- Meldan, Reuven Reproducing-kernel Hilbert spaces of distributions and generalized stochastic processes. *SIAM J. Math. Anal.* 10 (1979), no. 1, 62-70. (M. M. Rao) 80c:60053 60G20 (46E20)
- Meier, George (with Kalaba, Robert E.; Zagustin, Elena A.) An initial value method for orthogonal polynomials. *Comput. Math. Appl.* 4 (1978), no. 2, 189-197. (V. I. Makarov) 80a:65060 65D99 (65L05)
- Meier, Michael (with Hildebrandt, Stefan) On variational problems with obstacles and integral constraints for vector-valued functions. *Manuscripta Math.* 28 (1979), no. 1-3, 185-206. (S. E. Dreyfus) 80g:49005 49A22
- Liouville theorems for nonlinear elliptic equations and systems. *Manuscripta Math.* 29 (1979), no. 2-4, 207-228. (M. Oelbaev) 80m:35024 35J15 (35B99)
- Meier, Willi (with Huber, Martin) Cohomology and the derived functors of the inverse limit. *Topology and algebra (Proc. Colloq., Eidgenöss. Tech. Hochschule, Zurich, 1977)*, pp. 155-160. *Monographiae Enseignement Math.*, 26, Univ. Genève, Geneva, 1978. (Timothy Porter) 80c:55010 55N20 (55T99)
- Pullback theorems and phantom maps. *Quart. J. Math. Oxford Ser. (2)* 29 (1978), no. 116, 469-481. (Guido Mislin) 80g:55023 55F60
- Complex and real  $K$ -theory and localization. *J. Pure Appl. Algebra* 14 (1979), no. 1, 59-71. (Richard R. Patterson) 80b:55003 55N15
- Meilhaus, A. M. Stabilization of control systems with incomplete information. *Automat. i*

- Telemeh. 1978, no. 7, 74-78 (Russian, English summary); translated as *Automat. Remote Control* 39 (1978), no. 7, part 1, 996-1000. (Author's summary) 80a:93196 93E20 (93D05)
- Design of stable control systems subject to parametric perturbation. *Automat. i Telemeh.* 1978, no. 10, 5-16 (Russian, English summary); translated as *Automat. Remote Control* 39 (1978), no. 10, part 1, 1409-1418 (1979). (A. K. Mahalanabish) 80f:93650 93C99 (93D05)
- Meiliev, T. K. (with Škil', M. I.) Asymptotic representation of solutions of a system of second-order linear differential equations with small parameter of fractional rank multiplying the derivative. (Russian, English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 4 (1979), 264-267. (Snežana Hristova) 80j:34069 34E05
- Melindard, Günter The algebraic structure of linear systems occurring in numerical methods for spline interpolation. *Multivariate approximation (Sympos., Univ. Durham, Durham, 1977)*, pp. 57-67, Academic Press, London, 1978. (C. A. Hall) 80d:65023 65D07
- Schnelle Fourier-Transformation. *Numerische Methoden der Approximationstheorie, Band 4 (Meeting, Math. Forschungsinst., Oberwolfach, 1977)*, pp. 192-203, Internat. Schriftenreihe Numer. Math., 42, Birkhäuser, Basel, 1978. (From the text) 80d:65141 65T05
- (with Taylor, G. D.) Periodic quadratic spline interpolant of minimal norm. *J. Approx. Theory* 23 (1978), no. 2, 137-141. (Editors) 80a:41008 41A15
- (with Merz, Gerhard) ★ *Praktische Mathematik. I. Für Ingenieure, Mathematiker und Physiker. Bibliographisches Institut, Mannheim, 1979*, vi + 337 pp. ISBN 3-411-01541-1 (Henning Esser) 80g:65002 65-01
- Polynomial splines and difference equations. *Polynomial and spline approximation (Proc. NATO Adv. Study Inst., Univ. Calgary, Calgary, Alta., 1978)*, pp. 121-135, NATO Adv. Study Inst. Ser., Ser. C: Math. and Phys. Sci., 49, Reidel, Dordrecht, 1979. (Avraham A. Melikman) 80j:41019 41A15
- See also *Numerische Methoden der Approximationstheorie*, 80a:65015 and *Numerische Methoden bei graphentheoretischen und kombinatorischen Problemen*, 80a:05003
- Melneke, Henning Mathematische Theorie der relativen Koordination und der Gangarten von Wirbeltieren. (English summary) *Sitzungsber. Heidelb. Akad. Wiss. Math.-Natur. Kl.* 1978, no. 4, 267-336. (From the summary) 80a:92017 92A05
- Meinquet, Jean A practical method for estimating approximation errors in Sobolev spaces. *Multivariate approximation (Sympos., Univ. Durham, Durham, 1977)*, pp. 169-187, Academic Press, London, 1978. (G. Godini) 80j:41060 41A65
- Melhardt, Jehuda (with Leibowitz, E.) Stationary axially symmetric vacuum metrics maximality of the local symmetry group. (Italian and Russian summaries) *Nuovo Cimento B* (11) 48 (1978), no. 1, 74-80. (Steve Kloster) 80c:83025 83C40
- Melikhin, Dikr The notion of an algebraic invariant and the related basic concepts in the investigation of certain physical properties. *J. Chem. Phys.* 72 (1980), no. 3, 1968-1971. (From the summary) 80c:81186 81G50
- Meir, A. (with Moon, J. W.) On the altitude of nodes in random trees. *Canad. J. Math.* 30 (1978), no. 5, 997-1015. (C. St. J. A. Nash-Williams) 80a:05043 05C05 (60C05)
- (with Moon, J. W.) Path edge-covering constants for certain families of trees. *Utilitas Math.* 14 (1978), 313-333. (Authors' summary) 80a:05073 05C05
- Approximation by quadratic splines. Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 1-2, 155-157. (Franz-Jürgen Delvos) 80g:41012 41A15
- Melre, R. (with Vanderbauwhede, André L.) A useful result for certain linear periodic ordinary differential equations. *J. Comput. Appl. Math.* 5 (1979), no. 1, 59-61. (Matti Mäkelä) 80c:65078 65L07 (70F07)
- Melrmanov, A. M. (with Antoncev, S. N.) Questions of correctness of a model of the simultaneous motion of surface and ground waters. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 3, 505-508. (From the text) 80c:76044 76S05
- Mels, Theodor (with Marcowitz, Ulrich) ★ *Numerische Behandlung partieller Differentialgleichungen. Hochschulzext. Springer-Verlag, Berlin-New York, 1978*, viii + 452 pp. ISBN 3-540-08967-5 (J. R. Cannon) 80g:65003 65-01
- Melne, Reinhold (with Colombeau, Jean-François) Strong nuclearity in spaces of holomorphic mappings. *Advances in holomorphy (Proc. Sem. Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 233-248, North-Holland Math. Studies, 34, North-Holland, Amsterdam, 1979. (A. Pietsch) 80j:46072 46G20 (32A10, 46A12)
- (with Börgens, Manfred; Vogt, Dietmar) Fonctions holomorphes sur certains espaces échelonés et  $\lambda$ -nuclearité. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 5, A229-A232. (Authors' summary) 80m:46008 46A45 (46G20)
- Melsel, L. V. (with Gray, D. M.; Brown, E.) The structure of groups with index-3 subgroups. *Transactions of the Twenty-Third Conference of Army Mathematicians (Langley Res. Center, Hampton, Va., 1977)*, pp. 639-650, ARO Rep. 78, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1978. (Authors' introduction) 80c:20010 20C15
- Meliske, Wolfgang An approximate solution of the Michaelis-Menten mechanism for quasi-steady state and quasi-equilibrium. *Math. Biosci.* 42 (1978), no. 1-2, 63-71. (Author's summary) 80c:92002 92A05
- Meliss, James D. (with Watson, Kenneth M.) Discussion of some weakly nonlinear systems in continuum mechanics. *Topics in nonlinear dynamics (Proc. Workshop, La Jolla Inst., La Jolla, Calif., 1977)*, pp. 296-323, AIP Conf. Proc., 46, Amer. Inst. Physics, New York, 1978. (J. W. Miles) 80d:73051 73D35 (34A34, 73A05, 76D10)
- (with Pomphrey, Neil; Watson, Kenneth M.) Numerical analysis of weakly nonlinear wave turbulence. *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 5, 2109-2113. (Authors' summary) 80d:82067 82A70 (76C99)
- Meister, E. Some mixed boundary value problems in the theory of subsonic flow past oscillating profiles. (Russian summary) *Complex analysis and its applications (Russian)*, pp. 364-362, 668, "Nauka", Moscow, 1978. (From the introduction) 80a:76038 76G99 (35Q99)
- Einige gemischte Randwertprobleme für Unterschallströmungen um schwingende Profile. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T383-T386. (Editors) 80c:76030 76G20
- Meister, T. F. (with Felderhof, B. U.) Frequency-dependent electric and magnetic multipole moments and Siegert's theorem. *J. Phys. A* 13 (1980), no. 1, 117-127. (K. Wódkiewicz) 80a:81070 81D99
- Meisters, G. H. (with Petersen, Edith Kregelius) Non-Liouville numbers and a theorem of Hörmander. *J. Funct. Anal.* 29 (1978), no. 2, 142-150. (C. Chou) 80m:46034 46F10
- Meitus, V. Ju. (with Tančer, I. V.) Structural algorithmic algebras and parallel computations. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 11* (1977), 26 pp. (Publisher's description) 80a:68023 68B15 (68C05)
- (with Tančer, I. V.) Representation of a parallel algorithm of Stone in structural-algorithmic algebras. (Russian) *Questions in the construction of programming systems (Russian)*, pp. 79-89, Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev, 1978. (Authors' summary) 80g:65029 65F05
- (with Tančer, I. V.) Representation of the algorithm for solving a system of equations with a three-diagonal matrix in a structural algorithmic algebra. *Kibernetika (Kiev)* 1979, no. 1, 98-105 (Russian); translated as *Cybernetics* 15 (1979), no. 1, 113-122. (From the text) 80j:68026 68C05 (68B15)
- Mejbaum, Wacław (with Hadry, Henryk) Basic properties of the dimensional modulus. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 26 (1978), no. 5, 521-528. (Vadim Komkov) 80c:73002 73A05 (80A99)
- Mejran, Zdzisław An algorithm for the solution of a linear system of algebraic equations arising in the mesh method for the Poisson equation. (Polish) *Mat. Stos.* (3) 12 (1978), 35-41. (Mieczysław Altman) 80c:65107 65N20 (65F05)
- Mejza, S. Use of inter-block information to obtain uniformly better estimators of treatment contrasts. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 9 (1978), no. 3, 335-341. (K. R. Shah) 80c:62067 62K10 (62F10)
- Mejzler, D. Limit distributions for the extreme order statistics. *Canad. Math. Bull.* 21 (1978), no. 4, 447-459. (N. R. Mohan) 80d:60027 60F05 (62G30)
- Mekerov, D. One-parameter families of lines with coinciding basic points in a generalized biaxial space. *C. R. Acad. Bulgare Sci.* 31 (1978), no. 3, 273-275. (From Marcu) 80d:53010 53A20
- Mekler, Alan H. Model complete theories with a distinguished substructure. *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 294-299. (Carol Wood) 80f:03033 03C60
- On residual properties. *Proc. Amer. Math. Soc.* 78 (1980), no. 2, 187-188. (Nigel J. Cutland) 80j:03044 03C52 (03C60, 20A15)
- Melamed, Benjamin (with Beutler, Frederick J.) Decomposition and customer streams of feedback networks of queues in equilibrium. *Oper. Res.* 26 (1978), no. 6, 1059-1072. (Brian Conolly) 80b:60121 60K25
- Characterizations of Poisson traffic streams in Jackson queueing networks. *Adv. in Appl. Probab.* 11 (1979), no. 2, 422-438. (F. P. Kelly) 80d:60134 60K25
- Melamed, I. A. (with Klebanov, L. B.) Several notes on Fisher information in presence of nuisance parameters. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 9 (1978), no. 1, 85-90. (R. Ponnappalli) 80c:62030 62F10 (62B10, 62F12)
- Méland, Guy Propriétés du spectre évolutif d'un processus non stationnaire. (English summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* 14 (1978), no. 4, 411-424 (1979). (P. A. Morettin) 80d:60041 60G12 (62M15)
- Melcher, Horst ★ *Albert Einstein wider Vorurteile und Denkgewohnheiten. Wissenschaftliche Taschenbücher, Texte und Studien. Akademie-Verlag, Berlin, 1979*, 107 pp. (H. C. Kennedy) 80g:01026 01A70
- Meldrum, J. D. P. Centralisers in wreath products. *Proc. Edinburgh Math. Soc.* (2) 22 (1979), no. 2, 161-168. (Norman Blackburn) 80i:20012 20E22
- The endomorphism near-ring of finite general linear groups. *Proc. Roy. Irish Acad. Sect. A* 79 (1979), no. 10, 87-96. (Marjory J. Johnson) 80c:16046 16A76 (20C99)
- Melichuk, S. B. A type of context conditions of programming languages. *Programmirovaniye* 1979, no. 1, 26-30, 95 (Russian); translated as *Programming and Comput. Software* 5 (1979), no. 1, 20-23. (Author's summary) 80c:68062 68F05
- Melechnko, V. I. See *Melečko, V. I.*
- Melečko, I. N. The approximate computation of iterated Cauchy-type integrals and their principal values. (Russian) *Ž. Vyš. Mat. i Mat. Fiz.* 19 (1979), no. 1, 232-238, 271. (I. Gishovich) 80d:65035 65D30
- Melečko, V. I. Use of recursive optimal estimates with pseudoinversion in identification problems. *Automat. i Telemeh.* 1978, no. 9, 79-89 (Russian); translated as *Automat. Remote Control* 39 (1978), no. 9, part 1, 1325-1334 (1979). (Author's summary) 80c:93049 93B30
- (with Žukovskii, E. L.) Error correcting solutions in linear conditional algebra. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 5, 1009-1012. (V. N. Igolkin) 80a:93182 93E15
- The convergence rate of perturbed iteration methods for determination of  $L$ -generalized solutions to nonlinear operator equations. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 3, 576-579. (V. V. Obuhovskii) 80a:47103 47H17 (65J15)
- Perturbations of unbounded closed pseudoinverse operators. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 4, 681-694, 765. (S. N. Krachkovskii) 80m:47010 47A50 (47A05, 47A53, 47A55)
- An investigation of stable  $L$ -pseudo-inverses of unbounded closed operators by the regularization method. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 5, 921-935, 958-959. (V. V. Vasin) 80c:47020 47A50 (65J10)
- Melikhjan, A. A. (with Černous'ko, F. L.) Minimax problems of control, observation and search. (Russian, Bulgarian and English summaries) *Teoret. Prilož. Meh.* 9 (1978), no. 3, 16-24, 3, 7. (Authors' summary) 80a:49043 49B40
- Melin, A. Free systems of vector fields. *Séminaire Goulaouic-Schwartz* (1977/1978), 7 pp. *École Polytech., Palaiseau, 1978*. (Editors) 80d:59064 58G05 (35H05, 57R25)
- Mellino, Angelo (with Poirier, Dale J.) A note on the interpretation of regression coefficients within a class of truncated distributions. *Econometrica* 46 (1978), no. 5, 1207-1209. (Charles F. Manski) 80c:62072 62P20
- Melka, Richard F. Implicit perturbations. *J. Comput. Appl. Math.* 5 (1979), no. 3, 177-182. (Author's summary) 80c:65085 65L05 (92A15)
- Melkadze, Z. A. (with Siharulidze, T. D.) Calculation of multiwave shallow cylindrical covering shells weakened by a very small circular aperture. (Russian, Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* 92 (1978), no. 2, 377-380. (Authors' summary) 80c:73060 73L99
- Melikman, Avraham A. (with Blake, Ian F.) On an inverse for sections of a binomial matrix. *Discrete Math.* 23 (1978), no. 2, 97-104. (F. J. MacWilliams) 80a:15017 15A36 (05B20, 94B25)
- (with Michelli, Charles A.) Spline spaces are optimal for  $L^2$   $n$ -width. *Illinois J.*



- Math.* 22 (1978), no. 4, 541-564. (Donald Kershaw) 80d:41013 41A46 (15A48, 47H05)
- (with Friedland, Shmuel) On the eigenvalues of nonnegative Jacobi matrices. *Linear Algebra Appl.* 25 (1979), 239-253. (B. N. Moysa) 80i:15015 15A48 (15A18, 15A57)
- (with Micheli, Charles A.) Optimal estimation of linear operators in Hilbert spaces from inaccurate data. *SIAM J. Numer. Anal.* 16 (1979), no. 1, 87-105. (Authors' summary) 80c:65119 65J05
- Mellema, Gregory An alternative semantics for knowledge. *Notre Dame J. Formal Logic* 20 (1979), no. 2, 265-278. (From the introduction) 80f:03024 03B45
- terraz Mello, Sylvio See Ferraz Mello, Sylvio
- Melloni, Franca Gallerani The reduced two-body problem for variable mass. (Italian. English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 24 (1979), 1-16. (D. Graffi) 80c:70007 70F05 (34C15)
- A particular nonlinear third-order differential equation. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 3, 475-483. (Author's summary) 80i:34071 34D05 (34C29)
- Meľnik, Ju. V. Diophantine approximation of curves and Hausdorff dimension. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 9, 793-796, 661. (F. Schweiger) 80b:10076 10K15
- Meľnik, A. M. Nonnegative solutions of a nonlinear integral equation. (Russian) *Lato. Mat. Eĭegodnik No. 22* (1978), 62-68, 281. (Ulrich Kosel) 80a:45015 45G10
- Meľnik, Ju. I. Representation of regular functions by series of Dirichlet type. (Russian) *Studies in the theory of approximation of functions and their applications* (Russian), pp. 132-141, 193. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (R. P. Boas, Jr.) 80m:30004 30B50 (30D10)
- Meľnik, N. V. (with Saryčev, V. A.; Sazonov, V. V.) Spatial periodic oscillations of a satellite relative to the center of mass. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 118* (1978), 53 pp. (Authors' summary) 80d:70050 70M05 (65L05)
- Meľnik, V. I. Multidimensional absolutely convergent Fourier transforms. (Russian) *Studies in the theory of approximation of functions and their applications* (Russian), pp. 123-131, 192. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (R. L. Cooke) 80m:42024 42B10 (46J05)
- Inverse theorems for transformations of the Laplace transform type. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 1, 32-41, 110. (Editors) 80c:44004 44A10
- Meľnikov, L. S. (with Aksionov, V. A.) Essay on the theme: the three-color problem. *Combinatorics* (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. I, pp. 23-34. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (J. Mitchen) 80c:05067 05C15
- Meľnikov, O. V. Characterization of accessible subgroups of free profinite groups. (Russian. English summary) *Dokl. Akad. Nauk SSSR* 22 (1978), no. 8, 677-680, 763. (S. P. Demuškin) 80m:20029 20E18
- Normal divisors of free profinite groups. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 1, 3-25, 214. (M. Greendlinger) 80d:20028 20E18
- Meľnikov, V. K. Equations that are generated by an operator relation. (Russian) *Mat. Sb. (N.S.)* 100(150) (1979), no. 3, 378-392, 478. (J. Kolomý) 80d:35139 35R20 (47H15)
- Meľnikova, I. V. (with Mornova, V. M.) The Cauchy problem and the method of quasireversibility for second-order equations in a Banach space. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 4, 614-618, 763. (P. Talpalaru) 80i:34096 34G10
- Meľnikova, O. F. (with Poljahov, N. N.) Construction of the initial approximation for the solution of the lifting surface integral equation. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 1, 104-110, 135. (Authors' summary) 80c:65250 65R20 (73C99)
- petrola de Melo Jorge, Laquesio See Petrola de Melo Jorge, Laquesio
- Meloni, G. C. (with Farina, M. F.) The associated sheaf functor in topoi. The construction  $X^+$ . (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 3, 639-647. (F. E. J. Linton) 80b:18006 18B25
- Melrose, Richard (with Sjöstrand, Johannes) Propagation de singularités pour des problèmes aux limites d'ordre 2. *Séminaire Goulaouic-Schwartz* (1977/1978), 9 pp., *Ecole Polytech., Palaiseau*, 1978. (Ju. V. Egorov) 80d:35008 35L20 (35S15)
- Airy operators. *Comm. Partial Differential Equations* 3 (1978), no. 1, 1-76. (R. D. Moyer) 80a:35118 35S05 (58G15)
- (with Guillemin, Victor) An inverse spectral result for elliptical regions in  $\mathbb{R}^2$ . *Adv. in Math.* 32 (1979), no. 2, 128-148. (V. M. Babic) 80f:35104 35P99 (58G25)
- (with Guillemin, Victor) The Poisson summation formula for manifolds with boundary. *Adv. in Math.* 32 (1979), no. 3, 204-232. (P. Günther) 80j:58066 58G25 (10J25, 35P20)
- Singularities and energy decay in acoustical scattering. *Duke Math. J.* 46 (1979), no. 1, 43-59. (Maurice Boix) 80h:35104 35P25 (58G15)
- Melshelmer, Olaf On the classical content of many-body quantum mechanics. *Found. Phys.* 9 (1979), no. 3-4, 193-215. (Author's summary) 80c:82009 82A05 (46L60)
- Melville, W. K. (with Chang, Peter; Miles, John W.) On the evolution of a solitary wave in a gradually varying channel. *J. Fluid Mech.* 95 (1979), no. 3, 401-414. (Authors' summary) 80j:76011 76B25
- Melvin, Paul Bordism of diffeomorphisms. *Topology* 18 (1979), no. 2, 173-175. (A. A. Ranicki) 80m:57031 57R90
- Melvin, Peter J. The phase-shifting limit cycles of the van der Pol equation. *J. Res. Nat. Bur. Standards* 83 (1978), no. 6, 593-601. (J. R. Ockendon) 80d:34035 34C05 (65L99)
- Mémin, Jean Décompositions multiplicatives de semimartingales exponentielles et applications. *Séminaire de Probabilités, XII* (Univ. Strasbourg, Strasbourg, 1976/1977), pp. 35-46, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Dominique Lepingle) 80b:60065 60G44
- (with Lepingle, Dominique) Sur l'intégrabilité uniforme des martingales exponentielles. *Z. Wahrsch. Verw. Gebiete* 42 (1978), no. 3, 175-203. (E. Lenglar) 80b:60064 60G44
- Mémmel, G. Fuites et graphes à choix non imposé dans les réseaux de Petri. (English summary) *Transformations de programmes* (Proc. Third Internat. Sympos. Programming, Paris, 1978), pp. 95-109. Dunod, Paris, 1978. (Rüdiger Valk) 80c:68100 68D90 (68B20)
- Fuites dans les réseaux de Petri. (English summary) *RAIRO Inform. Théor.* 12 (1978), no. 2, 125-144, iv. (Rüdiger Valk) 80c:68100 68D90 (68B20)
- Memmonov, V. P. See Cercignani, Carlo, 80a:82042
- Men, B. A. Expression of Ising model statistical sums by means of infinite determinants. (Russian) *Izv. Vysl. Učebn. Zaved. Fizika* 1979, no. 6, 72-76. (Author's summary) 80f:82041 82A55
- Menal, Pere Anneaux de groupe principaux à droite. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 22, A1005-A1007. (D. A. R. Wallace) 80f:16017 16A26
- (with Dicks, Warren) The group rings that are semifirs. *J. London Math. Soc.* (2) 19 (1979), no. 2, 288-290. (P. M. Cohn) 80g:16002 16A06 (16A26)
- Group rings in which every left ideal is a right ideal. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 204-208. (S. K. Sehgal) 80m:16009 16A27 (20C05, 20C07)
- Addendum to: "Residual linearity for certain nilpotent groups" (Proc. Amer. Math. Soc. 68 (1978), no. 1, 27-31). *Proc. Amer. Math. Soc.* 77 (1979), no. 1, 19-22. (B. A. F. Wehrfritz) 80f:20037 20F18
- Ménaldi, José-Luis (with Rofman, Edmundo) Méthodes constructives en contrôle optimal. (English summary) *Math. Notes* 26 (1977/78), 81-98. (E. O. Roxin) 80j:93053 93C10
- (with Lions, Pierre-Louis) Problèmes de Bellman avec le contrôle dans les coefficients de plus haut degré. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 6, A409-A412. (Authors' summary) 80a:93095 93E20
- Sur le problème de temps d'arrêt optimal pour les diffusions réfléchies dégénérées. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 16, A779-A782. (Authors' summary) 80c:60054 60G40 (60J60)
- Le principe de séparation pour le problème de temps d'arrêt optimal. *Stochastics* 3 (1979), no. 1, 47-59. (A. Friedman) 80j:93117 93E11 (60G40)
- Sur le problème de contrôle impulsionnel optimal pour des diffusions réfléchies dégénérées. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 1, A5-A8. (Authors' summary) 80m:93036 93C20 (49B22)
- Mendel, J. M. (with Washburn, H. D.) Multistage estimation of bias states in linear systems. *Internat. J. Control* 28 (1978), no. 4, 511-524. (S. G. Trafestas) 80i:93073 93E10
- Mendelsohn, Eric (with Lindner, Charles C.) On the conjugates of an  $n^2 \times 4$  orthogonal array. *Discrete Math.* 20 (1977/78), no. 2, 123-132. (Authors' summary) 80f:05015 05B15
- On the groups of automorphisms of Steiner triple and quadruple systems. *J. Combin. Theory Ser. A* 25 (1978), no. 2, 97-104. (Charles C. Lindner) 80d:05010 05B05
- (with Lindner, Charles C.; Mendelsohn, N. S.; Wolk, Barry) Orthogonal Latin square graphs. *J. Graph Theory* 3 (1979), no. 4, 325-338. (Jean-Claude Bermond) 80c:05022 05B15 (05C99)
- Mendelsohn, N. S. (with Bennett, Frank E.) Some remarks on 2-designs  $S_2(2, 3, v)$ . *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1978), pp. 119-127, Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978. (A. E. Brouwer) 80c:05024 05B05
- The spectrum of idempotent varieties of algebras with binary operators based on two variable identities. *Aequationes Math.* 18 (1978), no. 3, 330-332. (G. Grätzer) 80f:08008 08B20
- A class of combinatorial quasigroups. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 1, 13-16. (Peter J. Cameron) 80b:05018 05B30 (08B20, 20N05)
- (with Lindner, Charles C.; Mendelsohn, Eric; Wolk, Barry) Orthogonal Latin square graphs. *J. Graph Theory* 3 (1979), no. 4, 325-338. (Jean-Claude Bermond) 80c:05022 05B15 (05C99)
- (with Bennett, Frank E.) Constructions of totally symmetric quasigroups containing a specified number of idempotents. *Utilitas Math.* 15 (1979), 33-50. (Tomáš Kepka) 80b:20104 20N05
- Mendelson, Elliott ★ Introduction to mathematical logic. Second edition. *D. Van Nostrand Co., New York*, 1979. viii + 328 pp. ISBN 0-442-25307-9 (Jane E. Kister) 80d:03001 03-01
- Mendelson, Haim (with Yechiali, Uri) Performance analysis of the chaining method for random-access addressing. *Computer performance* (Proc. Internat. Sympos. Computer Performance Modeling, Measurement and Evaluation, IBM Thomas J. Watson Res. Center, Yorktown Heights, N.Y., 1977), pp. 341-361, North-Holland, Amsterdam, 1977. (Authors' summary) 80c:68239 68H05 (68B15)
- (with Pliskin, Joseph S.; Yechiali, Uri) Optimal storage allocation for serial files. *Comm. ACM* 22 (1979), no. 2, 124-130. (Authors' summary) 80b:68032 68B15
- (with Yechiali, Uri) Performance measures for ordered lists in random-access files. *J. Assoc. Comput. Mach.* 26 (1979), no. 4, 654-667. (Margaret Chock) 80b:68008 68H05
- Mendelsohn, Roy Optimal harvesting strategies for stochastic single-species, multiage class models. *Math. Biosci.* 41 (1978), no. 3-4, 159-174. (Author's summary) 80a:92052 92A15 (92A17)
- Mendelson, Alberto O. On axiomatizing multivalued dependencies in relational databases. *J. Assoc. Comput. Mach.* 26 (1979), no. 1, 37-44. (W. W. Armstrong) 80f:68024 68B15 (68H05)
- Mendes, Pedro Stability in open manifolds. Anosov systems. (Portuguese) *Proceedings of the Tenth Brazilian Colloquium* (Poços de Caldas, 1975), Vol. II (Portuguese), pp. 627-632, Cons. Nac. Desenvolvimento Ci. Tec., Inst. Mat. Pura Apl., Rio de Janeiro, 1978. (Editors) 80d:58035 58F10 (58F09, 58F15)
- vilela Mendes, R. See Vilela Mendes, R.
- Mendes France, Michel Indépendance statistique, somme des chiffres, mesure spectrale. *Séminaire Delange-Pisot-Poitou, 18e année: 1976/77, Théorie des nombres, Fasc. 2, Exp. No. 9, 4 pp., Secrétariat Math., Paris*, 1977. (Editors) 80i:10070 10K10 (10K35)
- Sur le spectre de Lagrange. *Séminaire de Théorie des Nombres 1977-1978, Exp. No. 13, 8 pp., CNRS, Talence*, 1978. (Editors) 80i:10030 10F25
- Les ensembles de van der Corput. *Séminaire Delange-Pisot-Poitou, 19e année 1977/78, Théorie des nombres, Fasc. 1, Exp. No. 12, 5 pp., Secrétariat Math., Paris*, 1978. (L. Kuipers) 80d:10074 10K05



- Sur le spectre de Lagrange d'un ensemble de nombres réels. *Séminaire Delange-Pisot-Poitou, 19e année: 1977/78, Théorie des nombres, Fasc. 2, Exp. No. 30, 5 pp., Secrétariat Math., Paris, 1978.* (From the text) **80d:10048** 10F05 (10F20)  
(with Kamae, Tetsuo) van der Corput's difference theorem. *Israel J. Math.* **31** (1978), no. 3-4, 335-342. (Marthe Grandet) **80a:10070** 10K05 (10L02)  
(with Cusick, T. W.) The Lagrange spectrum of a set. *Acta Arith.* **34**, no. 4, 287-293 (1979). (Richard T. Bumby) **80i:10038a** 10F20
- rivero Mendoza, Jesús** See **Rivero Mendoza, Jesús**
- lewin-Ménégaux, Renée** See **Lewin-Ménégaux, Renée**
- Menegazzo, Federico** Normal subgroups and projectivities of finite groups. *Rend. Sem. Mat. Univ. Padova* **59** (1978), 11-15 (1979). (A. Scarselli) **80i:20011** 20E07
- Menger, Karl** ★Selected papers in logic and foundations, didactics, economics. Vienna Circle Collection, 10. D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1979. xii+341 pp. (1 plate). ISBN 90-277-0320-5, 90-277-0321-3 (Mario Bunge) **80f:01026** 01A75 (03-03)
- Mengersen, Ingrid** Viereckige Flächen in Geradenanordnungen. *Elem. Math.* **34** (1979), no. 3, 55-59. (P. B. Kirkpatrick) **80d:51003** 51A20
- Menges, G.** (with Behara, M.; Koffler, E.) Entropy and informativity in decision situations under partial information. *Statist. Hefte (N.F.)* **19** (1978), no. 2, 124-130. (From the introduction) **80c:62007** 62B10 (94A17)
- Adaptive Mustererkennung. (English, French and Russian summaries) *Statist. Hefte (N.F.)* **20** (1979), no. 1, 22-38. (Author's summary) **80f:68105** 68G10
- Mengü, Yalcin** (with McNiven, Hugh D.) A mathematical model for the linear dynamic behavior of two phase periodic materials. *Internat. J. Solids and Structures* **15** (1979), no. 4, 271-280. (J. Ignaczak) **80g:73007** 73B05
- Menikoff, L. D.** The regularizability of mappings that are inverse to integral operators. (Russian) *Dokl. Akad. Nauk SSSR* **241** (1978), no. 2, 282-285. (S. G. Samko) **80d:47034** 47B38 (47G05)  
(with Plisko, A. M.) Conditions for linear and finite-dimensional regularizability of linear inverse problems. (Russian) *Dokl. Akad. Nauk SSSR* **241** (1978), no. 5, 1027-1030. (Ja. I. Al'ber) **80c:65069** 65J05 (47A50)
- ten Men Jan** See **Ten Men Jan**
- Menke, Klaus** Über die Verteilung der Curviss-Maximalpunkte bei analytischen Jordankurven. *Math. Z.* **161** (1978), no. 2, 155-162. (V. P. Havin) **80c:41001** 41A05
- Menemier, G.** (with Auberson, G.; Mahoux, G.) On the perturbation theory of the anharmonic oscillator at large orders. (Italian and Russian summaries) *Nuovo Cimento A (11)* **46** (1978), no. 1, 1-23. (P. G. L. Leach) **80c:81030** 81C12 (47E05)  
(with Auberson, G.) On the optimality of axiomatic constraints for  $\pi^0$  scattering: the case of the lower bounds. *Nuclear Phys. B* **162** (1980), no. 3, 440-448. (Authors' summary) **80m:81075** 81F20
- Menéndez, J. L.** (with Grunewald, Fritz J.; Havas, George; Newman, M. F.) Groups of exponent eight. *Bull. Austral. Math. Soc.* **20** (1979), no. 1, 7-16. (Authors' summary) **80g:20044** 20E34
- Menickens, R.** (with Sagraloff, B.) Störungstheoretische Untersuchungen über Semi-Fredholmpaare und -operatoren in lokalkonvexen Vektorräumen. II. *J. Reine Angew. Math.* **303/304** (1978), 389-436. (Harro Heuser) **80a:47023** 47A55
- Mennig, J.** (with Brandt, D.; Hälg, W.) Solution of the neutron transport equation by means of Hermite- $S_n$ -theory. (German summary) *Z. Angew. Math. Phys.* **30** (1979), no. 4, 705-708. (A. Bellini-Morante) **80c:82004** 82A75
- Menon, V. J.** (with Lagu, A. V.) A wave packet description of resonant states in potential scattering theory. *Hadronic J.* **2** (1979), no. 1, 159-197. (Authors' summary) **80b:81094** 81F05 (47B99)
- Men'sikov, V. M.** Small perturbations of unsteady homogeneous motions of an ideal incompressible fluid with axial symmetry. (Russian) *Ž. Prikl. Meh. i Tehn. Fiz.* **1979**, no. 2, 14-20, 180. (From the summary) **80b:76030** 76C99
- Men'sikov, M. V.** (with Malyukov, V. A.) Ergodicity, continuity and analyticity of countable Markov chains. (Russian) *Trudy Moskov. Mat. Obšč.* **39** (1979), 3-48, 235. (M. Iosifescu) **80c:60081** 60J05 (60K25)
- Men'sikova, O. R.** Necessary and sufficient conditions of core coincidence and the solution in a symmetric cooperative game. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1979**, no. 1, 38-42, 87. (Stanislav Zdravka) **80a:90171** 90D12
- Menskil, M. B.** Application of the group of paths to the gauge theory and quarks. *Lett. Math. Phys.* **3** (1979), no. 6, 513-520. (M. Carmeli) **80m:81095** 81G10 (53C80, 58D30, 81G05)
- Men'sov, D. E.** (with Nikol'skii, S. M.) Petr Lavrent'evič Ul'janov (on the occasion of his fiftieth birthday). (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 6(193), 3-5. (Editors) **80g:01027** 01A70
- Menzala, Gustavo Perla** (with Medeiros, Luiz Adauto J.) Regular solutions for a nonlinear evolution problem. (Spanish) *Proceedings of the Tenth Brazilian Mathematical Colloquium (Poços de Caldas, 1975), Vol. 1 (Portuguese), pp. 189-197, Cons. Nat. Desenvolvimento Ci. Tec., Inst. Mat. Pura Apl., Rio de Janeiro, 1978.* (W. Güttinger) **80g:35115** 35Q20 (35K55)  
(with Medeiros, Luiz Adauto J.) On global solutions of a nonlinear dispersive equation of Sobolev type. *Bol. Soc. Brasil. Mat.* **9** (1978), no. 1, 49-59. (R. E. Showalter) **80c:35090** 35Q20
- On inverse scattering for the wave equation with a potential term via the Lax-Phillips theory: a simple proof. *J. Differential Equations* **30** (1978), no. 1, 41-48. (Gottfried Anger) **80d:35120** 35P25 (35R30)
- Menzio, Maria Rosa** (with Tulczyjew, Włodzimierz M.) Infinitesimal symplectic relations and generalized Hamiltonian dynamics. (French summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* **28** (1978), no. 4, 349-367. (Richard Cushman) **80a:58027** 58F05 (70H05)
- Mephram, John** See **Koyré, Alexandre**, **80c:01013**
- Méret, P.** (with Guéret, Ph.; Moles, M.; Vigier, J.-P.) Stable states of a relativistic harmonic oscillator imbedded in a random stochastic thermostat. *Lett. Math. Phys.* **3** (1979), no. 1, 47-56. (Ronald F. Fox) **80b:82016** 82A15 (53C10, 58F06)
- Mercado, R.** (with Raghavarao, D.) On designs balanced for residual effects. *Calcutta Statist. Assoc. Bull.* **26** (1977), no. 101-104, 121-122 (1978). (K. R. Shah) **80c:62123** 62K99
- Mercer, A. McD.** Generalized Beatty sequences. *Internat. J. Math. Math. Sci.* **1** (1978), no. 4, 525-528. (J. B. Kelly) **80i:10018** 10A40 (10A45)
- Merches, I.** (with Agop, M.) The relativistic Boltzmann equation and the macroscopic equations of conservation. *Acta Phys. Acad. Sci. Hungar.* **44** (1978), no. 3, 239-244. (Authors' summary) **80a:83046** 83C55 (45K05, 82A30)
- Mercier, André** (with Treder, Hans-Jürgen; Young, W.) ★On general relativity. An analysis of the fundamentals of the theory of general relativity and gravitation. *Akademie-Verlag, Berlin*, 1979. 154 pp. (C. B. Collins) **80c:83028** 83C99 (53C80)
- Mercier, Arnel** Fonctions additives dont l'ordre moyen est  $\log \log n$ . *Ann. Sci. Math. Québec* **3** (1979), no. 1, 107-118. (Henri Joris) **80b:10051** 10H25
- Mercier, Bertrand** (with Johnson, Claes) Some equilibrium finite element methods for two-dimensional problems in continuum mechanics. *Energy methods in finite element analysis*, pp. 213-224, Wiley, Chichester, 1979. (S. J. Sackett) **80c:73050** 73K25 (65N30)
- A conforming finite element method for two-dimensional incompressible elasticity. *Internat. J. Numer. Methods Engrg.* **14** (1979), no. 6, 942-945. (From the introduction) **80c:65028** 65N30 (73C99)
- See also **Arminjon, Paul**, **80i:65001**
- Mercuri, Francesco** On the rational cohomology of the spaces of unparametrized closed curves. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* **6** (8) (1977), no. 5, 281-289 (1978). (Wolfgang Ziller) **80c:58040** 58E10 (49F05, 53C22)
- The critical points theory for the closed geodesics problem. *Math. Z.* **156** (1977), no. 3, 231-245. (Y. Muto) **80d:58018** 58E10 (53C60)
- The space of free loops. (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977), Vol. II (Portuguese)*, pp. 801-802, Inst. Mat. Pura Apl., Rio de Janeiro, 1978. (Editors) **80j:58028** 58E10 (53C22)
- Meredith, David** Positive logic and  $\lambda$ -constants. *Studia Logica* **37** (1978), no. 3, 269-285. (H. B. Curry) **80c:03019** 03B40 (03B20)
- Axiomatics for implication. *Notre Dame J. Formal Logic* **20** (1979), no. 1, 89-91. (Daniel Ponsse) **80c:03022** 03B55 (03B20)
- Meredor, B.** A general estimate for the concentration function. (Russian) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* **1979**, no. 3, 3-5. (Werner Wolf) **80m:60037** 60F05 (60G50)
- Accuracy of the convergence to the normal distribution. (Russian. Turkmen and English summaries) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* **1979**, no. 5, 6-11. (Dominik Szymla) **80i:60025** 60F05
- Meredor, H. M.** Numerical determination of the eigenvalues and the eigenfunctions of a boundary value problem for the Helmholtz equation by the method of summary representations. (Russian. English summary) *Vysš. Prikl. Mat. (Kiev) No. 36* (1978), 139-145, 168. (Author's summary) **80c:65221** 65N25  
(with Embergenov, A.) Numerical determination of upper bounds on natural oscillation frequencies of a polygonal membrane. (Russian. Turkmen and English summaries) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* **1979**, no. 3, 14-19. (From the summary) **80c:49033** 49G05 (35P15, 65N25)
- Meredor, M. M.** (with Samedov, N. I.) A boundary value problem for a fourth-order quasilinear equation of mixed type. (Russian) *Differentsial'nye Uravnenija* **15** (1979), no. 1, 92-95, 188. (A. Haimovici) **80c:35073** 35M05
- Meredova, M. M.** (with Bazarov, D.) A boundary value problem for a third-order equation of mixed-composite type. (Russian) *Differentsial'nye Uravnenija* **15** (1979), no. 2, 343-344, 382. (S. A. Terenov) **80c:35099** 35M05
- Merenson, Ju. N.** (with Šestakov, A. A.) Ljapunov stability and attracting sets relative to a nonautonomous differential system. (Russian) *Differentsial'nye Uravnenija* **15** (1979), no. 5, 815-827, 956. (Z. Vorel) **80j:34062** 34D20 (58F12)  
(with Šestakov, A. A.) Examples of Ljapunov unstable points of positive attraction. (Russian) *Differentsial'nye Uravnenija* **15** (1979), no. 6, 1028-1035, 1149. (Pavel Krbeč) **80c:34034** 34D20
- Meres, Lucjan** On a certain estimation of solving Fermat's equation. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. No. 30* (1979), 215-218. (K. Szymiczek) **80c:10014** 10B15
- About certain inequalities connected with the great theorem of Fermat. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. No. 30* (1979), 219-225. (K. Szymiczek) **80c:10015** 10B15
- Merencia, I. V.** Some properties of the divisors of a polynomial operator pencil. (Russian) *Studies in functional analysis and differential equations (Russian)*, pp. 61-64, 78-79, "Štince", Kishinev, 1978. (F. H. Szafraniec) **80j:47023** 47A68
- Merikoski, Jorma Kaarlo** On a lower bound for the Perron eigenvalue. *BIT* **19** (1979), no. 1, 39-42. (Author's summary) **80c:65089** 65F15
- Merlees, Philip E.** On spectral multiplication as viewed in physical space. (Russian summary) *Telhus* **32** (1980), no. 1, 1-5. (Author's summary) **80m:86009** 86A99 (93A99)
- Méritet, Alain** Un théorème ergodique pour le temps local sur une variété riemannienne compacte à bord. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 14, A973-A976. (Author's summary) **80c:60091** 60J60 (58G32)
- Théorème d'annulation pour la cohomologie absolue d'une variété riemannienne à bord. (English summary) *Bull. Cl. Math.* **2** (103) (1979), no. 4, 379-400. (Jean-Louis Ducourtieux) **80c:58102** 58G32 (60J60)
- Méthode d'optimisation visant à déterminer la forme d'antenne filaire ayant un gain maximal. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 10, B185-B188. (Author's summary) **80m:78025** 78A50 (49B22)
- Merkes, Edward P.** (with Lameier, Steven H.) Separation of points in the plane. *Math. Mag.* **52** (1979), no. 2, 108-110. (H. T. Croft) **80d:52013** 52A37
- Merkur'ev, A. S.** A seven-term sequence in the Galois theory of schemes. (Russian) *Mat. Sb. (N.S.)* **109(151)** (1979), no. 3, 395-409, 479. (J. Browkin) **80j:14040** 14L15 (12G05)
- Merkur'ev, S. P.** Wave functions and generalized wave operators for the Schrödinger equation of a system of three charged particles. (Russian) *Dokl. Akad. Nauk SSSR* **241** (1978), no. 1, 68-71. (Nguyễn Văn Hiệ) **80i:81007** 81C05 (81F10)
- The structure of the resolvent of the Schrödinger operator for a system of three charged particles. (Russian) Questions in quantum field theory and statistical physics. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **77** (1978), 148-187, 231. (Author's summary) **80i:81086** 81F10 (35P05)
- Integral equations for three-particle systems with Coulomb interaction. *Lett. Math.*

- Phys.* 3 (1979), no. 2, 141–142. (Author's summary) **80c:81101** 81F10  
Integral equations in the quantum scattering problem for a system of three charged particles. (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 2, 201–218. (V. P. Kalashnikov) **80f:81094** 81F10 (45K05)
- Merkuriev, V. V.** (with Moldavskii, M. A.) A family of convolutions of a vector-valued criterion for finding points in a Pareto set. *Avtomat. i Telemekh.* 1979, no. 1, 110–121 (Russian); translated as *Automat. Remote Control* 40 (1979), no. 1, part 2, 87–97. (Authors' summary) **80d:93048** 93C99
- Merkuriev, S. P.** See **Merkuriev, S. P.**
- Merlier, Thérèse** Sur une généralisation des demi-groupes nilpotents. *Groupe d'Étude d'Algèbre (Marie-Paule Malliavin), 1re année (1975/76), Exp. No. 11, 3 pp., Secrétariat Math., Paris, 1978.* (H. D'Alarcao) **80g:20073** 20M10  
Totally orderable semigroups and locally finite semigroups. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976), pp. 385–392, Colloq. Math. Soc. János Bolyai, 20, North-Holland, Amsterdam, 1979.* (Frank A. Smith) **80j:06018** 06F05 (20M10)
- Mertin, Philip M.** (with Segall, Adrian) A failsafe distributed routing protocol. *IEEE Trans. Comm.* 27 (1979), no. 9, 1280–1287. (Authors' summary) **80g:90044** 90B10 (90C35, 94C10)  
(with Schweitzer, Paul J.) Deadlock avoidance in store-and-forward networks. I. Store-and-forward deadlock. *IEEE Trans. Comm.* 28 (1980), no. 3, 345–354. (Authors' summary) **80m:68010a** 68A05 (68C15)  
(with Schweitzer, Paul J.) Deadlock avoidance in store-and-forward networks. II. Other deadlock types. *IEEE Trans. Comm.* 28 (1980), no. 3, 355–360. (Authors' summary) **80m:68010b** 68A05 (68C15)
- Merner, Mark P.** (with Anderson, Robert L.) Transitive group structure for the one-body Keplerian problem. *Nonlinear Anal.* 2 (1978), no. 5, 627–634. (Ernest G. Kalnins) **80k:58104** 58H05 (22E70, 58F05)
- Mervel, Ymer** (with Damoni, Sami) On some qualitative properties of the solutions of the equation  $\Phi(x, y, y', y'') = 0$ . (Serbo-Croatian. French summary) *Mat. Bilten* 27 (1977), no. 1, 15–22. (M. Bertolino) **80j:34031** 34C11
- Merrett, T. H.** QT logic: simpler and more expressive than predicate calculus. *Inform. Process. Lett.* 7 (1978), no. 6, 251–255. (W. W. Armstrong) **80j:68111** 68H05 (68B15)
- Merrien, Jean** Faisceaux analytiques semi-cohérents. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 16, A791–A793. (Author's summary) **80k:32015** 32C35 (32C05)  
Applications des faisceaux analytiques semi-cohérents aux fonctions différentiables. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 1, A37–A39. (Author's summary) **80m:32008** 32B05
- Merrill, Samuel** Approval voting: a "best buy" method for multi-candidate elections? *Math. Mag.* 52 (1979), no. 2, 98–102. (J. H. Blau) **80i:90012** 90A08
- Merrill, Stephen J.** A model of the stimulation of B-cells by replicating antigen. I. *Math. Biosci.* 41 (1978), no. 1–2, 125–141. (H. A. Lauwerier) **80h:92006a** 92A09 (34C25, 58F14)  
A model of the stimulation of B-cells by replicating antigen. II. *Math. Biosci.* 41 (1978), no. 1–2, 143–156. (H. A. Lauwerier) **80h:92006b** 92A09 (34C25, 58F14)
- Merris, Russell** Subgroups normal modulo the zeros of an irreducible character. *Karachi Math. Assoc. Riazi (Sowenir)* 1978, 1–7. (Gary L. Peterson) **80a:20012** 20C15  
The structure of higher degree symmetry classes of tensors. II. *Linear and Multilinear Algebra* 6 (1978/79), no. 3, 171–178. (A. O. Morris) **80b:15038** 15A72  
Linearly independent permutation characters afforded by action on tensor spaces. *Linear and Multilinear Algebra* 6 (1978/79), no. 4, 263–267. (J. A. Dias da Silva) **80c:15018** 15A69 (20C15)  
(with Ishaq, M.) Matrix functions afforded by entries of unitary representations. *Linear Algebra Appl.* 25 (1979), 255–269. (G. Karpilovsky) **80b:20020** 20C30 (15A33)
- Recent advances in symmetry classes of tensors. *Linear and Multilinear Algebra* 7 (1979), no. 1–2, 317–328. (J. A. Dias da Silva) **80k:15040** 15A69 (20C15)  
Generalized matrix functions: a research problem. *Linear and Multilinear Algebra* 8 (1979/80), no. 1, 83–86. (W. Ledermann) **80j:15005** 15A15  
Inequalities involving the inverses of positive definite matrices. *Proc. Edinburgh Math. Soc.* (2) 22 (1979), no. 1, 11–15. (J. de Pillis) **80f:15022** 15A45
- Mervencan, Russell M.** On the equivalence between the Kaiser-Hamming sharpening procedure and the McClellan transformation for FIR digital filter design. *IEEE Trans. Acoust. Speech Signal Process.* 27 (1979), no. 4, 423–424. (Author's summary) **80h:94011** 94A12
- Mertens, Jean-François** (with Samuel-Cahn, Ester; Zamir, Shmuel) Necessary and sufficient conditions for recurrence and transience of Markov chains, in terms of inequalities. *J. Appl. Probab.* 15 (1978), no. 4, 848–851. (Richard Madsen) **80a:60088** 60J10
- Mertens, R.** (with De Corte, L.) An exact mathematical solution of the problem of tops rising by friction. *Z. Angew. Math. Mech.* 58 (1978), no. 6, 116–118. (G. V. Hmelevskaja-Plotnikova) **80a:70008** 70E15 (34A05)
- Mertins, Ulrich** Eigenschaften stetiger Endomorphismen, die mit beschränkten kommutieren. *Arch. Math. (Basel)* 30 (1978), no. 5, 523–527. (H. H. Schaefer) **80a:47010** 47A15 (46A05)  
Das Lomonosov-Lemma für topologische Vektorräume. *J. Reine Angew. Math.* 303/304 (1978), 437–440. (Lawrence Fialkow) **80b:47007** 47A15  
(with Kroh, Helmut) Ein Homomorphiesatz und verwandte Operatoren in topologischen Vektorräumen. (English summary) *Manuscripta Math.* 25 (1978), no. 3, 241–247. (N. Adasch) **80c:46005** 46A30 (47A05)
- Mercet, Claude** (with Gapillard, Christiane) Espaces fonctionnels de Banach—méthode discrète d'interpolation. *Ark. Mat.* 16 (1978), no. 2, 161–170. (Jöran Bergh) **80g:46060** 46M35 (46E30)
- van der Merwe, A. J.** (with de Waal, D. J.) The asymptotic expansion of the Stein estimators for the vector case. *Ann. Inst. Statist. Math.* 30 (1978), no. 3, 385–395. (Arthur Cohen) **80j:62009** 62C15 (62E20, 62H12)
- van der Merwe, P. du T.** Phase-locked solutions. *Lett. Nuovo Cimento* (2) 25 (1979), no. 3, 93–96. (V. E. Korepin) **80b:35117** 35Q20 (81C99)
- Merz, Gerhard** (with Meinardus, Günter) ★Praktische Mathematik. I. Für Ingenieure, Mathematiker und Physiker. *Bibliographisches Institut, Mannheim, 1979.* vi+337 pp. ISBN 3-411-01541-1 (Henning Esser) **80g:65002** 65–01
- Merzenich, Wolfgang** A binary operation on trees and an initial algebra characterization for finite tree types. *Acta Inform.* 11 (1978/79), no. 2, 149–168. (V. Ju. Melitus) **80d:68077** 68E10 (05C05)
- Merzljak, M. G.** Central limit theorem for near stationary sequences. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 1, 143–153, 231. (B. S. Nahapetjan) **80h:60036** 60F05 (60G10)
- Merzljakov, Ju. I.** Linear groups. (Russian) *Algebra, Topology, Geometry, Vol. 16* (Russian), pp. 35–89, 247, VINITI, Moscow, 1978. (Author's summary) **80j:20040** 20Gxx  
(with Kargapolov, M. I.) ★Fundamentals of the theory of groups. Translated from the second Russian edition by Robert G. Burns. Graduate Texts in Mathematics, 62. Springer-Verlag, New York-Heidelberg, 1979. xvii+203 pp. ISBN 0-387-90396-8 (Editors) **80k:20002** 20–01  
See also Robinson, D., **80b:20024** and van der Waerden, Bartel Leendert, **80k:00002**
- Merzljakova, G. D.** (with Bykov, Ja. V.) Oscillatory properties of a class of equations in finite differences of first order. (Russian) *Izv. Akad. Nauk Kirgiz. SSR* 1978, no. 5, 29–40. (A. Halanay) **80g:39002** 39A10
- Meisalkin, L. D.** (with Serdobolskii, V. I.) Classification errors in the case of multivariate observations. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 4, 772–781. (László Györfi) **80f:62062a** 62H30
- Meisalkin, V. P.** (with Kafarov, V. V.; Nguen Suan Nguen) Modeling of chemical engineering systems by the method of the compact transformation. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 2, 408–410. (Josef Kaška) **80g:93005a** 93A10 (80A30)  
(with Kafarov, V. V.; Nguen Suan Nguen) An algorithm for modeling chemical engineering systems based on the method of the compact transformation. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 3, 669–672. (Josef Kaška) **80g:93005b** 93A10 (80A30)  
(with Kafarov, V. V.; Nguen Suan Nguen) A method for reflecting free variables of chemical engineering systems based on the compact transformation of matrix informational structure. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 4, 888–891. (Josef Kaška) **80g:93005c** 93A10 (80A30)
- Mesiarović, M. D.** (with Takahara, Yasuhiko) ★Общая теория систем: математические основы. (Russian) [General systems theory: mathematical foundations] Translated from the English by É. L. Nappelbaum. Edited by S. V. Enef'janov. "Mir", Moscow, 1978. 311 pp. (Editors) **80a:93004** 93–02
- Meschkowski, Herbert** ★Probleme Geschichte der neueren Mathematik (1800–1950). *Bibliographisches Institut, Mannheim, 1978.* 314 pp. ISBN 3-411-01542-X (Manfred Stern) **80i:01011** 01A55 (01A60)  
★Mathematik und Realität. Vorträge und Aufsätze. *Bibliographisches Institut, Mannheim, 1979.* 183 pp. ISBN 3-411-01558-6 (H. C. Kennedy) **80e:01036** 01A75 (00A25)
- Mesikov, S. I.** See **Meikov, S. I.**
- Mesikov, V. Z.** Smoothness properties in Banach spaces. *Studia Math.* 63 (1978), no. 2, 111–123. (M. M. Rao) **80b:46027** 46B20
- Mesirov-Kardani, Jili P.** Perturbation theory for condition (C) in the calculus of variations. *J. Differential Geom.* 12 (1977), no. 4, 523–553 (1978). (A. J. Tromba) **80h:58019** 58E05  
A classification for polynomial Lagrangians. *Indiana Univ. Math. J.* 28 (1979), no. 1, 99–117. (Jacques Lemondant) **80c:58011** 58E05 (49A27)
- Meiskov, S. I.** (with Čigarev, A. V.) On wave propagation in inhomogeneous viscoelastic-plastic media. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* 13 (1978), no. 5, 116–121 (Russian); translated as *Mech. Solids* 13 (1978), no. 5, 105–110. (Authors' summary) **80h:73035** 73D99
- Meiskov, V. Z.** Spherical multipliers. (Russian) *Mat. Zametki* 23 (1978), no. 1, 105–112. (V. M. Kokilavili) **80b:42009** 42B15
- Mesropjan, N.** Asymptotic behaviour of the prediction error for vector-valued processes of nonmaximal rank. (Russian. English summary) *Studies in statistical estimation theory. II. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 79 (1978), 17–37, 97, 101. (A. L. Makagon) **80c:60050** 60G25
- Mess, Geoff** (with Lawrence, John; Zoritto, Frank) Near derivations and information functions. *Proc. Amer. Math. Soc.* 76 (1979), no. 1, 117–122. (J. Aczél) **80c:39005** 39B20 (94A17)
- Messa, Kenneth** A generalization of Ulm subgroups. *Rend. Sem. Mat. Univ. Padova* 58 (1977), 1–7 (1978). (L. Bican) **80h:16028** 16A64
- Messenger, A.** (with Gruber, Ch.; Hintermann, A.; Miracle-Solé, S.) Invariant equilibrium states and surface tension in ferromagnetic systems. *Statistical physics—"STATPHYS 13" (Proc. Thirteenth IUPAP Conf. Statist. Phys., Technion-Israel Inst. Tech., Haifa, 1977), Part 2, pp. 536–539.* *Ann. Israel Phys. Soc.*, 2, Hilger, Bristol, 1978. (Authors' summary) **80g:82040** 82A65
- Messer, Joachim** Decay of local correlations and absence of phase transitions. *J. Math. Phys.* 20 (1979), no. 7, 1349–1351. (Richard S. Ellis) **80f:82011** 82A05
- Messer, Robert** (with Wright, Alden H.) Embedding open 3-manifolds in compact 3-manifolds. *Pacific J. Math.* 82 (1979), no. 1, 163–177. (J. S. Birman) **80m:57004** 57N10  
(with Brown, Edward M.) The classification of two-dimensional manifolds. *Trans. Amer. Math. Soc.* 255 (1979), 377–402. (V. A. Kalinin) **80j:57007** 57N05 (57M20)
- Messori, Bruno** A particular nonholonomic dynamical system similar to that of the circle. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* 26 (1977), no. 2, 371–383 (1979). (Author's summary) **80i:70005** 70E15 (34C35)
- Mestvirishvili, M. A.** (with Logunov, A. A.; Petrov, V. A.) General principles of quantum field theory and strong interactions at high energies. *Ann. Physics* 114 (1978), no. 1–2, 46–92. (From the introduction) **80m:81093** 81G05 (81F20)  
(with Logunov, A. A.; Denisov, V. I.; Vlasov, A. A.; Folomeikina, V. N.) New concepts of space-time and gravitation. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 3, 291–328. (Kishore Marathe) **80k:83046** 83D05
- Meszéna, György** (with Füstös, László; Simonné Mosolygó, Nóra) Cluster analysis.



- (Hungarian. English and Russian summaries) *Szigma—Mat.-Közgazdasági Folyóirat* 10 (1977), no. 3, 111–148 (1978). (Authors' summary) 80a:62809 62H30
- Met, P. N. (with Krée, Paul) Utilisation de la transformation de Laplace pour l'évaluation de fonctions de répartition. (English summary) *Publ. Inst. Statist. Univ. Paris* 21 (1972), no. 1-2, 65–84 (1976). (Authors' summary) 80f:60022 60E10
- Metakides, G. (with Remmel, J. B.) Recursion theory on orderings. I. A model-theoretic setting. *J. Symbolic Logic* 44 (1979), no. 3, 383–402. (Gabriel Lolli) 80a:03000 03D45 (03C15, 03D75)
- Metel'skii, N. N. (with Kornienko, N. M.) A description of the partial orderings of the admissible solutions of integer linear programming problems. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 22 (1978), no. 3, 208–211, 283–284. (K. Zimmermann) 80d:90057 90C10
- (with Kornienko, N. M.) Metrization of a class of graphs. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 1, 5–7, 91. (A. Astromoff) 80b:05026 05C10
- Metherell, Allen (with Landshoff, Peter) ★Simple quantum physics. Cambridge University Press, Cambridge-New York, 1979. viii + 177 pp. ISBN 0-521-22498-5, 0-521-29538-6 (Editors) 80a:81001 81-01
- Methouali, Hamid Sur l'évolution d'un compact mobile régi par une loi différentielle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 2, A91–A94. (Author's summary) 80g:34069 34C99
- Métivier, Guy Propriété des itérés et ellipticité. *Comm. Partial Differential Equations* 3 (1978), no. 9, 827–876. (P. C. Fife) 80f:35047 35J30 (35H05, 46E10)
- Métivier, Michel Stochastic integration with respect to Hilbert valued martingales, representation theorems and infinite-dimensional filtering. *Measure theory applications to stochastic analysis* (Proc. Conf., Res. Inst. Math., Oberwolfach, 1977), pp. 13–25, *Lecture Notes in Math.*, 695, Springer, Berlin, 1978. (Jean-Yves Ouyard) 80j:60089 60H05 (60G35, 60G44, 93E10)
- Un "Jemme de Gronwall" "stochastique" et application à un théorème de stabilité pour équations différentielles stochastiques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 4, A287–A290. (Author's summary) 80i:60084 60H10
- Metodiya, M. Asymptotic single-frequency solutions of a quasilinear nonautonomous system with lag in the case of resonance. (Bulgarian. Russian and English summaries) *Godinik Visi. Učebn. Zaved. Pribl. Mat.* 12 (1976), no. 1, 251–262 (1978). (Author's summary) 80c:34056 34K25
- Multi-frequency resonance oscillations of a quasilinear nonautonomous system with lag and with slowly varying parameters. (Bulgarian. Russian and English summaries) *Godinik Visi. Učebn. Zaved. Pribl. Mat.* 12 (1976), no. 1, 263–275 (1978). (Author's summary) 80c:34057 34K25
- Métroux, C. Quelques inégalités pour martingales à paramètre bidimensionnel. *Séminaire de Probabilités, XII* (Univ. Strasbourg, Strasbourg, 1976/1977), pp. 170–179, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (David Nualart Rodón) 80i:60066 60G42
- Metreveli, D. G. (with Vachnadze, R. G.) Pareto-optimal solutions with fuzzy goals and constraints. (Russian. Georgian and English summaries) *Sobit. Akad. Nauk Gruzin. SSR* 93 (1979), no. 3, 565–568. (Authors' summary) 80a:90002 90A05
- Metropolis, N. (with Rota, Gian-Carlo) Combinatorial structure of the faces of the  $n$ -cube. *SIAM J. Appl. Math.* 35 (1978), no. 4, 689–694. (R. W. Quackenbush) 80c:06015 06C15 (05A17, 05B30)
- Metropoulos, Aristophanes (with Chiu, Ying Nan) Generalized classification of the rotational-vibrational wavefunctions of  $C_{2v}$  and  $D_{3h}$  symmetric tops according to their respective molecular point groups. *Chem. Phys.* 42 (1979), no. 1-2, 61–72. (Philip H. Butler) 80g:81087 81G50
- Metsänkylä, Tarmo Iwasawa invariants and Kummer congruences. *J. Number Theory* 10 (1978), no. 4, 510–522. (Yasumasa Akagawa) 80d:12007 12A70
- (with Ernvall, Reijo) Cyclotomic invariants and  $E$ -irregular primes. *Math. Comp.* 32 (1978), no. 142, 617–629. (Editors) 80c:12004a 12A35 (10A40, 12A50)
- See also Ernvall, Reijo, 80c:12004b
- Mettenberg, Marlies Beantwortung einer Frage von J. Arason und A. Pfister als Korollar eines Ergebnisses von L. Bröcker. *Arch. Math. (Basel)* 32 (1979), no. 4, 344–345. (A. Pfister) 80j:10029 10C04 (12D15)
- Mettler, E. Die Heubewegung im eingeschränkten Dreikörperproblem als Beispiel einer nichtlinearen Schwingung. (English and Russian summaries) *Z. Angew. Math. Mech.* 58 (1978), no. 3, 121–132. (Author's summary) 80b:70009 70F07
- offray de la Mettrie, Julien See Offray de la Mettrie, Julien
- Metze, Gernot (with Smith, James E.) Strongly fault secure logic networks. Special issue on fault-tolerant computing. *IEEE Trans. Comput.* 27 (1978), no. 6, 491–499. (Izzet Cem Göknaar) 80m:94103 94C10 (68A05)
- Metzler, Richard C. Uniqueness of extensions of positive linear functions. *Pacific J. Math.* 74 (1978), no. 1, 179–182. (L. Narici) 80f:46027 46E27 (28C05)
- Representation of pseudotriangular ordered vector spaces. *J. Austral. Math. Soc. Ser. A* 27 (1979), no. 2, 167–172. (J. Jakubik) 80c:06016 06F20
- de Meulemeester, Willy See De Meulemeester, Willy
- van der Meulen, S. G. (with Veldhorst, M.) ★TORRIX. A programming system for operations on vectors and matrices over arbitrary fields and of variable size. Vol. 1. Mathematical Centre Tracts, 86. *Mathematisch Centrum, Amsterdam*, 1978. vi + 231 pp. ISBN 90-6196-152-1 (From the introduction) 80b:15003 15-04 (68B05)
- Meunargha, T. V. Solution of certain problems of the concentration of stresses for anisotropic plates. (Russian) *Complex analysis and its applications* (Russian), pp. 391–396, 669, "Nauka", Moscow, 1978. (Author's summary) 80a:73014 73C45 (00A89)
- de Meur, G. Espaces de Fischer hermitiens. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1979/79), no. 6, 305–308. (From the text) 80j:20003 20B20 (51A45, 51J10)
- Mewborn, A. C. (with Goldston Barnwell, Beth) The structure sheaf of an incidence algebra. *J. Austral. Math. Soc. Ser. A* 25 (1978), no. 1, 92–102. (S. Williamson) 80b:16022 16A52
- de Mey, G. See De Mey, G.
- Meyberg, Kurt (with Vachnauer, Peter) ★Aufgaben und Lösungen zur Algebra. Mathematische Grundlagen für Mathematiker, Physiker und Ingenieure. Carl Hanser Verlag, Munich-Vienna, 1978. iii + 241 pp. ISBN 3-446-12173-0 (K. Kiyek) 80f:00001 00A05
- Meyenhofer, B. (with Délez, M.; Goël, J.-J.) Finite elements of  $C^1$ -class on a tetrahedron. *Internat. J. Numer. Methods Engrg.* 12 (1978), no. 5, 787–793. (Jacques Couot) 80i:65115 65N30
- Meyer, B. (with Bossavit, A.) Sur la programmation rationnelle des algorithmes numériques. (English summary) *Bull. Direction Études Rech. Sér. C Math. Inform.* 1979, no. 1, 3, 61–73. (Authors' summary) 80d:68011 68B05
- (with Demuyne, M.) Les langages de spécification. (English summary) *Bull. Direction Études Rech. Sér. C Math. Inform.* 1979, no. 1, 3, 39–59. (Authors' summary) 80d:68012 68B05
- Meyer, Burnett Inequalities for the logarithmic capacity. *J. Math. Anal. Appl.* 68 (1979), no. 1, 265–266. (From the text) 80j:31002 31A15
- Meyer, C. D., Jr. (with Stadelmaier, M. W.) Singular  $M$ -matrices and inverse positivity. *Linear Algebra Appl.* 22 (1978), 139–156. (R. J. Plemmons) 80b:15008 15A09
- (with Campbell, Stephen L.) ★Generalized inverses of linear transformations. Surveys and Reference Works in Mathematics, 4. Pitman Publishing, Ltd., London-San Francisco, Calif., 1979. xi + 272 pp. ISBN 0-273-08422-4 (F. J. Papp) 80d:15003 15A09 (65F05)
- Meyer, Daniel Courbure sectionnelle et opérateur de courbure en codimension plus grande que 2. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 22, A1029–A1032. (John J. O'Sullivan) 80g:53032 53C20 (57R42)
- Meyer, Gerard G. L. (with Raup, R. C.) On the structure of cluster point sets of iteratively generated sequences. *J. Optim. Theory Appl.* 28 (1979), no. 3, 353–362. (L. János) 80h:54011 54C05 (90C30)
- Asymptotic properties of sequences iteratively generated by point-to-set maps. Point-to-set maps and mathematical programming. *Math. Programming Stud.* No. 10 (1979), 115–127. (D. M. Topkis) 80c:90155 90C99
- Meyer, Gottfried P. (with Schmidt, Hermann) Zur Existenz und analytischen Darstellung von Nullstellenfolgen bei Exponentialsummen. *Boyer. Akad. Wiss. Math.-Natur. Kl. Sitzungsber.* 1977, 125–133 (1978). (C. Tanaka) 80a:30007 30C15
- Über die Nullstellen von Exponentialsummen längs einer logarithmischen Wechsellinie. *Arch. Math. (Basel)* 32 (1979), no. 5, 479–486. (A. J. van der Poorten) 80k:30012 30C15 (30D35)
- Meyer, Gunter H. The numerical solution of Stefan problems with front-tracking and smoothing methods. *Appl. Math. Comput.* 4 (1978), no. 4, 283–306. (Author's summary) 80a:65244 65N99
- de Meyer, H. E. See De Meyer, H. E.
- Meyer, Jean-Pierre Acyclic models for multicomplexes. *Duke Math. J.* 45 (1978), no. 1, 67–85. (J. Stasheff) 80c:55012 55U25 (55T99)
- Meyer, Josiah  $e$ -folliations of codimension two. *J. Differential Geom.* 12 (1977), no. 4, 583–594 (1978). (Robert Roussarie) 80c:57018 57R30
- Meyer, Mathieu Une nouvelle caractérisation des espaces vectoriels réticulés presque  $\sigma$ -complets. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 16, A1081–A1084. (Author's summary) 80b:46011 46A40
- Richesses du centre d'un espace vectoriel réticulé. *Math. Ann.* 236 (1978), no. 2, 147–169. (S. K. Berberian) 80b:46012 46A40
- Meyer, Paul-André (with Dellacherie, Claude) ★Probabilities and potential. North-Holland Mathematics Studies, 29. Hermann, Publishers in Arts and Science, Paris; North-Holland Publishing Co., Amsterdam-New York, 1978. viii + 189 pp. ISBN 0-7204-0701-X (Editors) 80b:60004 60-02 (28-02, 31-02)
- Sur un théorème de J. Jacod. *Séminaire de Probabilités, XII* (Univ. Strasbourg, Strasbourg, 1976/1977), pp. 57–60, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Jacques Azéma) 80j:60075 60G44
- (with Dellacherie, Claude; Yor, Marc) Sur certaines propriétés des espaces de Banach  $H^1$  et BMO. *Séminaire de Probabilités, XII* (Univ. Strasbourg, Strasbourg, 1976/1977), pp. 98–113, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Norihiko Kazamaki) 80i:60072 60G46
- Correction à: "Sur un théorème de C. Stricker" (*Séminaire de Probabilités, XI* (Univ. Strasbourg, Strasbourg, 1975/1976), pp. 482–489, *Lecture Notes in Math.*, Vol. 581, Springer, Berlin, 1977). *Séminaire de Probabilités, XII* (Univ. Strasbourg, Strasbourg, 1976/1977), p. 740, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Editors) 80c:60062 60G44
- (with Dellacherie, Claude) Construction d'un processus prévisible ayant une valeur donnée en un temps d'arrêt. *Séminaire de Probabilités, XII* (Univ. Strasbourg, Strasbourg, 1976/1977), pp. 425–427, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Yves Le Jan) 80g:60046 60G40
- (with Yor, Marc) Sur l'extension d'un théorème de Doob à un noyau  $\sigma$ -fini d'après G. Mokobodzki. *Séminaire de Probabilités, XII* (Univ. Strasbourg, Strasbourg, 1976/1977), pp. 482–488, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (P. Géraud) 80j:28011 28A20
- Inégalités de normes pour les intégrales stochastiques. *Séminaire de Probabilités, XII* (Univ. Strasbourg, Strasbourg, 1976/1977), pp. 757–762, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Philip Protter) 80c:60073 60H05 (60G46)
- Sur le lemme de la Vallée Poussin et un théorème de Bismut. *Séminaire de Probabilités, XII* (Univ. Strasbourg, Strasbourg, 1976/1977), pp. 770–774, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Jean-Michel Bismut) 80b:60049 60G07
- See also *Séminaire: Probabilités, 80d:60007* et *Séminaire: Probabilités, 80d:60008*
- Meyer, Paul R. (with Wilson, Richard G.) Cardinal functions on topological spaces satisfying order conditions. *Houston J. Math.* 5 (1979), no. 1, 107–118. (Stojan Nedel) 80e:54005 54A25 (54F05)
- See also *Papers in mathematics, 80f:00004*
- Meyer, R. R. Equivalent constraints for discrete sets. *Discrete Appl. Math.* 1 (1979), no. 1-2, 31–50. (F. Giannessi) 80b:90069 90C10
- Two-segment separable programming. *Management Sci.* 25 (1979/80), no. 4, 385–395. (J. Parida) 80i:90077 90C25 (90C11)
- Meyer, Richard M. ★Essential mathematics for applied fields. Universitext. Springer-Verlag, New York-Heidelberg, 1979. xvi + 555 pp. ISBN 0-387-90450-6 (F. J. Murray) 80m:00002 00A06
- Meyer, Robert K. (with Routley, Richard) Towards a general semantical theory of implication and conditionals. II. Improved negation theory and propositional identity. *Rep. Math. Logic* No. 9 (1977), 47–62. (Editors) 80i:03019 03B20



- (with Bunder, M. W.) On the inconsistency of systems similar to  $\mathcal{S}_2$ . *J. Symbolic Logic* 43 (1978), no. 1, 1-2. (Henk Barendregt) **80a:03002a** 03B40
- Career induction stops here (and here = 2). *J. Philos. Logic* 8 (1979), no. 3, 361-371. (Garrel Pottinger) **80i:03032** 03B45 (03B25)
- Meyer, Sybille (with Junghans, Peter) Eine asymptotische Zerlegung der Lösung einer schwach nichtlinearen Randwertaufgabe vierter Ordnung mit einem kleinen Parameter bei der höchsten Ableitung. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* 21 (1979), no. 5, 597-606. (H. Hochstadt) **80j:34019** 34B15 (34E99)
- Meyer, W. Weston (with Thomas, Donald H.) Erratum: "Variations on a theme by Schoenberg" [J. Approx. Theory 18 (1976), no. 1, 39-49]. *J. Approx. Theory* 25 (1979), no. 1, 91. (Editors) **80g:41013** 41A15
- Meyer, Yves Nouvelles estimations pour les opérateurs pseudo-différentiels. *Séminaire Goulaouic-Schwartz* (1977/1978), Exp. No. 10, 6 pp., École Polytech., Palaiseau, 1978. (Editors) **80a:35119** 35S05 (47G05)
- (with Coifman, Ronald) Commutateurs d'intégrales singulières et opérateurs multilinéaires. (English summary) *Ann. Inst. Fourier (Grenoble)* 28 (1978), no. 3, xi, 177-202. (R. V. Dudučava) **80a:47076** 47G05 (42B99, 58G15)
- Sharp estimates for pseudodifferential operators. *Harmonic analysis in Euclidean spaces* (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 2, pp. 105-113. *Proc. Sympos. Pure Math., XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979.* (J. Unterberger) **80m:47048** 47G05
- (with Coifman, Ronald) Le théorème de Calderón par les "méthodes de variable réelle". (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 7, A425-A428. (Authors' summary) **80j:42024** 42A50 (30C35)
- Meyer-König, W. (with Zeller, Karl) Über die Größenordnung der Koeffizienten von Potenzreihenentwicklungen. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 1 (1978), 221-233. (Kazuo Ishiguro) **80b:30003** 30B10
- Meyer-Nieberg, Peter Eine Variante des Rieszschen Darstellungssatzes und ein Zerlegungssatz für sublineare Operatoren. *Arch. Math. (Basel)* 31 (1978/79), no. 5, 491-500. (A. C. Zaenen) **80a:47047** 47B55
- Kegel  $p$ -absolutsummierende und  $p$ -beschränkende Operatoren. *Nederl. Akad. Wetensch. Indag. Math.* 40 (1978), no. 4, 479-490. (O. I. Reinov) **80b:47053** 47D30 (47B10)
- Meyers, C. (with de Roo, M.; Sorba, P.) On embeddings of gauge groups in Yang-Mills theory. *Nuclear Phys. B* 140 (1978), no. 3, 533-546. (James D. Fabrey) **80f:81070** 81E10 (22E70)
- (with de Roo, M.) New explicit instantons and the geometry of the parameter space. *Nuclear Phys. B* 148 (1979), no. 1-2, 61-73. (Nicholas M. J. Woodhouse) **80d:81115** 81G05 (53C80, 57T99, 81E10)
- (with de Roo, M.; Sorba, P.) Group-theoretical aspects of instantons. (Italian and Russian summaries) *Nuovo Cimento A* (11) 52 (1979), no. 4, 519-530. (Don Weingarten) **80m:81100** 81G20 (53C05)
- Meyers, Glenn (with Bartlett, M. W.; Lewis, James T.) A generalized interpolation problem with variable nodes. *Anal. Numer. Theor. Approx.* 6 (1977), no. 1, 9-14. (From the introduction) **80c:65025** 65D05 (41A05)
- Meyerson, Mark D. (with Wright, Alden H.) A new and constructive proof of the Borsuk-Ulam theorem. *Proc. Amer. Math. Soc.* 73 (1979), no. 1, 134-136. (Gencho Skordev) **80c:55006** 55M20
- Meyer-Spasche, Rita A note on the approximation of mildly nonlinear Dirichlet problems by finite differences. *Numer. Math.* 33 (1979), no. 3, 303-313. (V. Thomé) **80m:65070** 65N10
- Mesemov, A. V. (with Gujatinikov, P. B.) The problem of evading many pursuers when integral constraints are involved. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 1, 11-14. (A. I. Subbotin) **80c:90166** 90D25
- Mestrel, Y. (with Galbe, G.) Remarques sur les coefficients de Timoshenko. *Mech. Res. Comm.* 6 (1979), no. 1, 37-43. (Authors' introduction) **80i:73031** 73H05 (49G05)
- Metzaroba, Joseph A. (with Salwach, Chester J.) The four known biplanes with  $k=11$ . *Internat. J. Math. Math. Sci.* 2 (1979), no. 2, 251-260. (J. H. van Lint) **80g:05014a** 05B05 (05B25, 94B05)
- Mézziell, Emilia (with Spangher, Walter) Polynomial rings over  $C_2FD$  and  $C_3FD$  domains. (Italian. English summary) *Rend. Istit. Mat. Univ. Trieste* 9 (1977), no. 1-2, 103-112 (1978). (Manfred Herrmann) **80a:13019** 13F15 (13G05)
- (with Spangher, Walter) Some generalizations of a known theorem of M. Nagata. (Italian. English summary) *Rend. Istit. Mat. Univ. Trieste* 9 (1977), no. 1-2, 113-121 (1978). (Manfred Herrmann) **80a:13018** 13F15 (13H10)
- (with Spangher, Walter) Some criteria for extending arithmetic properties under the operation of projective closure. (Italian. English summary) *Rend. Istit. Mat. Univ. Trieste* 10 (1978), no. 1-2, 101-122 (1979). (Paolo Maroscia) **80h:13002** 13A15 (14A25)
- Mikharjan, S. M. (with Guljan, K. G.) On the solution of two contact problems for a wedge with elastic stiffeners. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* 31 (1978), no. 4, 3-20, 100. (S. P. Gavelja) **80j:73093** 73K10 (73T05)
- Mikolajewski, Zdzisław B. Some structural properties of the periodic sum of finite automata. *Found. Control Engrg.* 3 (1978), no. 2, 63-69. (Bolesław Mikolajczak) **80b:68079** 68D90
- Minaee, A. G. (with Salehi, H.) A note on the product of operator-valued measures. *Bol. Soc. Mat. Mexicana* (2) 22 (1977), no. 1, 23-24. (Przemysław Kranz) **80h:28005** 28A35
- (with Salehi, H.) On minimality of infinite-dimensional stationary stochastic processes. *Probability theory on vector spaces* (Proc. Conf., Trzebiezowice, 1977), pp. 119-128. *Lecture Notes in Math.*, 656, Springer, Berlin, 1978. (A. I. Ponomarenko) **80d:60052** 60G25
- (with Salehi, H.) On the factorization of a nonnegative operator valued function. *Probability theory on vector spaces* (Proc. Conf., Trzebiezowice, 1977), pp. 129-137. *Lecture Notes in Math.*, 656, Springer, Berlin, 1978. (Jürgen Leiterer) **80g:47022** 47A68 (60G10)
- (with Salehi, H.) On the bilateral prediction error matrix of a multivariate stationary stochastic process. *SIAM J. Math. Anal.* 10 (1979), no. 2, 247-252. (A. L. Makagon) **80j:60059** 60G25
- Minnay, D. (with Le Poac, P.; Royer, J.; Tissot, J. M.) Approches de l'intégrale de Rice. *Ann. École Nat. Sup. Méc. Nantes* 1978, 93-107. (Authors' conclusion) **80b:73054** 73M05
- Miso, Long Chi Fastautomorphe Dirichletfunktionen. *Chinese J. Math.* 6 (1978), no. 2, 137-145. (Marvin I. Knopp) **80i:10033** 10D24 (30B50)
- Mistello, Roberto J. On the Plancherel measure for linear Lie groups of rank one. *Manuscript Math.* 29 (1979), no. 2-4, 249-276. (Mitsuo Sugiera) **80b:22021** 22E46 (22E45)
- Mical, Artiano (with Costa, Roberto) Sur les algèbres de Rees. II. (English summary) *Manuscript Math.* 26 (1978), no. 1-2, 1-15. (P. Samuel) **80a:13016** 13D99 (15A72)
- (with Ferrero, Miguel) Sur les  $n$ -applications. Colloque sur les Formes Quadratiques, 2 (Montpellier, 1977). *Bull. Soc. Math. France Mém. No. 59* (1979), 33-53. (A. Prószyński) **80j:10032** 10C10 (13C99)
- (with Chevalet, Claude; Gillois, Michel) On a dynamical system relevant in genetics. *Tôhoku Math. J. (2)* 31 (1979), no. 2, 127-138. (J. P. Kernevez) **80c:92016** 92A10 (92A40)
- Mitchell, Charles A. (with Melkman, Avraham A.) Spline spaces are optimal for  $L^2$   $n$ -width. *Illinois J. Math.* 22 (1978), no. 4, 541-564. (Donald Kershaw) **80d:41013** 41A46 (15A48, 47H05)
- (with Pinkus, Allan) Some problems in the approximation of functions of two variables and  $n$ -widths of integral operators. *J. Approx. Theory* 24 (1978), no. 1, 51-77. (Bl. Sendov) **80a:41020** 41A35
- On an extremal problem of Subbotin concerning finite differences and derivatives. *J. Approx. Theory* 26 (1979), no. 2, 119-123. (Jean Tzimbario) **80c:41014** 41A50 (26D15)
- Optimal estimation of smooth functions from inaccurate data. *J. Inst. Math. Appl.* 23 (1979), no. 4, 473-495. (Siegfried Filippi) **80c:65015** 65D10 (41A05)
- (with Pinkus, Allan) The  $n$ -widths of rank  $n+1$  kernels. *J. Integral Equations* 1 (1979), no. 2, 111-130. (T. Bojanov) **80g:41019** 41A46 (46E99)
- (with Willoughby, R. A.) On functions which preserve the class of Stieltjes matrices. *Linear Algebra Appl.* 23 (1979), 141-156. (Donald Kershaw) **80c:15022** 15A30
- (with Melkman, Avraham A.) Optimal estimation of linear operators in Hilbert spaces from inaccurate data. *SIAM J. Numer. Anal.* 16 (1979), no. 1, 87-105. (Authors' summary) **80c:65119** 65J05
- Michael, E. Uniform ARs and ANRs. *Compositio Math.* 39 (1979), no. 2, 129-139. (Teodor Przymusiński) **80m:54026** 54C55
- Michael, Emily (with Michael, Frederick) Peirce on the nature of logic. *Notre Dame J. Formal Logic* 20 (1979), no. 1, 84-88. (Joseph W. Dauben) **80f:03004** 03-03 (01A55, 03A05)
- A note on Peirce on Boole's algebra of logic. *Notre Dame J. Formal Logic* 20 (1979), no. 3, 636-638. (Joseph W. Dauben) **80g:03003** 03-03 (01A55)
- An examination of the influence of Boole's algebra on Peirce's developments in logic. *Notre Dame J. Formal Logic* 20 (1979), no. 4, 801-806. (H. C. Kennedy) **80c:01038** 01A55 (03-03)
- Michael, Frederick (with Michael, Emily) Peirce on the nature of logic. *Notre Dame J. Formal Logic* 20 (1979), no. 1, 84-88. (Joseph W. Dauben) **80f:03004** 03-03 (01A55, 03A05)
- Michaelides, Eleftherios (with Loulou, Richard) New greedy-like heuristics for the multidimensional 0-1 knapsack problem. *Oper. Res.* 27 (1979), no. 6, 1101-1114. (Authors' summary) **80c:90027** 90C09
- Michaelis, Diethard (with Jänich, Klaus) Die Universalität der Kuaspiden. *Arch. Math. (Basel)* 33 (1979/80), no. 1, 45-48. (Leslie Lander) **80c:58022** 58C27 (58C28)
- Michalczyk, Barbara (with Majewska-Tronowicz, Jadwiga; Kinowska, Małgorzata) Current bibliography of the history of science and technology. No. 29/30 (Jan.-June 1978). (Polish) *Kwart. Hist. Nauk. Tech.* 23 (1978), no. 3-4, suppl., 24 pp. (Editors) **80k:00016a** 00A15 (01A75)
- (with Majewska-Tronowicz, Jadwiga; Kinowska, Małgorzata) Current bibliography of the history of science and technology. No. 31 (July-Sept. 1978). (Polish) *Kwart. Hist. Nauk. Tech.* 24 (1979), no. 1, suppl., 28 pp. (Editors) **80k:00016b** 00A15 (01A75)
- Michalek, J. F. (with Hilger, R. W.) An integral representation of holomorphic functions. *Proc. Amer. Math. Soc.* 74 (1979), no. 1, 44-48. (S. M. Shah) **80f:30032** 30E20
- chojnowska-Michalik, Anna See Chojnowska-Michalik, Anna
- Michalodimitrak, M. The bifurcation of periodic orbits of the planar circular restricted  $N$ -body problem to the three-dimensional general  $N$ -body problem. *Astrophys. and Space Sci.* 58 (1978), no. 1, 125-129. (P. J. Holmes) **80a:70016** 70F10 (34C25, 58F14)
- A contribution to the three-dimensional Copenhagen problem. *Astronom. and Astrophys.* 76 (1979), no. 1, 6-14. (D. Schmidt) **80c:70008** 70F07 (34C25, 58F35)
- On the continuation of periodic orbits from the planar to the three-dimensional general three-body problem. *Celestial Mech.* 19 (1979), no. 3, 263-277. (George Bozis) **80i:70010** 70F07 (34C25)
- Michalska, M. (with Kunert, H.; Suffczyński, Maciej; Cracknell, A. P.; Davies, B. L.) Selection rules for the double space groups  $O_h^2(Fm3c)$  and  $O_h^2(Fd3c)$ . *Comm. Roy. Soc. Edinburgh Phys. Sci. No. 17* (1979), 227-240. (T. Janssen) **80k:82063** 82A60
- Michel, Anthony N. (with Miller, Richard K.; Tang, Wang) Lyapunov stability of interconnected systems: decomposition into strongly connected subsystems. Special issue on the mathematical foundations of system theory. *IEEE Trans. Circuits and Systems* 25 (1978), no. 9, 799-809. (From the summary) **80c:93009** 93A15 (93D05)
- (with Gutmann, R. L.) Stability of interconnected systems described by stochastic nonlinear Volterra integral equations. *SIAM J. Math. Anal.* 10 (1979), no. 2, 217-236. (Nicola Luca) **80i:93067** 93E20
- (with Miller, Richard K.) Stability of linear Volterra integro-differential equations of order  $n$ . *SIAM J. Math. Anal.* 10 (1979), no. 5, 1089-1091. (T. L. Herdman) **80j:45005** 45D05
- (with Gutmann, R. L.) Second-order stochastic input-output stability and instability of interconnected systems. (German and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 11, 599-610. (Authors' summary) **80m:93090** 93E15
- Michel, Bernd About inverse problems in continuum mechanics and solid state physics. *Inverse and improperly posed problems in differential equations* (Proc. Conf., Math. Numer. Methods, Halle, 1979), pp. 171-180. *Math. Research*, 1, Akademie-Verlag, Berlin, 1979.

- (Xanthippi Markenscoff) **80f:73009** 73B99 (35R30)
- Michel, Dominique** Sur le calcul intégral stochastique à deux paramètres. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 13, A601-A604. (Author's summary) **80b:60080** 60H05
- Produit de deux diffusions. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 2, A143-A146. (Author's summary) **80g:60080** 60I60 (58G32)
- Michel, Françoise** (with Bayer, Eva) Finitude du nombre des classes d'isomorphisme des structures isométriques entières. *Comment. Math. Helv.* **54** (1979), no. 3, 378-396. (J. P. Levine) **80m:57015** 57Q45 (10C05)
- Michel, Jean** (with Digne, François) Nombre de points rationnels des variétés de Deligne-Lusztig et caractères de l'algèbre de Hecke. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 12, A811-A814. (T. Ono) **80h:20067** 20G40
- Michel, John R.** (with Gudder, Stanley P.) Embedding quantum logics in Hilbert space. *Lett. Math. Phys.* **3** (1979), no. 5, 379-386. (Authors' summary) **80m:81012** 81B10 (03G12, 06C99, 46N05)
- Michel, Louis** Topological classification of symmetry defects in ordered media. *Group theoretical methods in physics (Sixth Internat. Colloq., Tübingen, 1977)*, pp. 247-258, *Lecture Notes in Phys.*, **79**, Springer, Berlin, 1978. (From the text) **80b:82007** 82A05 (20C35)
- Michel, Ph.** A discrete time maximum principle in a stochastic case. *Optimization and operations research (Proc. Workshop, Univ. Bonn, Bonn, 1977)*, pp. 201-208, *Lecture Notes in Econom. and Math. Systems*, **157**, Springer, Berlin, 1978. (E. A. Nurminski and P. I. Kitaul) **80b:93167** 93E20 (49B60)
- Michel, R.** Higher order asymptotic sufficiency. *Sankhyā Ser. A* **40** (1978), no. 1, 76-84. (Masafumi Akahira) **80f:62022** 62F12
- de Michele, Leonede** See De-Michele, Leonede
- Micheleze, Michael L.** A fast solution technique for a class of linear partial differential equations. *Chem. Engng. J.* **18** (1979), no. 1, 59-65. (Author's summary) **80d:65127** 65N35
- Michelson, M. L.** Cohomology operations and vector fields. *Geometric applications of homotopy theory (Proc. Conf., Evanston, Ill., 1977)*, II, pp. 316-330, *Lecture Notes in Math.*, **658**, Springer, Berlin, 1978. (Donald M. Davis) **80a:55018** 55S20
- Michelucci, Maria Letizia** (with Reas, Pier Giorgio) Analyses of the nonlinear "predator-prey" model and its statistical-mechanical interpretation. (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **35** (1975/76), 225-249 (1978). **80d:92032** 92A15
- Michizuki, Yoshimasa** (with Kobayashi, Tatsuhiro; Oyama, Makoto; Tanaka, Kaoru) On the cycloids in the old Japanese mathematics. *Karachi Math. Assoc. Riaz (Souvenir)* **1978**, 32-41. (S. Hitotumatu) **80f:01004** 01A27 (51-03)
- (with Oyama, Makoto; Hamada, Toshio; Izuka, Masaki; Ōtake, Shigeo; Kobayashi, Tatsuhiro; Tanaka, Kaoru; Tanaka, Mitsuru) Elliptic problems occurring in "sangaku". (Japanese) *Sūgaku Shi Kenkyū No. 78* (1978), 1-85. (S. Hitotumatu) **80c:01001** 01A27 (51-03)
- Michler, Gerhard O.** Sur l'égalité des défauts d'un bloc et la correspondance de Green. *Ring theory (Proc. Conf., Univ. Antwerp, Antwerp, 1977)*, pp. 59-63, *Lecture Notes in Pure and Appl. Math.*, **40**, Dekker, New York, 1978. (W. E. Deakins) **80c:20013** 20C20
- Michlin, S. G.** See Mihlin, S. G.
- Michon, J. C.** (with Dubignon, S.) Petits mouvements des structures autour d'un état contraint. (English summary) *Ann. École Nat. Sup. Méc. Nantes* **1978**, 21-39. (Authors' summary) **80h:73031** 73D35
- Michor, Peter W.** ★ Functors and categories of Banach spaces. Tensor products, operator ideals and functors on categories of Banach spaces. *Lecture Notes in Mathematics*, **651**, Springer-Verlag, Berlin-New York, 1978, iii+99pp. ISBN 3-540-08764-8 (J. Wick Pelletier) **80b:46116** 46M15 (46B20, 46M05, 47D30)
- (with Cigler, Johann; Losert, Viktor) ★ Banach modules and functors on categories of Banach spaces. *Lecture Notes in Pure and Applied Mathematics*, **46**, Marcel Dekker, Inc., New York-Basel, 1979, xv+282 pp. ISBN 0-8247-6867-1 (B. R. Gelbaum) **80j:46112** 46M15
- Mickelson, A. R.** (with Jaggard, D. L.) Electromagnetic wave propagation in almost periodic media. *IEEE Trans. Antennas and Propagation* **27** (1979), no. 1, 34-40. (Authors' summary) **80b:78006** 78A40
- Mickelić, N. V.** See Arlof, L. Ja. **80f:83002**
- Mickle, Martin H.** (with Wang, Jong C.; Hoelzeman, Ronald G.) Simplification of Boolean-valued data by minimum covering. *Inform. Sci.* **12** (1977), no. 2, 163-178. (Authors' summary) **80j:68016** 68B15 (68G10, 94C10)
- (with Lee, Jang G.; Vogt, William G.) Optimal decomposition of large-scale networks. *IEEE Trans. Systems Man Cybernet.* **9** (1979), no. 7, 369-375. (Authors' summary) **80g:94103** 94C15 (90B10, 93A15)
- (with Mahmoud, M. S.; Vogt, William G.) Decomposition and coordination methods for constrained optimization. *J. Optim. Theory Appl.* **28** (1979), no. 4, 549-584. (Authors' summary) **80c:65070** 65K10 (90C30)
- Middleton, D.** (with Spencer, A. J. M.; Parker, D. F.; Berry, D. S.; England, A. H.; Faulkner, T. R.; Green, W. A.; Holden, J. T.; Rogers, T. G.) ★ Engineering mathematics. Vol. 2. *Van Nostrand Reinhold Co. Ltd., New York-Toronto, Ont.-London*, 1977. 400 pp. ISBN 0-442-30206-1 (Vadim Komkov) **80g:00003** 00A06
- Midorikawa, Hisaichi** On the explicit formulae of characters for discrete series representations. *Japan. J. Math. (N.S.)* **3** (1977), no. 2, 313-368. (P. C. Trombi) **80f:22015** 22E46
- Midy, P.** (with Yakovlev, Y.) An extrapolation method for the quadrature of functions with singularities in the vicinity of the interval of integration. *Numer. Math.* **32** (1979), no. 2, 183-196. (Helmut Brass) **80b:65010** 65D30
- Thierry-Mieg, Jean** See Thierry-Mieg, Jean
- Miel, George** The Kantorovich theorem with optimal error bounds. *Amer. Math. Monthly* **86** (1979), no. 3, 212-215. (R. S. Dahiya) **80c:65109** 65H05
- An algorithm for the calculation of  $\pi$ . *Amer. Math. Monthly* **86** (1979), no. 8, 694-697. (Gerhard Merz) **80b:65021** 65D20
- Mielants, Willem** On the nonexistence of a class of symmetric group divisible partial designs. *J. Geom. J.* **12** (1979), no. 2, 89-98. (Rudolf Mathon) **80c:05030** 05B05
- Miele, A.** (with Gonzalez, S.) On the comparative evaluation of algorithms for mathematical programming problems. *Nonlinear programming, 3 (Proc. Sympos., Special Interest Group Math. Programming, Univ. Wisconsin, Madison, Wis., 1977)*, pp. 337-359, Academic Press, New York, 1978. (From the summary) **80a:90158** 90C99
- (with Gonzalez, S.) Sequential gradient-restoration algorithms for optimal control problems with general boundary conditions. *J. Optim. Theory Appl.* **26** (1978), no. 1, 395-425. (C. A. Botsaris) **80b:93074** 93C15 (49D05, 65L05)
- (with Cloutier, J. R.) Sequential conjugate gradient-restoration algorithm for optimal control problems with nondifferential constraints. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 89-93, Academic Press, New York, 1979. (From the text) **80g:93054** 93C99 (49D07)
- (with Wu, A. K.; Liu, C. T.) A transformation technique for optimal control problems with partially linear state inequality constraints. *J. Optim. Theory Appl.* **28** (1979), no. 2, 185-212. (Authors' summary) **80c:93086** 93C99
- Mielke, Bruce W.** On the lattice of completely-simple congruences on a Croisot-Tessier semigroup. *Semigroup Forum* **17** (1979), no. 4, 325-336. (P. G. Trotter) **80e:20076** 20M10
- Mielke, Eckehard W.** Note on localized solutions of a nonlinear Klein-Gordon equation related to Riemannian geometry. *Phys. Rev. D* (3) **18** (1978), no. 12, 4525-4528. (Author's summary) **80a:81020** 81C05 (58F06)
- Mielke, M. V.** Sectional representation of multipotential spaces relative to a family of smoothness categories. *Illinois J. Math.* **23** (1979), no. 1, 58-70. (A. Verona) **80g:57041** 57R40 (58A05, 58A40)
- Mielke, P. W.** Some parametric, nonparametric and permutation inference procedures resulting from weather modification experiments. *Comm. Statist. A—Theory Methods* **1** (1979), no. 11, 1083-1096. (Author's summary) **80k:62114** 62P99
- Mielnik, Bogdan** Generalized quantum mechanics. *Physical theory as logico-operational structure*, pp. 115-152, *Univ. Western Ontario Series in Philos. Sci.*, **7**, Reidel, Dordrecht, 1979. (A. R. Marlow) **80j:81009** 81B10
- Mier Muth, Alberto M.** (with Willsky, Alan S.) A sequential method for spline approximation with variable knots. *Internat. J. Systems Sci.* **9** (1978), no. 9, 1055-1067. (Authors' summary) **80c:65033** 65D10 (65D07, 94A05)
- Miers, C. Robert** Centralizing mappings of operator algebras. *J. Algebra* **59** (1979), no. 1, 56-64. (J. W. Bunce) **80j:46096** 46L05
- Miersemann, Erich** Über höhere Verzweigungspunkte nichtlinearer Variationsungleichungen. *Math. Nachr.* **85** (1978), 195-213. (A. Vanderbauwhede) **80e:58014** 58E07 (47H15, 49A27, 73C50)
- Über positive Lösungen von Eigenwertgleichungen mit Anwendungen auf elliptische Gleichungen zweiter Ordnung und auf ein Beulproblem für die Platte. (English and Russian summaries) *Z. Angew. Math. Mech.* **59** (1979), no. 4, 189-194. (J. R. Kuttler) **80d:35122** 35P30 (35J20, 73K10)
- Miescke, Klaus-J.** Identification and selection procedures based on tests. *Ann. Statist.* **7** (1979), no. 1, 207-219. (K. M. Lal Saxena) **80d:62034** 62F07
- Mifflin, Robert** A stable method for solving certain constrained least squares problems. *Math. Programming* **16** (1979), no. 2, 141-158. (Richard S. Sacher) **80j:90088** 90C20
- See also Nonsmooth optimization, **80d:49002**
- Miglietta, F.** Two-component first-order equations for the quantum-relativistic electron. (Italian and Russian summaries) *Nuovo Cimento A* (11) **48** (1978), no. 2, 189-201. (Author's summary) **80f:81104** 81G10 (81C05)
- Internal  $GL_{2,c} \times GL_{2,c}$  symmetry of Dirac equation with external electromagnetic field. *Lett. Nuovo Cimento* (2) **25** (1979), no. 17, 539-541. (From the text) **80k:81013** 81C05 (81L05)
- (with Ricci, M.) Infinite conservation laws for the electromagnetic and the asymptotic gravitational fields. (Italian and Russian summaries) *Nuovo Cimento A* (11) **49** (1979), no. 1, 93-100. (Authors' summary) **80k:78015** 78A25 (49A99, 53B50)
- Nonlinear two-valued realizations of  $GL_{2,c}$ . (Italian and Russian summaries) *Nuovo Cimento A* (11) **52** (1979), no. 2, 151-165. (Henk Hoogland) **80k:81019** 81C40 (22E70)
- Migliorato, R.** Surfaces de  $E^4$  portant un champ quasi concourant au sens restreint. *Riv. Mat. Univ. Parma* (4) **4** (1978), 233-237 (1979). (Jean-Marie Morvan) **80b:53055** 53C40
- Mignone, Fausto** Optimal control of abstract evolution equations over unbounded time domains. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **15** (1978), no. 3, 844-858. (M. Q. Jacobs) **80k:49007** 49A27 (34G20)
- Mignani, Roberto** Quaternions and Lorentz transformations. *Tachyons, monopoles, and related topics (Proc. First Session, Interdisciplinary Sem., Erice, 1976)*, pp. 67-78, North-Holland, Amsterdam, 1978. (Editors) **80c:83003** 83A05 (51B20)
- Instability of invariance groups of space-time, group contractions and models of universe. *Lett. Nuovo Cimento* (2) **23** (1978), no. 9, 349-352. (Philip L. Quinn) **80k:83072** 83F05 (22E70)
- (with Camiz, P.; Dattoli, G.; Prosperi, D.)  $SU_3$  subalgebras of  $SU_4$  and generalized U-spin in a new approach to the magnetic moments of charmed baryons. (Italian and Russian summaries) *Nuovo Cimento A* (11) **49** (1979), no. 3, 429-446. (Authors' summary) **80b:81106** 81G30 (22E70)
- (with Camiz, P.; Dattoli, G.; Prosperi, D.)  $SU_3$  subalgebras of  $SU_4$  and mass sum rules for hadrons with charm, beauty and taste. (Italian and Russian summaries) *Nuovo Cimento A* (11) **53** (1979), no. 1, 97-131. (F. R. Halpern) **80j:81001** 81G20 (17B10)
- Mignard, F.** Multiple expansion of the tidal potential. *Celestial Mech.* **18** (1978), no. 3, 287-294. (From the summary) **80a:86003** 86A20 (35C99)
- Mignot, F.** (with Puel, J.-P.) Sur une classe de problèmes non linéaires avec non linéarité positive croissante, convexe. *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis (Rome, 1978)*, pp. 45-72, Pitagora, Bologna, 1979. (R. C. MacCamy) **80i:35054** 35J65
- (with Puel, J.-P.) Homogénéisation d'un problème de bifurcation. *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis (Rome, 1978)*, pp. 281-310, Pitagora, Bologna, 1979. (H. J. Weinitzschke) **80f:73050** 73H05 (73K10)
- Mignotte, Maurice** Some effective results about linear recursive sequences. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978)*, pp. 322-329, *Lecture Notes in Comput. Sci.*, **62**, Springer, Berlin, 1978. (A. A. Mullin) **80d:10019** 10A25 (03B25, 68C25)
- Entiers algébriques dont les conjugués sont proches du cercle unité. *Séminaire Delange-Pisot-Poitou, 19e année 1977/78, Théorie des nombres, Fasc. 2, Exp. No. 38*



- 6 pp., *Secrétariat Math.*, Paris, 1978. (Christopher Smyth) **80b:12002** 12A15  
Séries rationnelles en une variable. *Séries formelles en variables non commutatives et applications* (Proc. 5e École de Printemps Informat. Théorique, Vieux-Boucau les Bains, 1977), pp. 209–217, École Nat. Sup. Tech. Avancées, Paris, 1978. (P. M. Cohn) **80g:12014** 12A90 (68Fxx)  
Une extension du théorème de Skolem-Mahler. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 4, A233–A235. (Author's summary) **80b:10013** 10A35  
(with Payafar, M.) Distance entre les racines d'un polynôme. (English summary) *RAIRO Anal. Numér.* **13** (1979), no. 2, 181–192. (F. Götze) **80d:65053** 65H05
- Migović, F. M. (with Zlepko, P. P.) Application of the modification of the Newton-Kantorovich method for the approximate construction of implicit functions. (Russian) *Ukrain. Mat. Ž.* **30** (1978), no. 2, 222–226, 283. (J. Albrycht) **80b:65066** 65H10 (47H17)
- San Miguel, M. See San Miguel, M.
- Satara-Mihal, P. See Tataru-Mihal, P.
- Mihalec, V. A. Selfadjoint extensions of operators with a prescribed spectrum asymptotics. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 5* (1979), 338–341, 398. (Author's summary) **80d:47038** 47B25 (47A70)
- Mihailenco, B. G. A method of solving dynamical problems of seismics for two-dimensionally inhomogeneous models of media. (Russian) *Dokl. Akad. Nauk SSSR* **246** (1979), no. 1, 47–51. (From the text) **80c:86003** 86A15
- Mihailenco, S. V. ★Численные методы. (Russian) [Numerical methods] Учебное пособие по курсу "Прикладная и вычислительная математика". [Textbook for the course "Applied and computational mathematics"] *Har'kov. Aviacion. Inst., Kharkov*, 1978. 128 pp. (Author's summary) **80k:65003** 65–01
- Mihailenco, Viorel On quaternionic projective space. (Romanian. German summary) *Bul. Inst. Politehn. București Ser. Electrotehn.* **40** (1978), no. 1, 3–7. (P. Drăgăli) **80e:53020** 53B21 (53A20)
- Mihăilescu-Suliciu, Mihaela (with Suliciu, Ion) Energy for hypoelastic constitutive equations. *Arch. Rational Mech. Anal.* **71** (1979), no. 4, 327–344. (R. L. Fosdick) **80j:73005** 73B05 (73E99)
- Mihalov, A. I. See Semiotics and information science, **80d:00019** and Semiotics and information science, **80k:68001**
- Mihalov, A. P. (with Galaktionov, V. A.; Elenin, G. G.; Kurdjumov, S. P.) The effect of depletion on the localization of combustion and the formation of structures in a nonlinear medium. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 27* (1979), 38 pp. (Author's summary) **80f:80004** 80A20  
(with Galaktionov, V. A.; Kurdjumov, S. P.; Samarskii, A. A.) The effect of boundary models with aggregation on a medium with constant heat conduction. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 28* (1979), 76 pp. (From the summary) **80i:80004** 80A20
- Mihalov, A. V. (with Zaharov, V. E.) Relativistically invariant two-dimensional models of field theory which are integrable by means of the inverse scattering problem method. *Ž. Éksp. Teoret. Fiz.* **74** (1978), no. 6, 1953–1973 (Russian); translated as *Soviet Phys. JETP* **47** (1978), no. 6, 1017–1027 (1979). (Authors' summary) **80c:81115** 81F99 (53C30)
- Mihalov, F. A. (with Petrov, B. N.; Aleksandrov, A. D.; Andreev, V. P.; Bulekov, V. P.; Viktorov, B. V.; Izvol'skii, E. G.; Kudrjavcev, P. S.; Kuzin, V. P.; Mahan'ko, A. V.; Muravleva, G. A.; Nikolaev, Ju. P.; Pobedonosev, G. V.; Pohvalenskii, V. L.; Sadykov, F. R.; Serpionov, G. V.; Salikova, I. M.; Ul'jačenko, A. E.; Frolov, P. A.; Červjakov, V. P.; Sartjan, K. T.) ★Многомерные и нестационарные системы автоматического управления. (Russian) [Multistate and nonstationary automatic control systems] "Машиностроение", Moscow, 1978. 240 pp. (Publisher's summary) **80c:93073** 93C40
- Mihalov, G. A. The development and application of the method of numerical statistic modeling for solving one-dimensional problems in radiative transport theory. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 3, 682–687, 696. (Author's summary) **80d:82068** 82A70  
Estimation of the difficulty of simulating the process of "random walk on spheres" for some types of regions. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **19** (1979), no. 2, 510–515, 558–559. (Author's summary) **80c:65023** 65C20 (65C10)
- Mihalov, I. I. Some remarks on the Diophantine equation  $x^{4k} + y^{2k} + z^{2k} = 2z^{2k}$  ( $k = 1, 2$ ). (Russian) *Demonstratio Math.* **11** (1978), no. 4, 975–981 (1979). (R. Steiner) **80h:10023** 10B15
- Mihalov, L. G. Some overdetermined systems of second-order partial differential equations. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* **21** (1978), no. 4, 7–9. (JiH Nedoma) **80d:35114** 35N10  
Conditions for compatibility of a generalized Cauchy-Riemann system with many variables. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* **21** (1978), no. 6, 8–11. (R. N. Abdulaev) **80b:32003** 32A10 (30G20, 35J99)  
Varieties of solutions of a generalized Cauchy-Riemann system with several variables. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* **21** (1978), no. 7, 14–17. (R. N. Abdulaev) **80b:32004** 32A10 (30G20, 35J99)  
(with Bil'man, B. M.) Some systems of first-order partial differential equations. (Russian) *Dokl. Akad. Nauk Tadžik. SSR* **22** (1979), no. 2, 88–92. (Rémi Vaillancourt) **80m:35020** 35F05
- Mihalov, V. G. (with Zubkov, A. M.) The repetitions of  $s$ -tuples in a sequence of independent trials. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 2, 267–279. (D. A. Darling) **80c:60034** 60F05 (60C05, 60E05)
- Mihalov, V. P. ★Ecuaciones diferenciales en derivadas parciales. (Spanish) [Partial differential equations] Translated from the Russian by K. P. Medkov. Editorial Mir, Moscow, 1978. 421 pp. (Editors) **80c:35002** 35–02 (35–01)  
(with Guščin, A. K.) The behavior near the boundary of the solution of the third boundary value problem for a second order elliptic equation. (Russian) *Complex analysis and its applications* (Russian), pp. 193–202, 666, "Nauka", Moscow, 1978. (Authors' summary) **80b:35049** 35J25  
(with Guščin, A. K.) Boundary values in  $L_p$ ,  $p > 1$ , of solutions of elliptic equations. (Russian) *Mat. Sb. (N.S.)* **108** (1950) (1979), no. 1, 3–21, 143. (K. Seitz) **80c:35062** 35J67
- Mihalov, V. V. Flow of gas from a finite container through a Laval nozzle. (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* **1978**, no. 2, 71–76. (Author's summary) **80a:76043** 76N10 (65D30)
- Mihalović, D. (with Tolić, D. Đ.) ★Elementi matematičke analize. II. (Serbo-Croatian) [Elements of mathematical analysis. II] Functions of several variables. Vector analysis. Multiple integrals. Theory of fields. Second edition. *Naučna Knjiga, Belgrade*, 1979. xi + 351 pp. (Editors) **80g:26002** 26–01
- Mihalovskii, A. B. (with Lominadze, J. G.; Beasley, C. O.) Beam shear-Alfvén instability in two-component tokamak. *Czechoslovak J. Phys. B* **29** (1979), no. 6, 646–657. (B. Buti) **80f:76046** 76W05
- Mihalovskii, V. I. (with Šerkuziev, M.) The analytic rigidity of developable surfaces fastened along a line on a surface relative to two points. (Russian) *Ukrain. Geom. Sb.* **20** (1978), 92–99, 3. (Hillel Gauchman) **80e:53059** 53C45
- Mihalev, A. V. (with Golubčik, I. Z.) A note on varieties of semiprime rings with semigroups identities. *J. Algebra* **54** (1978), no. 1, 42–45. (Hal G. Moore) **80a:16031** 16A38
- Mihalevič, G. A. (with Burim, V. M.) The convergence of the approximate method for solving differential and integral equations with the applications of Walsh series. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* **35** (1978), 93–99, 166. (Authors' summary) **80a:65187** 65L99 (65R20)
- Mihalevič, V. M. (with Pleničnyĭ, B. N.) An optimal control problem on an abstract manifold. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1978**, no. 1, 70–73, 96. (Authors' summary) **80c:58032** 58E25 (49B99)  
An optimal control problem on a manifold. (Russian) *Kibernet. i Vyčisl. Tehn.* **1978**, no. 39, 94–98, 115. (S. Kutateladze) **80a:49027** 49B10
- Mihailinec, M. Endomorphisms of sheaves of constructive functions. (Russian. English summary) *Glas. Mat. Ser. III* **13** (33) (1978), no. 2, 215–222. (Authors' summary) **80j:03092** 03G30 (03F65, 18F10)
- Mihal'skii, A. I. Reconstruction of statistical dependencies by averaged splines. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **19** (1979), no. 5, 1107–1117, 1355. (V. Orman and J. Girshovich) **80k:65111** 65U05 (62J02)
- Mihályffy, László (with Pölöskei, Pál; Réti, János) On the determination of weights in preference functions. (Hungarian. English and Russian summaries) *Stigma—Mat.-Közgazdasági Folyóirat* **11** (1978), no. 3–4, 211–218. (Authors' summary) **80e:90010** 90A06  
On the problem of the second best assignment. (Russian summary) *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* **8** (1979), no. 3, 257–265. (Author's summary) **80e:68158** 68D50 (90C08)
- Mihcev, N. V. (with Lipmanov, È. M.) On the universal mixing of leptons in a gauge theory of weak interactions. *Jadernaja Fiz.* **29** (1979), no. 4, 1091–1096 (Russian); translated as *Soviet J. Nuclear Phys.* **29** (1979), no. 4, 563–566. (Jean Nuyta) **80m:81099** 81G15
- Mihcev, V. L. A hierarchy of independent  $\omega$ -processions of cosimple isolos. (Russian) *Algebra i Logika* **17** (1978), no. 1, 56–78, 122. (Cristian Calude) **80c:03053** 03D50  
Some remarks on isolos. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* **1979**, no. 3, 76–79. (A. N. Degtev) **80j:03061** 03D50
- Mihlin, S. (with Vainikko, G.) The Fredholm resolvent and an inversion of matrices dependent on a parameter. (Russian. Estonian and English summaries) *Tartu Riikl. Ül. Toimetised No. 448* (1978), 94–98. (Authors' summary) **80c:65072** 65F05 (65R20)
- Mihlin, S. G. ★Линейные уравнения в частных производных. (Russian) [Linear partial differential equations] *Izdat. "Vysl. Škola", Moscow*, 1977. 431 pp. (J. S. Joel) **80a:35001** 35–01  
★Partielle Differentialgleichungen in der mathematischen Physik. Translated from the Russian by Bernd Silbermann. Mathematische Lehrbücher und Monographien, I. Abteilung: Mathematische Lehrbücher [Mathematical Textbooks and Monographs, Part 1: Mathematical Textbooks], 30.  *Akademie-Verlag, Berlin*, 1978. xiv + 519 pp. (E. Kreyzig) **80b:35001** 35–01 (00A69)
- The method of least squares for multidimensional singular integral equations. (Russian) *Complex analysis and its applications* (Russian), pp. 401–408, 669, "Nauka", Moscow, 1978. (Gheorghe Micula) **80a:65271** 65R20  
★Approximation on a rectangular grid. With application to finite element methods and other problems. Translated from the Russian and edited by R. S. Anderssen and T. O. Shaposhnikova [T. O. Šapovalnikova], Monographs and Textbooks on Mechanics of Solids and Fluids (Mechanics: Analysis), 4. *Sijthoff & Noordhoff, Alphen aan den Rijn-Germantown, Md.*, 1979. xi + 224 pp. ISBN 90-286-0008-6 (Dietrich Braess) **80j:65002** 65–02 (65N30)  
See also Kantorovič, L. V.; et al., **80a:01033**
- Mihoc, Ion On measures of information. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians* (Tech. Univ. Prague, Prague, 1974), Vol. B, pp. 359–368, Academia, Prague, 1978. (Author's summary) **80b:94014** 94A17
- Mihova-Nehmer, V. On differentiable manifolds with almost contact metric structure and vanishing C-Bochner tensor. *C. R. Acad. Bulgare Sci.* **31** (1978), no. 10, 1253–1256. (Yoshiaki Maeda) **80b:53038** 53C15
- Milda, P. Some collocation-iteration algorithms for the finding of self-oscillations. (Russian. Estonian and English summaries) *Tartu Riikl. Ül. Toimetised No. 448* (1978), 139–148. (Walter Gautschi) **80f:65009** 65L10
- Mijalov, V. P. See Mihalov, V. P.
- Mika, Janusz Singular perturbation method for evolution equations in Banach spaces. *Mathematical physics and physical mathematics* (Proc. Internat. Sympos., Warsaw, 1974), pp. 263–273, Math. Phys. and Appl. Math., 2, Reidel, Dordrecht, 1976. (Author's summary) **80j:34073** 34G10 (47D05)  
Hilbert asymptotic expansion method for the linear Boltzmann equation. *Fundamental problems in statistical mechanics, IV* (Proc. Fourth Internat. Summer School, Jadwiniv, 1977), pp. 493–505, Ossolineum, Wrocław, 1978. (Mizan Rahman) **80c:82017** 82A15 (45K05)  
(with Stankiewicz, Roman) Asymptotic equivalence of the  $P_1$  and diffusion equations. *Transport Theory Statist. Phys.* **7** (1978), no. 3, 81–101. (A. Bellini-Morante) **80c:82051** 82A75 (35B40)  
Asymptotic methods for singularly perturbed linear differential equations in Banach spaces. *Equadiff IV* (Proc. Czechoslovak Conf. Differential Equations and their



- Applications, Prague, 1977), pp. 263-270, *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (D. Bobrowski) **80k:34105** 34G20 (34E15)
- Mikadze, I. S. A method of determining the interval coefficient of readiness. (Russian. Georgian and English summaries) *Soviet Akad. Nauk Gruz. SSR* 92 (1978), no. 2, 417-420. (A. Prékopa) **80g:93027** 93B30 (90B25)
- Mikaelson, L. V. Asymptotic behavior of Fredholm determinants for truncated integral operators with matrix kernels depending on the difference of arguments. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 68 (1979), no. 3, 137-145. (V. B. Dybin) **80m:39006** 45E10 (47B35)
- Mikami, Shunroku A simple expression of the characters of certain discrete series representations. *J. Math. Kyoto Univ.* 19 (1979), no. 3, 435-470. (Wulf Rossmann) **80m:22015** 22E46
- Mikelsons, J. See Problems of electrodynamics and continuum mechanics, **80g:73005**
- Mikensberg, Irene From total to partial algebras. *Mathematical logic (Proc. First Brazilian Conf., State Univ. Campinas, 1977)*, pp. 203-223, *Lecture Notes in Pure and Appl. Math.*, 39, Dekker, New York, 1978. (G. Grätzer) **80f:08003** 08A55 (03C40, 03C60)
- Mikeli, I. (with Domalev, V. V.) On the theory of holomorphically projective mappings of Kählerian spaces. (Russian) *Mat. Zametki* 23 (1978), no. 2, 297-303. (Jarolim Bureš) **80c:53020** 53B35
- Mikhail, N. N. (with Ali, Mir M.; Haq, M. Safiul) A class of bivariate distributions including the bivariate logistic. *J. Multivariate Anal.* 8 (1978), no. 3, 405-412. (Yasuko Chikuse) **80a:62020** 62E10 (62H05, 62H20)
- Mikhailov, A. V. See Mikhailov, A. V.
- Mikhailovskii, A. B. See Mikhailovskii, A. B.
- Mikhalev, Alexander See Mikhalev, A. V.
- Mikheev, N. V. See Mikheev, N. V.
- Mikhlin, S. G. See Mikhlin, S. G.
- Miki, Hiroo A relation between Bernoulli numbers. *J. Number Theory* 10 (1978), no. 3, 297-302. (Wells Johnson) **80a:10024** 10A40
- Miki, Tetsuo Utilisation of conic sections for the representation of sections of surfaces. (Japanese. English summary) *Mem. Osaka Inst. Tech. Ser. A* 23 (1978/79), no. 1, 1-30. (S. Hitotumatu) **80k:65005** 65D10 (51N05)
- Mikic, B. B. On some aspects of bubble growth rates: effect of bubble shape. *Zb. Rad. Mat. Inst. Beograd. (N.S.)* 3(11) (1979), 81-94. (Ph. Mathieu) **80m:80007** 80A20
- Mikiewicz, Jan Statistical selection method of the best objects. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 369-377, *Academia, Prague*, 1978. (Author's summary) **80c:62121** 62P99
- Mikha, M. L. (with Kulik, A. N.) A quasistatic problem of thermoelasticity for a semi-infinite plate that is heated along its lateral surface by a linear moving heat source. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 9 (1979), 110-116, 133. (Authors' summary) **80d:73121** 73U05
- Mikhlison, R. P. (with Feagin, T.) A computational method for minimization with nonlinear constraints. *J. Optim. Theory Appl.* 25 (1978), no. 3, 335-347. (Marco Gaviano) **80a:65130** 65K05
- Mikhajlov, V. M. A new approach to the Bernstein theorem and to related questions of equations of minimal surface type. (Russian) *Mat. Sb. (N.S.)* 100(150) (1979), no. 2, 268-289, 304. (Ju. G. Borisov) **80c:53005** 53A10 (35J60, 49F10, 58E12)
- An estimate of the modulus of a family of curves on a minimal surface and its applications. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 3(207), 207-208. (V. T. Fomenko) **80k:53010** 53A10 (30C35)
- Miklos, Stanislaw (with Bryll, Grzegorz) The theory of concrete and abstract words. (Polish. English summary) *Zeszyty Nauk. Wyz. Szkoły Ped. w Opolu* 20 (1978), Algebra, Zastos. Mat., 63-76. (Authors' summary) **80f:03069** 03F99
- Mikolajko, Franciszek The recurrent calculation of the inverse of a special class of matrices. *Mathematical models and numerical methods (Papers, Fifth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 249-253, *Banach Center Publ.*, 3, PWN, Warsaw, 1978. (H. R. Schwarz) **80c:65038** 65F05
- Mikolajczyk, Julius ★The theory of elastic waves and waveguides. North-Holland Series in Applied Mathematics and Mechanics, 22. North-Holland Publishing Co., Amsterdam-New York, 1978. xvi+618 pp. ISBN 0-7204-0551-3 (V. M. Babic) **80d:73001** 73-01 (35Q99)
- (with Sve, C.) Lamb's problem for an impulsive line load on a laminated composite. *Modern problems in elastic wave propagation (Proc. IUTAM Sympos., Northwestern Univ., Evanston, Ill., 1977)*, pp. 305-326, Wiley, New York, 1978. (J. Ignaczak) **80k:73023** 73D05
- (with Garrott, W. Riley) Transient response of two-dimensional cantilevered plates subjected to base motions. *Modern problems in elastic wave propagation (Proc. IUTAM Sympos., Northwestern Univ., Evanston, Ill., 1977)*, pp. 373-400, Wiley, New York, 1978. (I. M. Longman) **80k:73050** 73K10
- See also Modern problems in elastic wave propagation, **80d:73006**
- Mikolajczak, Boleslaw On the isomorphisms of generalized finite automata extensions and generalized periodic sums. *Vorträge aus dem Problemseminar: Algebraische Methoden der Automaten-theorie (Athenberg, 1978)*, pp. 73-88, *Weiterbildungszentrum Math. Kybernet. Rechentechn. Informationsverarbeitung*, 35, Tech. Univ. Dresden, Dresden, 1978. (Author's summary) **80c:68151** 68D30
- On the isomorphisms of generalized periodic sums. *Found. Control Engrg.* 3 (1978), no. 2, 71-80. (István Babcsányi) **80d:68071** 68D30
- Mikolajczyk, Leon (with Walczak, Stanislaw) Theorems on the number of switchings for linear analytical systems. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 26 (1978), no. 6, 617-624. (J. Warg) **80a:49028** 49B10 (34H05)
- Mikolaj, M. On an extension of Fourier's integral theorem. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 537-542, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (A. Peyerimhoff) **80j:44005** 44A15
- (with Sebestyén, L.) A new approximate method for solving some ordinary nonlinear differential equations of higher order. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T388-T389. **80c:65179** 65I99
- Mikon, N. (with Tucci, S.) Analyse et optimisation d'une procédure de reprise dans un système de gestion de données centralisées. (English summary) *Acta Inform.* 12 (1979), no. 4, 321-338. (Authors' summary) **80j:68007** 68A05
- Mikulecky, D. C. Global flow equations for membrane transport from local equations of motion. I. The general case for  $(n-1)$  nonelectrolyte solutes plus water. *Bull. Math. Biol.* 40 (1978), no. 6, 791-805. (From the summary) **80c:92013** 92A09
- Mikulski, Leszek (with Szefer, Gwidon) Optimal design of rotating discs using Pontryagin's maximum principle. (Polish. Russian and English summaries) *Mech. Teoret. Sta.* 11 (1979), no. 1, 35-47. (From the summary) **80d:73105** 73K99 (49B99)
- Mikni, Jan (with Galanc, Tadeusz) A mathematical model of the innovation process. (Polish. Russian and English summaries) *Przeglad Statyst.* 25 (1978), no. 1, 57-64. (Authors' summary) **80a:62157** 62M20
- Mikusiński, J. (with Kamiński, A.; Kannappan, P.) Distributional solutions in information theory. I. *Ann. Polon. Math.* 36 (1979), no. 1, 101-110. (Prem Nath) **80c:94008** 94A17 (39B40)
- Milani, A. Nonanalytic minimal varieties. (Italian summary) *Boll. Un. Mat. Ital. B (5)* 15 (1978), no. 3, 801-813. (Themistocles M. Rassias) **80d:53035** 53C40 (58E12)
- Milani, Albert On a variational inequality with time dependent convex constraints for the Maxwell equations. (Italian summary) *Rend. Sem. Mat. Univ. Politec. Torino* 36 (1977/78), 389-401 (1979). (M. Birosi) **80c:49012** 49A29 (35Q20, 47H15)
- Milanov, P. B. An effective algorithm for the solution of the resource allocation problem with a convex target function. (Russian. English summary) *Vest. Akad. Nauk. Azerb. Ser. Fiz.-Mat. Nauk* 1979, no. 2, 127-128, 143. (P. Vondráček) **80c:90082** 90C25
- Milas, James (with Cooper, Joan; Wallis, W. D.) Hadamard equivalence. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 126-135, *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (A. L. Whiteman) **80c:05043** 05B20
- Milbourne, A. J. (with Johnson, H. H.) Null controllability for nonlinear systems of the form  $\dot{y} = A(t)y(t) + B(t)u(t) + f(t, y, u)$ . With discussion. *Recent theoretical developments in control (Proc. Conf., Univ. Leicester, Leicester, 1976)*, pp. 337-358, Academic Press, London, 1978. (G. Zafrañil) **80c:93034** 93B05
- Miles, G. (with Thomas, R. K.) The breakdown of automorphisms of compact topological groups. *Studies in probability and ergodic theory*, pp. 207-218, *Advances in Math., Suppl. Studies*, 2, Academic Press, New York, 1978. (S. G. Dani) **80c:22007** 22C05 (22D40)
- (with Thomas, R. K.) On the polynomial uniformity of translations of the  $n$ -torus. *Studies in probability and ergodic theory*, pp. 219-229, *Advances in Math., Suppl. Studies*, 2, Academic Press, New York, 1978. (Douglas Lind) **80c:28017** 28D15 (10K99)
- (with Thomas, R. K.) Generalized torus automorphisms are Bernoullian. *Studies in probability and ergodic theory*, pp. 231-249, *Advances in Math., Suppl. Studies*, 2, Academic Press, New York, 1978. (S. G. Dani) **80c:22011** 22D40 (28D05)
- Miles, John W. On the evolution of a solitary wave for very weak nonlinearity. *J. Fluid Mech.* 87 (1978), no. 4, 773-783. (Mark J. Ablowitz) **80c:76008** 76B25 (35Q20, 81F20)
- On the second Painlevé transcendent. *Proc. Roy. Soc. London Ser. A* 361 (1978), no. 1706, 277-291. (Mark J. Ablowitz) **80b:34024** 34B25 (35Q20, 58A15, 58F07)
- On the Korteweg-de Vries equation for a gradually varying channel. *J. Fluid Mech.* 91 (1979), no. 1, 181-190. (From the summary) **80g:76012** 76B25 (35Q20)
- (with Chang, Peter; Melville, W. K.) On the evolution of a solitary wave in a gradually varying channel. *J. Fluid Mech.* 95 (1979), no. 3, 401-414. (Authors' summary) **80j:76011** 76B25
- The asymptotic solution of the Korteweg-de Vries equation in the absence of solitons. *Stud. Appl. Math.* 60 (1979), no. 1, 59-72. (Author's summary) **80d:35130** 35Q20 (35C20, 76B99)
- On internal solitary waves. (Russian summary) *Teluz* 31 (1979), no. 5, 456-462. (Author's summary) **80j:76012** 76B25
- Miles, Joseph A theorem for entire functions of infinite order. *Complex analysis Jönköping 1978 (Proc. Colloq., Univ. Joensuu, Joensuu, 1978)*, pp. 281-284, *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (S. Hellerstein) **80m:30025** 30D20
- On entire functions of infinite order with radially distributed zeros. *Pacific J. Math.* 81 (1979), no. 1, 131-157. (W. H. J. Fuchs) **80c:30046** 30D35
- Miles, Roger E. (with Serra, Jean) En Matière d'introduction. *Geometrical probability and biological structure: Buffon's 200th anniversary (Proc. Buffon Bicentenary Sympos., Paris, 1977)*, pp. 3-28, *Lecture Notes in Biomath.*, 23, Springer, Berlin, 1978. (L. A. Santaló) **80c:60020** 60D05 (01A55, 60-03)
- The importance of proper model specification in stereology. *Geometrical probability and biological structure: Buffon's 200th anniversary (Proc. Buffon Bicentenary Sympos., Paris, 1977)*, pp. 115-136, *Lecture Notes in Biomath.*, 23, Springer, Berlin, 1978. (Shigeru Mase) **80f:60015** 60D05 (62M99)
- Some new integral geometric formulae, with stochastic applications. *J. Appl. Probab.* 16 (1979), no. 3, 592-606. (L. A. Santaló) **80h:60022** 60D05
- See also Geometrical probability and biological structures: Buffon's 200th anniversary, **80a:92003**
- Milgram, David L. (with Haralick, Robert M.; Davis, Larry S.; Rosenfeld, Azriel) Reduction operations for constraint satisfaction. *Inform. Sci.* 14 (1978), no. 3, 199-218. (Authors' summary) **80c:68108** 68C25
- Milgram, R. James (with Strutt, J.; Zvengrowski, P.) Projective stable stems of spheres. *Bol. Soc. Mat. Mexicana (2)* 22 (1977), no. 2, 48-57. (Donald W. Kahn) **80c:58025** 55Q45 (55Q70)
- A survey of the classifying spaces associated to spherical fiberings and surgery. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976)*, Part 1, pp. 79-89, *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (J. P. E. Hodgson) **80c:57037** 57R65
- (with Hambleton, Ian) An obstruction to Poincaré transversality. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976)*, Part 1, pp. 161-166, *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (J. P. E. Hodgson) **80c:57034** 57P10
- (with Cohen, F. R.; Mahowald, Mark) The stable decomposition for the double loop space of a sphere. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976)*, Part 2, pp. 225-228, *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (P. W. H. Lemmens) **80j:58009** 55P35 (55P42)

- (with Carlsson, G.) Torsion Witt rings for orders and finite groups. *Geometric applications of homology theory* (Proc. Conf., Evanston, Ill., 1977), I, pp. 85-105, *Lecture Notes in Math.*, 657, Springer, Berlin, 1978. (A. A. Ranicki) **80i:18012** 18F25 (10C03, 57R65)
- (with Hambleton, Ian) Poincaré transversality for double covers. *Canad. J. Math.* 30 (1978), no. 6, 1319-1330. (Norman Levitt) **80j:57017** 57P10 (57R90)
- (with Carlsson, G.) The structure of odd L-groups. *Algebraic topology, Waterloo, 1978* (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1978), pp. 1-72, *Lecture Notes in Math.*, 741, Springer, Berlin, 1979. (A. A. Ranicki) **80m:57025** 57R67 (10C05, 18F25) (with Hambleton, Ian) The surgery group  $L_3(\mathbb{Z}(G))$  for  $G$  a finite 2-group. *Algebraic topology, Waterloo, 1978* (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1978), pp. 73-89, *Lecture Notes in Math.*, 741, Springer, Berlin, 1979. (A. A. Ranicki) **80m:57026** 57R67 (18F25)
- See also Algebraic and geometric topology. **80d:57001a** and Algebraic and geometric topology. **80d:57001b**
- MILL, A. (with Caspi, P.; Robach, Ch.) An information measure on nets—application to the testability of digital systems. *Information and systems* (Proc. IFAC Workshop, Compiègne, 1977), pp. 35-39, Pergamon, Oxford, 1978. (Authors' summary) **80g:94026** 94A17 (94C15)
- MILK, M. (with Novak, Ladislav A.) The anti-Lagrangian equations: a missing network description. *J. Franklin Inst.* 307 (1979), no. 3, 183-191. (Authors' summary) **80i:94036** 94C05
- MILK, Sretosar A proof and an extension of a theorem of G. Birkhoff. *Publ. Inst. Math. (Beograd) (N.S.)* 23(37) (1978), 137-139. (W. Nemitz) **80g:60004** 06A12 (with Bogdanović, Stojan; Pavlović, Velimir) Anti-inverse semigroups. *Publ. Inst. Math. (Beograd) (N.S.)* 24(38) (1978), 19-28. (Mohan S. Putcha) **80c:20006** 20M10 (with Bogdanović, Stojan) On a class of anti-inverse semigroups. *Publ. Inst. Math. (Beograd) (N.S.)* 25(39) (1979), 95-100. (M. Friedberg) **80i:20032b** 20M10
- MILICER-GRUBIŠKA, Halina ★ Sur les solutions spéciales et modifiées des opérateurs différentiels  $P$ -paraboliques. *Publications du Centre de Recherches en Mathématiques Pures, Série 3, 2. Université de Neuchâtel, Centre de Recherches en Mathématiques Pures, Neuchâtel*, 1978. 39 pp. (M. H. Protter) **80i:35101** 35K40
- MILNE, M. A multiplication of  $m$ -relations. *Publ. Inst. Math. (Beograd) (N.S.)* 24(38) (1978), 103-107. (Editors) **80b:04002** 04A05 (06A15)
- MILNE, Pavle M. Sur le complément orthogonal du sous-espace fermé d'un espace vectoriel normé. *Math. Balkanica* 6 (1976), 119-124 (1978). (M. M. Day) **80g:46021** 46B20
- Sur la comparaison des normes d'opérateurs. *Math. Balkanica* 6 (1976), 125-128 (1978). (Bryan E. Cain) **80h:47009** 47A30 (15A60, 46B10)
- MILLES, César Polcino See Polcino Milles, Francisco César
- MILJUTIN, A. A. (with Dubovickii, A. Ja.) Necessary conditions for the extremum in some linear problems with mixed constraints. (Russian) *Probability processes and control* (Russian), pp. 42-74, "Nauka", Moscow, 1978. (Rémi Vaillancourt) **80m:49018** 49B22
- (with Levitin, E. S.; Osmolovskii, N. P.) Higher order conditions for local minima in problems with constraints. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 6(204), 85-148, 272. (Vadim Komkov) **80i:49001** 49A05 (93C15)
- MILJUTIN, O. F. (with Lavrik, V. I.) Analytic and numerical-analytic solution of two-dimensional boundary value problems of convective diffusion of soluble matter in the filtration of underground waters. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 24* (1978), 55 pp. (E. Ungureanu-David) **80e:76050** 76S05 (65P05)
- MILKA, A. D. Estimates of the sizes of curves with bounded curvature. (Russian) *Ukrain. Geom. Sb. No. 21* (1978), 88-91, 3. (Hillel Gauchman) **80i:52011** 52A40 (53C40)
- van MILL, Jan (with Wattel, E.) An external characterization of spaces which admit binary normal subbases. *Amer. J. Math.* 100 (1978), no. 5, 987-994. (Douglass L. Grant) **80a:54029** 54D15 (54C25)
- A pseudo-interior of  $X$ . *Compositio Math.* 36 (1978), no. 1, 75-82. (John J. Walsh) **80i:57005** 57N20
- (with van de Vel, M.) Convexity preserving mappings in subbase convexity theory. *Nederl. Akad. Wetensch. Proc. Ser. A* 40 (1978), no. 1, 76-90. (John Cantwell) **80i:52014** 52A99 (54C10)
- (with van Douwen, Eric K.) Parovichenko's characterization of  $\beta\omega - \omega$  implies CH. *Proc. Amer. Math. Soc.* 72 (1978), no. 3, 539-541. (From the text) **80i:04007** 04A30 (54D40, 54F65, 54G05)
- (with Mills, Charles F.) On the character of supercompact spaces. *Proceedings of the 1978 Topology Conference* (Univ. Oklahoma, Norman, Okla., 1978), I. *Topology Proc.* 3 (1978), no. 1, 227-236 (1979). (Eric K. van Douwen) **80k:54037** 54D30 (54A25)
- Extenders from  $\beta X - X$  to  $\beta X$ . (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 1, 117-121. (S. Brovman) **80g:54015** 54C15 (54D40)
- Not every  $K_1$ -embedded subspace is  $K_0$ -embedded. *Canad. J. Math.* 31 (1979), no. 4, 818-823. (Robert A. Herrmann) **80j:54012** 54C99 (54B20)
- (with Schrijver, Alexander) Subbase characterizations of compact topological spaces. *General Topology Appl.* 10 (1979), no. 2, 183-201. (Teodor Przymusiński) **80d:54023** 54D30 (54E45, 54F05)
- (with Mills, Charles F.) A nonsupercompact continuous image of a supercompact space. *Houston J. Math.* 5 (1979), no. 2, 241-247. (V. I. Belugin) **80m:54033** 54D30 (with Mills, Charles F.) Closed  $G_\delta$  subsets of supercompact Hausdorff spaces. *Nederl. Akad. Wetensch. Indag. Math.* 41 (1979), no. 2, 155-162. (W. Kulp) **80c:54036** 54D30
- (with Schrijver, Alexander) Superextensions which are Hilbert cubes. *Period. Math. Hungar.* 10 (1979), no. 1, 15-24. (J. J. Charatonik) **80d:54010** 54C20 (57N20)
- (with Kunen, Kenneth; Mills, Charles F.) On nowhere dense closed  $P$ -sets. *Proc. Amer. Math. Soc.* 78 (1980), no. 1, 119-123. (R. Grant Woods) **80h:54029** 54D25 (54A25)
- MILÁ MIRANDA, Manuel Homogénéisation d'un problème hyperbolique périodique avec conditions aux limites mixtes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 22, A1025-A1027. (Author's summary) **80k:35009** 35L20 (35B10)
- MILLAR, P. W. Asymptotic minimax theorems for the sample distribution function. *Z. Wahrsch. Verw. Gebiete* 48 (1979), no. 3, 233-252. (M. D. Burke) **80j:62010** 62C20 (62G05)
- MILLAR, Terrence S. Foundations of recursive model theory. *Ann. Math. Logic* 13 (1978), no. 1, 45-72. (M. Makkai) **80a:03051** 03C99 (03B25, 03D80)
- MILBURN, John R. (with King, Henry C.) ★ Geared to the stars. The evolution of planetariums, orreries, and astronomical clocks. *University of Toronto Press, Toronto, Ont.*, 1978. xvii + 442 pp. ISBN 0-8020-2312-6 (N. Swerdlow) **80g:01001** 01A05
- MILLEFIORE, Maria Gabriella Ottaviani A linear model in two variables for sampling without replacement. (Italian. English and French summaries) *Statistica (Bologna)* 38 (1978), no. 4, 537-547. (Jean Larisse) **80g:62003** 62D05
- MILLEN, Jonathan K. Constraints. II. Constraints and multilevel security. *Foundations of secure computation* (Workshop, Georgia Inst. Tech., Atlanta, Ga., 1977), pp. 205-222, Academic Press, New York, 1978. (T. Rus) **80f:68055b** 68A05 (94C99)
- MILLER, Ann Cancellative properties of  $k$ -modular and  $k$ -distributive lattices. *Trans. Illinois State Acad. Sci.* 70 (1977), no. 2, 173-178. (Author's summary) **80g:06009** 06C05 (06D05)
- MILLER, Arnold W. On the length of Borel hierarchies. *Ann. Math. Logic* 16 (1979), no. 3, 233-267. (D. W. Bressler) **80m:04003** 04A15 (03E35)
- There are no  $Q$ -points in Laver's model for the Borel conjecture. *Proc. Amer. Math. Soc.* 78 (1980), no. 1, 103-106. (A. Kanamori) **80i:03071** 03E35 (03E05)
- MILLER, B. M. Nonlinear sampled-data control of processes described by ordinary differential equations. II. *Automat. i Telemekh.* 1978, no. 3, 34-42. (Russian. English summary); translated as *Automat. Remote Control* 39 (1978), no. 3, part 1, 338-344. (Author's summary) **80b:93090** 93C55
- (with Serebrovskii, A. P.) Optimal control of linear system with singular quadratic performance criterion. *Automat. i Telemekh.* 1979, no. 3, 23-34. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 3, part 1, 338-348. (Authors' summary) **80g:93038** 93C10
- MILLER, Bruce L. (with Modarres-Yazdi, Mohammad) The distribution of recoverable inventory items from a repair center when the number of consumption centers is large. *Naval Res. Logist. Quart.* 25 (1978), no. 4, 597-604 (1979). (Kailash C. Kapur) **80b:90051** 90B05 (90B25)
- MILLER, D. J. (with Cockayne, E. J.; Hedetniemi, Stephen) Properties of hereditary hypergraphs and middle graphs. *Canad. Math. Bull.* 21 (1978), no. 4, 461-468. (Takashi Hamada) **80m:05007** 05C65
- MILLER, D. Michael A canonical representation for many-valued symmetric functions. *Proceedings of the Sixth Manitoba Conference on Numerical Mathematics* (Univ. Manitoba, Winnipeg, Man., 1976), pp. 303-313, Congress. Numer., XVIII, Utilitas Math., Winnipeg, Man., 1977. (Author's summary) **80g:94006** 94C10 (03G05)
- MILLER, Dale D. Semihiereditary prime algebras. *Comm. Algebra* 7 (1979), no. 9, 885-940. (J. K. Luedeman) **80i:16007** 16A14
- MILLER, David On probability measures for deductive systems. II. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 7 (1978), no. 1, 12-19. (J. F. A. K. van Benthem) **80b:03030a** 03B60
- On probability measures for deductive systems. III. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 7 (1978), no. 2, 51-57. (J. F. A. K. van Benthem) **80b:03030b** 03B60
- On distance from the truth as a true distance. *Essays on mathematical and philosophical logic* (Proc. Fourth Scandinavian Logic Symposium and First Soviet-Finnish Logic Conf., Jyväskylä, 1976), pp. 415-435, Synthese Library, 122, Reidel, Dordrecht, 1979. (N. B. Cocchiarella) **80j:03013** 03A05 (03B30)
- What's in a numeral? *Philos. Stud.* 35 (1979), no. 4, 323-344. (Paul Ernest) **80m:03018** 03A05
- MILLER, Douglas E. An application of invariant sets to global definability. *J. Symbolic Logic* 44 (1979), no. 1, 9-14. (M. Makkai) **80m:03072** 03C75 (03E15)
- On classes closed under unions of chains. *J. Symbolic Logic* 44 (1979), no. 1, 29-31. (W. Taylor) **80c:03032** 03C52
- MILLER, Douglas R. (with Sentilles, F. Dennis) Weak convergence of probability measures relative to incompatible topology and  $\sigma$ -field with applications to renewal theory. *Z. Wahrsch. Verw. Gebiete* 45 (1978), no. 3, 239-256. (David Pollard) **80b:60008** 60B10 (60K05)
- MILLER, E. K. (with Poggio, A. J.) Moment-method techniques in electromagnetics from an applications viewpoint. *Electromagnetic scattering*, pp. 315-357, Academic Press, New York, 1978. (Magdi M. Shourci) **80g:78012** 78A45
- MILLER, E. L. Convergence properties and an inversion formula for the Lambert transform. (Spanish summary) *Rev. Técn. Fac. Ingr. Univ. Zulia* 2 (1979), no. 1-2, 77-94. (H. M. Srivastava) **80j:44006** 44A15
- MILLER, Edward V. (with Kan, Daniel M.) Representations in nilpotent groups. *J. Pure Appl. Algebra* 13 (1978), no. 2, 109-124. (S. B. Conlon) **80b:20013** 20C99
- MILLER, F. R. (with Curtis, W. D.; Lerner, D. E.) Complex pp waves and the nonlinear graviton construction. *J. Math. Phys.* 19 (1978), no. 10, 2024-2027. (Brian O. J. Tupper) **80a:83016** 83C20 (53C99)
- (with Curtis, W. D.; Lerner, D. E.) Some remarks on the nonlinear graviton. *Gen. Relativity Gravitation* 10 (1979), no. 7, 557-565. (Garry Ludwig) **80i:83026** 83C99 (32L99, 81M05)
- MILLER, Gary L. Graph isomorphism, general remarks. *J. Comput. System Sci.* 18 (1979), no. 2, 128-142. (Editors) **80b:68056** 68E10 (68C25)
- MILLER, Grady Properties of certain symmetric stable distributions. *J. Multivariate Anal.* 8 (1978), no. 3, 346-360. (D. N. Shanbhag) **80a:62067** 62H05 (60E05)
- MILLER, H. D. Infinite divisibility in stochastic processes. *Ann. Probab.* 7 (1979), no. 3, 406-417. (F. W. Steutel) **80b:60027** 60E07 (60J10, 60K05)
- MILLER, H. G. (with Berger, W. A.) An investigation of pseudoconvergence in an iterative method for calculating the low-lying eigenvectors of a Hermitian matrix. *J. Phys. A* 12 (1979), no. 10, 1693-1698. (Authors' summary) **80g:65040** 65F15
- MILLER, Harry I. Relationships between various gauges of the size of sets of real numbers. II. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* No. 16 (1976), 37-48. (O. Costinescu) **80j:28005** 28A12
- On the permutation functions of H. Steinhaus. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* 61 (1978), no. 17, 27-35. (J. D. Knowles) **80c:28025** 28D05



- A universal null set whose Steinhaus distance set is  $[0, \infty)$ . (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* 61 (1978), no. 17, 37-40. (J. D. Knowles) **80c:28002** 28A05 (04A30)
- On transformations of Baire sets in  $E^n$ . (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* 61 (1978), no. 17, 75-83. (J. D. Knowles) **80c:28003** 28A05
- Some results on rates of convergence of sequences. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* 61 (1978), no. 17, 169-178. (David F. Dawson) **80a:40001** 40A05
- Miller, Haynes R. (with Priddy, Stewart B.) On  $G$  and the stable Adams conjecture. *Geometric applications of homotopy theory (Proc. Conf., Evanston, Ill., 1977), II*, pp. 331-348. *Lecture Notes in Math.*, 658, Springer, Berlin, 1978. (V. P. Snaith) **80k:55027** 55P35
- A spectral sequence for the homology of an infinite delooping. *Pacific J. Math.* 79 (1978), no. 1, 139-155. (Harvey Margolis) **80c:55019** 55P47 (55S12; 55T99) (with Bendersky, M.; Curtis, E. B.) The unstable Adams spectral sequence for generalized homology. *Topology* 17 (1978), no. 3, 229-248. (Stanley Kochman) **80c:55035** 55T15
- Miller, J. V. (with Morton, K. W.; Baines, M. J.) A finite element moving boundary computation with an adaptive mesh. *J. Inst. Math. Appl.* 22 (1978), no. 4, 467-477. (Authors' summary) **80a:65229** 65N30
- Miller, Jay I. Just non-metabelian groups. *Math. Z.* 166 (1979), no. 1, 1-11. (J. R. J. Groves) **80b:20027** 20D15
- Center-by-metabelian groups of prime exponent. *Trans. Amer. Math. Soc.* 249 (1979), no. 1, 217-224. (N. D. Gupta) **80c:20042** 20E15 (20F50)
- Miller, John Boris. The order-dual of a TRL group. I. *J. Austral. Math. Soc. Ser. A* 25 (1978), no. 2, 129-141. (P. F. Conrad) **80f:06019** 06F20 (46A40)
- Direct summands in  $l$ -groups. *Proc. Roy. Soc. Edinburgh Sect. A* 81 (1978), no. 3-4, 175-186. (F. D. Pedersen) **80b:06018** 06F15
- Introduction to a theory of coups. *Algebra Universalis* 9 (1979), no. 3, 346-370. (Rubin Saposnik) **80a:90017** 90A07
- Miller, John J. H. A finite element method for a two point boundary value problem with a small parameter affecting the highest derivative. *Mathematical models and numerical methods (Papers, Fifth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 143-146. *Banach Center Publ.*, 3, PWN, Warsaw, 1978. (Robert D. Russell) **80c:65169** 65L10
- See also Numerical analysis of singular perturbation problems, **80j:65004**
- Miller, L. F. (with Cochran, R. G.; Howze, J. W.) Output feedback stabilization by minimization of a spectral radius functional. *Internat. J. Control* 27 (1978), no. 3, 455-462. (Authors' summary) **80a:93139** 93D15
- Miller, Michael D. (with Friedlander, Richard J.; Gordon, Basil) On a group sequencing problem of Ringel. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 307-321. *Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978*. (Gary L. Walls) **80c:05079** 05C20 (20D99)
- tanović-Miller, Naza. See Tanović-Miller, Naza
- Miller, Perry. See Newton, Isaac, **80d:01011**
- Miller, R. E. On consistent finite difference formulae for ordinary differential equations. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 10, 1567-1573. (Author's summary) **80g:65095** 65L10
- Miller, Raymond E. (with Yap, Chee K.) On formulating simultaneity for studying parallelism and synchronization. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 105-113. *ACM, New York, 1978*. (J. Paredaens) **80d:68031** 68B20
- (with Lipton, Richard J.) A batching method for coloring planar graphs. *Inform. Process. Lett.* 7 (1978), no. 4, 185-188. (D. Ja. Kesel'man) **80d:68041** 68C05 (05C15, 68E10)
- (with Pippenger, Nicholas; Rosenberg, Arnold L.; Snyder, Lawrence) Optimal 2,3-trees. *SIAM J. Comput.* 8 (1979), no. 1, 42-59. (Richard A. DeMillo) **80c:68050** 68E10 (68B10)
- Miller, Richard J. (with Lovass-Nagy, Victor; Powers, David L.) An introduction to the application of the simplest matrix-generalized inverse in systems science. Special issue on the mathematical foundations of system theory. *IEEE Trans. Circuits and Systems* 25 (1978), no. 9, 766-771. (Thomas L. Bouillon) **80b:93056** 93B99 (15A09)
- (with Lovass-Nagy, Victor; Powers, David L.) Reply to "Comments on: 'On system realization by matrix generalized inverses'" (*Internat. J. Control* 27 (1978), no. 4, 651-652) by E. Eitelberg and H. Hanselmann. *Internat. J. Control* 29 (1979), no. 1, 175-176. (Editors) **80d:93016** 93A99
- Miller, Richard K. (with Wheeler, Robert L.) Well-posedness and stability of linear Volterra integro-differential equations in abstract spaces. *Funkcial. Ekvac.* 21 (1978), no. 3, 279-305. (J. M. Cushing) **80j:45017** 45J05
- (with Michel, Anthony N.; Tang, Wang) Lyapunov stability of interconnected systems: decomposition into strongly connected subsystems. Special issue on the mathematical foundations of system theory. *IEEE Trans. Circuits and Systems* 25 (1978), no. 9, 799-809. (From the summary) **80b:93009** 93A15 (93D05)
- An integro-differential equation for rigid heat conductors with memory. *J. Math. Anal. Appl.* 66 (1978), no. 2, 313-332. (Editors) **80g:45015** 45K05
- Well-posedness of abstract Volterra problems. *Volterra equations (Proc. Helsinki Sympos. Integral Equations, Otaniemi, 1978)*, pp. 192-205. *Lecture Notes in Math.*, 737, Springer, Berlin, 1979. (V. Lakshmikantham) **80j:45022** 45N05 (45D05)
- (with Grimmer, R. C.) Well posedness of Volterra integral equations in Hilbert space. *J. Integral Equations* 1 (1979), no. 3, 201-216. (J. A. Nohel) **80i:45003** 45D05 (45N05)
- (with Michel, Anthony N.) Stability of linear Volterra integro-differential equations of order  $n$ . *SIAM J. Math. Anal.* 10 (1979), no. 5, 1089-1091. (T. L. Herdman) **80j:45005** 45D05
- Miller, Robert L. Necklaces, symmetries and self-reciprocal polynomials. *Discrete Math.* 22 (1978), no. 1, 25-33. (L. Carlitz) **80c:05017** 05A15 (12C05)
- (with Reed, Irving S.; Truong, T. K.) Fast algorithm for computing a primitive  $2^{2^k}$ th root of unity in  $\text{GF}(2^{2^k-1})$ . *Electron. Lett.* 14 (1978), no. 15, 493-494. (Authors' summary) **80c:68076** 68C05 (94A05)
- (with Reed, Irving S.; Truong, T. K.) Simple method for computing elements of order  $2^n$ , where  $n|2^{2^k-1}-1$  and  $2 < k < p+1$ , in  $\text{GF}(2^{2^k-1})$ . *Electron. Lett.* 14 (1978), no. 21, 697-698. (Authors' summary) **80c:68077** 68C05 (94A05)
- (with Reed, Irving S.; Truong, T. K.) Decoding of B.C.H. and R.S. codes with errors and erasures using continued fractions. *Electron. Lett.* 15 (1979), no. 17, 542-544. (Authors' introduction) **80b:94032** 94B15
- Generalized BCH codes. *Inform. and Control* 40 (1979), no. 1, 61-75. (H. C. A. van Tilborg) **80f:94020** 94B15
- Minimal codes in abelian group algebras. *J. Combin. Theory Ser. A* 26 (1979), no. 1, 166-178. (Harold N. Ward) **80f:94017** 94B05 (94B15)
- Miller, Sanford S. (with Mocanu, Petru T.) Second-order differential inequalities in the complex plane. *J. Math. Anal. Appl.* 65 (1978), no. 2, 289-305. (M. M. Schiffer) **80f:30009** 30C45 (34A20)
- (with Mocanu, Petru T.; Reade, Maxwell O.) Starlike integral operators. *Pacific J. Math.* 79 (1978), no. 1, 157-168. (Author's review (P. T. M.)) **80g:30008** 30C45
- (with Mocanu, Petru T.) Second order differential inequalities in the complex plane. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 301-322. *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (Olusola Akinyele) **80m:34006** 34A20 (31C05, 32A30)
- Miller, Timothy James. On the formality of  $(k-1)$ -connected compact manifolds of dimension less than or equal to  $4k-2$ . *Illinois J. Math.* 23 (1979), no. 2, 253-258. (Jean-Michel Lemaire) **80j:55017** 55P62
- Miller, W. H. (with Colwell, S. M.; Handy, N. C.) Semiclassical eigenvalues for rotating triatomic molecules. *Stochastic behavior in classical and quantum Hamiltonian systems (Volta Memorial Conf., Como, 1977)*, pp. 299-305. *Lecture Notes in Phys.*, 93, Springer, Berlin, 1979. (Marcel Coz) **80k:81189** 81G55
- Miller, Webb (with Johnson, Donald B.; Minnihan, Brian; Wrathall, Celia) Reducibility among floating-point graphs. *J. Assoc. Comput. Mach.* 26 (1979), no. 4, 739-761. (Authors' summary) **80i:65045** 65G05
- Miller, Willard, Jr. (with Kalnins, E. G.)  $R$ -separation of variables for the four-dimensional flat space Laplace and Hamilton-Jacobi equations. *Trans. Amer. Math. Soc.* 244 (1978), 241-261. (Carl Wulfman) **80d:22017** 22E70 (33A75, 35A23, 53B20)
- Miller, Zevi (with Harary, Frank; Hsu, Derbiau) The bichromaticity of a tree. *Theory and applications of graphs (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976)*, pp. 236-246. *Lecture Notes in Math.*, 642, Springer, Berlin, 1978. (David P. Sumner) **80c:05093** 05C15
- Contractions of graphs: a theorem of Ore and an extremal problem. *Discrete Math.* 21 (1978), no. 3, 261-272. (B. Zelinka) **80a:05169** 05C99 (05C35)
- Milliet, Annie (with Sucheston, Louis) Sur la caractérisation des conditions de Vitali par la convergence essentielle de classes d'amarts. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 21, A1015-A1017. (Authors' summary) **80b:60070** 60G41
- Sur la caractérisation des conditions de Vitali par la convergence essentielle des martingales. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 13, A887-A890. (Author's summary) **80i:60070** 60G44 (28A15)
- (with Sucheston, Louis) La convergence essentielle des martingales bornées dans  $L^1$  n'implique pas la condition de Vitali  $V$ . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 11, A595-A598. (Authors' summary) **80b:60065** 60G42
- (with Sucheston, Louis) Characterizations of Vitali conditions with overlap in terms of convergence of classes of amarts. *Canad. J. Math.* 31 (1979), no. 5, 1033-1046. (U. Krengel) **80i:60080** 60G48
- Milligan, Glenn W. Ultrametric hierarchical clustering algorithms. *Psychometrika* 44 (1979), no. 3, 343-346. (Byron J. T. Morgan) **80m:62061** 62H30
- Milliken, George A. (with Hussein, Muhammad) An unbalanced two-way model with random effects having unequal variances. *Biometrical J.* 20 (1978), no. 3, 203-213. (M. Atiquallah) **80c:62079** 62J05
- (with Hussein, Muhammad) An unbalanced nested model with random effects having unequal variances. *Biometrical J.* 20 (1978), no. 4, 329-338. (M. Atiquallah) **80d:62103** 62J05
- (with DeBruin, Robert L.) A procedure to test hypotheses for nonlinear models. *Comm. Statist. A—Theory Methods* 7 (1978), no. 1, 65-79. (Hans-Peter Höschel) **80c:62034** 62F05 (62E15)
- (with Johnson, Dallas E.; McGuire, Stephen A.) Estimating  $\sigma^2$  in the presence of outliers. *Technometrics* 20 (1978), no. 4, part 1, 441-455. (Authors' summary) **80a:62039** 62F10
- Milliken, Keith R. A Ramsey theorem for trees. *J. Combin. Theory Ser. A* 26 (1979), no. 3, 215-237. (Alan D. Taylor) **80j:05090** 05C55 (04A20, 05C05)
- Millionščikov, V. M. (with Efimov, N. V.; Kolmogorov, A. N.; Rozov, N. H.) In memoriam Boris Pavlovič Demidovič. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 2(200), 169-174. (Editors) **80a:01031** 01A70
- Mills, Charles F. (with van Mill, Jan) On the character of supercompact spaces. *Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978)*. *I. Topology Proc.* 3 (1978), no. 1, 227-236 (1979). (Eric K. van Douwen) **80k:54037** 54D30 (54A25)
- (with van Mill, Jan) A nonsupercompact continuous image of a supercompact space. *Houston J. Math.* 5 (1979), no. 2, 241-247. (V. I. Belugin) **80m:54033** 54D30
- (with van Mill, Jan) Closed  $G_\delta$  subsets of supercompact Hausdorff spaces. *Nederl. Akad. Wetensch. Indag. Math.* 41 (1979), no. 2, 155-162. (W. Kuip) **80c:54036** 54D30
- A simpler proof that compact metric spaces are supercompact. *Proc. Amer. Math. Soc.* 73 (1979), no. 3, 388-390. (Eric K. van Douwen) **80d:54036** 54E45
- (with Kunen, Kenneth; van Mill, Jan) On nowhere dense closed  $P$ -sets. *Proc. Amer. Math. Soc.* 78 (1980), no. 1, 119-123. (R. Grant Woods) **80b:54029** 54D25 (54A25)
- Mills, D. L. (with Wallis, R. F.; Maradudin, A. A.) Attenuation of Rayleigh waves by point defects. *Phys. Rev. B* (3) 19 (1979), no. 8, 3981-3995. (I. M. Longman) **80c:78023** 73D20 (35Q99)
- Mills, Janet E. The idempotents of a class of 0-simple inverse semigroups. *Pacific J. Math.* 81 (1979), no. 1, 159-166. (M. Friedberg) **80b:20039** 20M10



- Mills, Stella** Note historique sur les groupes transitifs de permutations des degrés six et sept. (English summary) *C. R. Acad. Sci. Paris Vie Académique* 288 (1979), no. 1-4, 39-41. (Peter M. Neumann) **80c:01014** 01A55 (20-03)
- Mills, W. H.** The construction of BIBDs using nonabelian groups. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 519-526, Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978. (H. Hanani) **80c:05031** 05B05
- The construction of balanced incomplete block designs with  $\lambda=1$ . *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1977)*, pp. 131-148, Congress. Numer., XX, Utilitas Math., Winnipeg, Man., 1978. (R. G. Stanton) **80c:05013** 05B05
- Mills, Wendell H., Jr.** The resolvent stability condition for spectra convergence with application to the finite element approximation of noncompact operators. *SIAM J. Numer. Anal.* 16 (1979), no. 4, 695-703. (Author's summary) **80f:65064** 65J10
- Optimal error estimates for the finite element spectral approximation of noncompact operators. *SIAM J. Numer. Anal.* 16 (1979), no. 4, 704-718. (Author's summary) **80f:65065** 65J10
- Milman, D. P.** On the set of minimal extensions of a subadditive functional. *Topics in functional analysis (essays dedicated to M. G. Krein on the occasion of his 70th birthday)*, pp. 227-240, *Advances in Math., Suppl. Studies*, 3, Academic Press, New York, 1978. (M. Valdivia) **80i:46013** 46A99
- Milman, Pierre** (with Bierstone, Edward) Invariant solutions of analytic equations. *Enseign. Math.* (2) 25 (1979), no. 1-2, 115-130. (D.-M. Popescu) **80a:14020** 14D15 (32B05, 39B40)
- Milman, V. D.** (with Karpovsky, Mark G.) Coordinate density of sets of vectors. *Discrete Math.* 24 (1978), no. 2, 177-184. (A. P. Street) **80m:05004** 05A05 (05B99, 10L10)
- (with Sharir, M.) Shrinking minimal systems and complementation of  $l_p$ -spaces in reflexive Banach spaces. *Proc. London Math. Soc.* (3) 39 (1979), no. 1, 1-29. (G. J. O. Jameson) **80i:46031** 46B20
- Milne, Frank** Consumer preferences, linear demand functions and aggregation in competitive asset markets. *Rev. Econom. Stud.* 46 (1979), no. 3, 407-417. (From the introduction) **80m:90021** 90A10 (90A16)
- Milne, George** (with Milner, Robin) Concurrent processes and their syntax. *J. Assoc. Comput. Mach.* 26 (1979), no. 2, 302-321. (M. G. Gonca) **80c:68061** 68B20
- Milne, R. K.** (with Griffiths, R. C.) A class of bivariate Poisson processes. *J. Multivariate Anal.* 8 (1978), no. 3, 380-395. (Mark Westcott) **80c:60069** 60G55 (62E10)
- Milne, Robert** Transforming predicate transformers. *Formal description of programming concepts (Proc. IFIP Working Conf., St. Andrews, N.B., 1977)*, pp. 31-65, North-Holland, Amsterdam, 1978. (Author's summary) **80c:68018** 68B05
- Milne, Stephen C.** A q-analog of restricted growth functions, Dobinski's equality, and Charlier polynomials. *Trans. Amer. Math. Soc.* 245 (1978/79), 89-118. (L. Carlitz) **80c:05018** 05A15 (33A65)
- Milner, E. C.** (with Györi, Ervin) A theorem of the transversal theory for matroids of finite character. *Discrete Math.* 23 (1978), no. 3, 235-240. (R. A. Brualdi) **80b:05019** 05B35
- Milner, Robin** (with Milne, George) Concurrent processes and their syntax. *J. Assoc. Comput. Mach.* 26 (1979), no. 2, 302-321. (M. G. Gonca) **80c:68061** 68B20
- Milnes, H. W.** (with Hildebrand, S. K.) A topological approach to minimizing  $\int_{\Omega} f(x, y, y') dx$  in subspaces of the plane. *Studia Sci. Math. Hungar.* 11 (1976), no. 1-2, 7-23 (1978). (F. J. Almgren, Jr.) **80i:49001** 49A05
- Milnes, P.** (with Berglund, J. F.; Junghenn, H. D.)  $\star$ Compact right topological semigroups and generalizations of almost periodicity. *Lecture Notes in Mathematics*, 663, Springer-Verlag, Berlin-New York, 1978. x+243 pp. ISBN 3-540-08919-5 (A. T.-M. Lau) **80c:22003** 22A20 (43A60)
- (with Bondar, J. V.) A simple proof of a covering property of locally compact groups. *Proc. Amer. Math. Soc.* 73 (1979), no. 1, 117-118. (Pierre Eymard) **80d:43003** 43A07 (22D05)
- See also Pym, John, **80d:22002**
- Milnor, J. W.** (with Shapley, L. S.) Values of large games. II. Oceanic games. *Math. Oper. Res.* 3 (1978), no. 4, 290-307. (G. Duru) **80b:90155** 90D12
- Milnor, John** Analytic proofs of the "hairy ball theorem" and the Brouwer fixed-point theorem. *Amer. Math. Monthly* 85 (1978), no. 7, 521-524. (J. C. Cantrell) **80m:55001** 55M20 (57R25)
- Milojević, P. S.** Some generalizations of the first Fredholm theorem to multivalued  $A$ -proper mappings with applications to nonlinear elliptic equations. *J. Math. Anal. Appl.* 65 (1978), no. 2, 468-502. (Milan Kučera) **80a:47098** 47H15 (35J65)
- Fixed point theorems for multivalued approximable mappings. *Proc. Amer. Math. Soc.* 73 (1979), no. 1, 65-72. (S. Swaminathan) **80b:47077** 47H10
- The solvability of operator equations with asymptotic quasibounded nonlinearities. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 293-298. (Ju. G. Borisovič) **80b:47075** 47H15
- Milosavljević, A. I.** On the Floquet theory for parabolic equations. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 31 (1979), 98-102, 168. (From the summary) **80a:34086** 34G20 (35K22)
- Milovanović, M. V.** The countability of the set of solvable Lie groups with a given lattice. (Russian) *Dokl. Akad. Nauk BSSR* 22 (1978), no. 12, 1067-1068, 1147. (J. E. Humphreys) **80j:22009** 22E40
- Milstein, G. N.** Stability and stabilization of periodic motions of autonomous systems. *Prikl. Mat. Meh.* 41 (1977), no. 4, 744-749 (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 4, 762-768 (1978). (G. Pecelli) **80m:70025** 70K20 (34D20, 49E20, 93D99)
- Probabilistic solution of linear systems of elliptic and parabolic equations. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 4, 851-855. (Constantin Tudor) **80c:35053** 35J55 (35K50, 60H20)
- Milton, D. R.** (with Fischer, C. N.; Tai, Ku Chung) Immediate error detection in strong LL(1) parsers. *Inform. Process. Lett.* 8 (1979), no. 5, 261-266. (From the text) **80f:68097** 68F25
- Milton, E. O.** (with Duncan, George T.) Multiple-answer multiple-choice test items: responding and scoring through Bayes and minimax strategies. *Psychometrika* 43 (1978), no. 1, 43-57. (Authors' summary) **80c:62116** 62P15
- Milton, Kimball A.** (with DeRaad, Lester L., Jr.; Schwinger, Julian) Casimir self-stress on a perfectly conducting spherical shell. *Ann. Physics* 115 (1978), no. 2, 388-403. (L. G. Chambers) **80c:78025** 78A99 (81L05)
- Milutic, Svetla D.** Application of the freezing method for the solution of multi-point boundary value problems with a nonlinear boundary condition for systems of integrodifferential equations of Volterra type. (Russian. English and Bulgarian summaries) *Godišnik Visš. Učebn. Zaved. Prirodna Mat.* 12 (1976), no. 1, 155-165 (1978). (From the text) **80a:45020** 45J05
- (with Bainov, D. D.) Application of the averaging method to solving boundary problems for systems of integro-differential equations with a linear boundary condition. *Studia Sci. Math. Hungar.* 11 (1976), no. 1-2, 51-58 (1978). (From the text) **80i:45016** 45J05 (34K10)
- (with Bainov, D. D.) Justification of the averaging method for a certain class of singularly perturbed integro-differential equations. (Russian) *VII. Internationale Konferenz über Nichtlineare Schwingungen (Berlin, 1975), Band I, Teil 1*, pp. 71-77, Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech., 1977, 3, Akademie-Verlag, Berlin, 1977. (M. Tvrđý) **80b:45009** 45J05 (34C29)
- (with Bainov, D. D.) Application of partial averaging to the solution of multipoint boundary value problems for a class of differential equations with deviating argument. (Russian. Bulgarian and English summaries) *Godišnik Visš. Učebn. Zaved. Prirodna Mat.* 13 (1977), no. 2, 35-42 (1978). (Authors' summary) **80i:34093** 34K15 (34C29)
- (with Bainov, D. D.) On the application of a method of partial averaging to the solution of multipoint boundary value problems with a nonlinear boundary condition for systems of integro-differential equations. (Russian. Bulgarian and English summaries) *Godišnik Visš. Učebn. Zaved. Prirodna Mat.* 13 (1977), no. 2, 43-52 (1978). (From the text) **80m:45012** 45J05 (34K05, 45M05)
- (with Bainov, D. D.) Application of the averaging method to a two-point boundary value problem for integrodifferential equations of Fredholm type that are unsolved with respect to the derivative. (Russian) *An. Univ. București Mat.* 27 (1978), 3-14. (V. G. Kravchenko) **80a:45017** 45J05 (34K10, 45M05)
- (with Bainov, D. D.) Application of the averaging method to a two-point boundary value problem for nonlinear systems of integro-differential equations. (Russian) *Arch. Math. (Brno)* 14 (1978), no. 2, 61-74. (Erwin Kozakiewicz) **80c:45013** 45J05 (34K10)
- (with Bainov, D. D.) Application of the averaging method for systems of integro-differential equations of Fredholm type with impulses. (Russian) *Publ. Inst. Math. (Beograd) (N.S.)* 24(38) (1978), 109-120. (A. S. Silbergleit) **80f:45018** 45J05 (34K15)
- (with Bainov, D. D.) Application of the averaging method for the solution of boundary problems for ordinary differential and integro-differential equations. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977)*, pp. 16-24, *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (A. I. Perov) **80d:34020** 34B15 (45J05)
- (with Bainov, D. D.; Konstantinov, M. M.) Structural stability and regular approximations of the solutions of certain boundary value problems with slow and fast variables. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 5, 577-580. (H. A. DeKleine) **80b:34018** 34B15
- (with Bainov, D. D.) Justification of the averaging method for a class of functional-differential equations with impulses. (Russian) *C. R. Acad. Bulgare Sci.* 32 (1979), no. 5, 581-582. (A. I. Perov) **80b:34096** 34K15
- (with Mitropol'skii, Ju. O.; Bainov, D. D.) Application of the averaging method to the solution of boundary value problems for ordinary differential and integro-differential equations. (Russian) *Mat. Fiz. No. 25* (1979), 3-22, 118. (R. R. Ahmerov) **80j:34048** 34C29 (34B15, 45J05)
- Mima, Kotaro** (with Chikashige, Yūichi; Fujii, Yasunori) Lorentz invariant string regularized dimensionally by means of hyperfunctions. II. *Progr. Theoret. Phys.* 59 (1978), no. 1, 274-288. (Authors' summary) **80a:81083** 81E15 (32M05, 58G15)
- Mima, Kunio** (with Hasegawa, Akira; Inamuro, Tsutomu; Taniuti, Tosiya) Stationary spectrum of pseudo-three-dimensional electrostatic turbulence in magnetized plasmas. *J. Phys. Soc. Japan* 45 (1978), no. 3, 1005-1010. (B. Buti) **80c:78010** 78A35 (76F05)
- Mimura, Fumitake** (with Ikushima, Akira) Generalized Clifford groups. *Bull. Kyushu Inst. Tech. Math. Natur. Sci.* No. 26 (1979), 13-18. (J. Dieudonné) **80c:16030** 16A46 (15A75)
- Mimura, Mamoru** (with Kono, Akira) On the cohomology mod 2 of the classifying space of  $AdE_7$ . *J. Math. Kyoto Univ.* 18 (1978), no. 3, 535-541. (J. F. Adams) **80f:55017** 55R40 (57T15)
- Mimura, Masayasu** (with Murray, James Dickson) On a diffusive prey-predator model which exhibits patchiness. *J. Theoret. Biol.* 75 (1978), no. 3, 249-262. (Frank J. S. Wang) **80c:92036** 92A15 (35K99)
- (with Nishida, Takaaki) On a certain semilinear parabolic system related to the Lotka-Volterra ecological model. *Publ. Res. Inst. Math. Sci.* 14 (1978), no. 2, 269-282. (Lu-San Chen) **80b:35077** 35K45 (92A15)
- Minaev, Ju. N.** Algorithm for solution of a class of problems of nonlinear mathematical programming with vector criteria. (Russian) *Mat. Fiz. No. 24* (1978), 33-40, 121. (S. Zlobec) **80d:90075** 90C30 (90C31)
- (with Čumakov, N. M.) Some questions on the construction of algorithms for the solution of optimization problems under conditions of noise effect. (Russian. English summary) *Avtomatika* 1979, no. 3, 64-70, 93. (Authors' summary) **80c:93026** 93A99 (90C25)
- Minaev, L. N.** (with Vereshagin, A. F.) Principles of construction of specialized computers for positional supervisor control of a manipulator. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 4, 56-65 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 4, 45-52 (1979). (Authors' summary) **80b:68078** 68G99 (68A05)
- Minaei, Haruo** On real  $J$ -homomorphisms. *Osaka J. Math.* 16 (1979), no. 2, 529-537. (Richard R. Patterson) **80b:55048** 55Q50
- Minamide, Nariyasu** An information theory consideration of a design of test input signals. *Internat. J. Systems Sci.* 10 (1979), no. 8, 927-942. (Suguru Arimoto) **80m:94016** 94A12
- (with Nikiforuk, P. N.; Gupta, Madan M.) A dual approach to a linear smoothing problem. *J. Franklin Inst.* 308 (1979), no. 4, 381-388. (Authors' summary) **80b:93066** 93E14

- stancu-Minasian, I. M. See Stancu-Minasian, I. M.
- Minasian, A. F. (with Tonjan, V. S.) A contact problem for an elastic composite half-plane. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mekh.* 32 (1979), no. 3, 3-17, 89. (Authors' summary) 80i:73066 73105
- Minasian, R. S. A mixed boundary value problem of heat conduction for a sphere. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 67 (1978), no. 3, 132-137. (D. M. Eidus) 80g:35025 35C99
- Minasian, V. B. Some results of Gibbs local-equilibrium distributions. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 5, 1004-1007. (Nicolae Angelescu) 80a:82011 82A05 (00A89)
- Minayev, L. N. See Minsev, L. N.
- Minic, Henryk ★Permanents. With a foreword by Marvin Marcus. Encyclopedia of Mathematics and its Applications, Vol. 6. Encyclopedia of Mathematics and its Applications. Addison-Wesley Publishing Co., Reading, Mass., 1978. xviii + 205 pp. ISBN 0-201-13505-1 (Thomas H. Foregger) 80d:15009 15A15  
(with Friedland, Shmuel) Monotonicity of permanents of doubly stochastic matrices. *Linear and Multilinear Algebra* 6 (1978/79), no. 3, 227-231. (Peter M. Gibson) 80b:15013 15A15 (15A51)  
On a conjecture of R. F. Scott (1881). *Linear Algebra Appl.* 28 (1979), 141-153. (S. Lajos) 80i:15005 15A15  
Evaluation of permanents. *Proc. Edinburgh Math. Soc.* (2) 22 (1979), no. 1, 27-32. (R. A. Brualdi) 80i:15006 15A15
- Minic, P. (with Krasinkiewicz, J.) Continua with countable number of arc-components. *Fund. Math.* 102 (1979), no. 2, 119-127. (Ben Fitzpatrick, Jr.) 80b:54041a 54F20  
(with Krasinkiewicz, J.) Continua and their open subsets with connected complements. *Fund. Math.* 102 (1979), no. 2, 129-136. (Ben Fitzpatrick, Jr.) 80b:54041b 54F20
- Minienko, L. I. On the optimization of difference inclusions. (Russian. English summary) *Dokl. Akad. Nauk SSSR* 22 (1978), no. 11, 979-981. (Author's summary) 80a:49047 49B99
- Minčev, M. C. (with Todorov, I. T.; Petkova, V. B.) ★Conformal invariance in quantum field theory. *Scuola Normale Superiore Pisa, Pisa*, 1978. vi + 273 pp. (Charles L. Hammer) 80i:81061 81E05 (32A25)
- Minčeva, M. L. Approximate solution of a problem of nonlinear oscillations by the method of "near" operators. (Bulgarian. Russian and French summaries) *Godišnik Vist. Učebn. Zaved. Prirodna Mat.* 13 (1977), no. 4, 101-115 (1978). (Author's summary) 80j:34032 34C15 (34A50)
- Min-Min-Či See Bui-Min-Či
- Minik, S. M. New Ricci type identities in a subspace of a space with asymmetric affine connection. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 4, 17-27. (L. Tamásy) 80b:53027 53B05 (53B25)
- Minda, C. David Conformal automorphisms of circular regions. *Amer. Math. Monthly* 86 (1979), no. 8, 684-686. (J. Ferrand) 80i:30015 30C20
- Mindlin, R. D. A variational principle for the equations of piezoelectromagnetism in a compound continuum. (Russian summary) *Complex analysis and its applications* (Russian), pp. 397-400, 669, "Nauka", Moscow, 1978. (N. Gass) 80a:73061 73R05 (49H05)
- Mine, Hisashi (with Fukushima, Masao; Ryang, Yong Joon) Parametric nonlinear programming for general cases and its application to some problems. *Mem. Fac. Engrg. Kyoto Univ.* 40 (1978), no. 3, 198-211. (Mary W. Cooper) 80a:90133 90C31  
(with Fukushima, Masao) Decomposition of multiple criteria mathematical programming problems by dynamic programming. *Internat. J. Systems Sci.* 10 (1979), no. 5, 557-566. (Nobuo Sannomiya) 80j:90097 90C30  
(with Katoh, Naoki; Ibaraki, Toshihide) A polynomial time algorithm for the resource allocation problem with a convex objective function. *J. Oper. Res. Soc.* 30 (1979), no. 5, 449-455. (James G. Morris) 80i:90104 90C25 (90C50)  
(with Kise, Hiroshi; Ibaraki, Toshihide) Performance analysis of six approximation algorithms for the one-machine maximum lateness scheduling problem with ready times. (Japanese summary) *J. Oper. Res. Soc. Japan* 22 (1979), no. 3, 205-224. (Authors' summary) 80b:90084 90B35  
(with Katoh, Naoki; Ibaraki, Toshihide) Algorithms for a variant of the resource allocation problem. (Japanese summary) *J. Oper. Res. Soc. Japan* 22 (1979), no. 4, 287-300. (Authors' summary) 80a:90068 90C08 (90B05, 90C05)  
(with Ohno, Katsuhisa; Shioyama, Tadayoshi) A new priority queue with two servers. *Oper. Res.* 16 (1979), no. 1, 1-22. (Authors' summary) 80g:90052 90B22
- Minenko, O. S. A thermophysical problem with a free boundary. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 6* (1979), 413-416, 492. (L. I. Rubinstein) 80i:35067 35J25 (35R35)
- Ming, Roger Yue Chi On generalizations of  $V$ -rings and regular rings. *Math. J. Okayama Univ.* 20 (1978), no. 2, 123-129. (G. Michler) 80i:16021 16A30  
On von Neumann regular rings. III. *Monatsh. Math.* 86 (1978/79), no. 3, 251-257. (K. R. Goodearl) 80c:16012 16A30  
A remark on decomposable modules. *Publ. Inst. Math. (Beograd) (N.S.)* 25(39) (1979), 101-104. (Birge Zimmermann-Huisgen) 80b:16034 16A52 (16A53)
- do le Minh See Do Le Minh
- nguyên anh Minh See Nguyễn Anh Minh
- bui Minh Phong See Bui Minh Phong
- Minieka, Edward ★Optimization algorithms for networks and graphs. Industrial Engineering, I. Marcel Dekker, Inc., New York-Basel, 1978. viii + 356 pp. ISBN 0-8247-6642-3 (Editors) 80a:90066 90B10 (90-01)
- Minimi, Michele A spectral approach to local solvability of some nonlinear equations in normed spaces. *Nonlinear Anal.* 2 (1978), no. 5, 597-607. (Jacques Lémordant) 80a:47099 47H15 (58C40)  
(with Basile, Nicola) A nonlinear spectral approach to Landesman-Lazer type problems. (Italian summary) *Boll. Un. Mat. Ital. A (5)* 16 (1979), no. 1, 137-147. (R. Kannan) 80b:47085 47H15
- Minlowitz, Ruth Distortion theorems for quasiregular mappings. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 1, 63-74. (Olli Martio) 80j:30026 30C60 (30D60)
- Minjuk, S. A. On the theory of ideal observability of linear systems with lag. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 12, 2164-2169, 2299. (Author's summary) 80b:93034 93B07 (34K35)  
(with Stepanjuk, N. N.) On the theory of pointwise completeness of linear systems with lag. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 5, 784-794, 955. (M. M. Konstantinov) 80i:34129 34K35 (39A10, 93B05)  
On the theory of the control and observation of hyperbolic systems. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 9, 1606-1613, 1724. (S. A. Minjuk) 80b:93017 93B05 (93B07)
- Minker, Jack See Logic and data bases, 80i:68009
- Minkler, H. (with Niemeyer, H.) Erweitert-reguläre Randwertprobleme. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* 59 (1979), no. 3, T34-T35. (R. E. Gaines) 80i:34024 34B25
- Minkowski, Hermann See Kersten, Sibylle, 80i:83001
- Minlos, R. A. (with Dobrušin, R. L.) Polynomials in a generalized random field and its moments. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 4, 715-730. (A. Badrikian) 80i:60055 60G20 (28C20, 60G60)  
(with Lakaev, S. N.) On bound states of the cluster operator. (Russian. English summary) *Teoret. Mat. Fiz.* 39 (1979), no. 1, 83-93. (B. S. Nahapetian) 80i:82007 82A15 (47A40)
- Minoshin, Brian (with Johnson, Donald B.; Miller, Webb; Wrathall, Celia) Reducibility among floating-point graphs. *J. Assoc. Comput. Mach.* 26 (1979), no. 4, 739-761. (Authors' summary) 80i:65045 65G05
- Minoux, M. (with Gondran, M.) L'indépendance linéaire dans les diodes. *Bull. Direction Études Rech. Sér. C Math. Inform.* 1978, no. 1, 67-90. (R. A. Brualdi) 80i:15008 15A15
- Minichev, M. C. See Minčev, M. C.
- Minzy, George J. On variational inequalities for monotone operators. I. *Adv. in Math.* 38 (1978), no. 1, 1-7. (A. A. Fonarev) 80c:47045 47H05
- Mintzer, Fred (with Liu, Bede) The design of optimal multirate bandpass and bandstop filters. *IEEE Trans. Acoust. Speech Signal Process.* 26 (1978), no. 6, 534-543. (Authors' summary) 80a:94008 94A12
- Minzoni, Antonmaria A. (with Canavati, A.; José A.) A discontinuous Steklov problem with an application to water waves. *J. Math. Anal. Appl.* 69 (1979), no. 2, 540-558. (R. C. MacCamy) 80b:35042 35J25 (76B15)
- Mioduszewski, Jerzy On components of  $BR - R$ . *Proceedings of the Conference Topology and Measure, I (Zinnowitz, 1974), Part 2*, pp. 257-283, Ernst-Moritz-Arndt Univ., Greifswald, 1978. (Olav Njåstad) 80g:54031 54D40 (03E50, 54A25)  
Compact Hausdorff spaces with two open sets. *Colloq. Math.* 39 (1978), no. 1, 35-40, 189. (Keith Devlin) 80a:54040 54D30  
Suslin's problem and Martin's axiom. (Polish) *Wiadom. Mat.* (2) 21 (1978), no. 1, 1-12. (W. Marek) 80b:30082 03E50 (03E65)
- Mira, Christian Accumulations de bifurcations et "structures boîtes emboîtées" dans les récurrences et transformations ponctuelles. VII. Internationale Konferenz über Nichtlineare Schwingungen (Berlin, 1975), Band 1, Teil 2, pp. 80-93. *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977, 4, Akademie-Verlag, Berlin, 1977. (J. S. Joel) 80d:58047 58F14 (39A12)  
Sur la structure des bifurcations des difféomorphismes du cercle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 13, A883-A886. (P. J. Holmes) 80b:58080 58F14  
Frontière floue séparant les domaines d'attraction de deux attracteurs. Exemples. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 11, A591-A594. (Authors' summary) 80b:58016 58F13
- Miracle-Solé, S. (with Gallavotti, Giovanni; Guerra, Francesco) A comment to the talk by E. Seiler: "Lattice gauge theories" (*Mathematical problems in theoretical physics* (Proc. Internat. Conf., Univ. Rome, Rome, 1977), pp. 26-36, Springer, Berlin, 1978) by K. Osterwalder and Seiler. *Mathematical problems in theoretical physics* (Proc. Internat. Conf., Univ. Rome, Rome, 1977), pp. 436-438, *Lecture Notes in Phys.*, 80, Springer, Berlin, 1978. (P. Rudra) 80i:82021 82A15  
(with Gruber, Ch.; Hintermann, A.; Messenger, A.) Invariant equilibrium states and surface tension in ferromagnetic systems. *Statistical physics—"STATPHYS 13"* (Proc. Thirteenth IUPAP Conf. Statist. Phys., Technion-Israel Inst. Tech., Haifa, 1977), Part 2, pp. 536-539. *Ann. Israel Phys. Soc.*, 2, Hilger, Bristol, 1978. (Authors' summary) 80g:82040 82A65  
(with Marra, R.) On the statistical mechanics of the gauge invariant Ising model. *Comm. Math. Phys.* 67 (1979), no. 3, 233-240. (Francesco Guerra) 80b:82070 82A67 (81E99)
- Mirancev, V. G. (with Sazonov, V. V.) On the central limit theorem in  $\mathbb{R}^k$ . (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 2, 425-429. (M. U. Gafurov) 80b:60041 60F05
- mirra Miranda, Manuel See Milla Miranda, Manuel
- Miranker, W. L. (with Willner, B. E.) Global analysis of magnetic domains. *Quart. Appl. Math.* 37 (1979/80), no. 3, 219-238. (Rainer Picard) 80m:82021 82A25 (35B32, 78A25)
- Mirchandani, Pitu B. (with Handler, Gabriel Y.) ★Location on networks theory and algorithms. MIT Press Series in Signal Processing, Optimization, and Control. MIT Press, Cambridge, Mass.-London, 1979. xviii + 233 pp. ISBN 0-262-08090-7 (Edward Minieka) 80b:90061 90B10  
(with Odoni, Amedeo R.) Locating new passenger facilities on a transportation network. *Transportation Res. Part B* 13 (1979), no. 2, 113-122. (Jacques A. Ferland) 80i:90061 90B15  
(with Odoni, Amedeo R.) Locations of medians on stochastic networks. *Transportation Sci.* 13 (1979), no. 2, 85-97. (Authors' summary) 80m:90052 90B15
- Mirzafarvili, M. G. (with Samsoniya, Z. V.) The quasiconformal mapping of a simply connected domain onto a plane with a straight-line cut. (Russian) *Sakhar. SSR Mech. Akad. Gamotol. Centr. Šrom.* 18 (1978), no. 1 Čisl. Rešenija Graničnyh Zadach, 103-106. (E. Reich) 80b:30014 30C60
- Mirică, St. (with Hălanay, A.) The time-optimal feedback using state estimator. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 4, 573-583. (P. Bertrand) 80b:93041 93D15 (93E10)  
(with Hălanay, A.) The time-optimal feedback control for singularly perturbed linear systems. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 4, 585-596. (P. Bertrand) 80b:93042 93D15



- Mirza, A. A. (with Cordey, J. G.; Marx, K. D.; McCoy, M. G.; Rensink, M. E.) A new expansion method for computing  $\sigma$  for reactant distribution functions. *J. Comput. Phys.* 28 (1978), no. 1, 115-121. (From the introduction) **80a:65032** 65D15
- Mir-Kasimov, R. M. (with Volobuev, I. P.; Kadyševskii, V. G.; Mateev, M. D.) Equations of motion for scalar and spinor fields in four-dimensional non-Euclidean momentum space. (Russian. English summary) *Teor. Mat. Fiz.* 40 (1979), no. 3, 363-372. (Authors' summary) **80i:81009** 81M05
- Mirkin, B. G.  $\star$ Group choice. Translated from the Russian by Yelena Olikier. Edited by Peter C. Fishburn. A Halsted Press Book. Scripta Series in Mathematics. V. H. Winston & Sons, Washington, D.C.; John Wiley & Sons, New York-Toronto, Ont.-London, 1979. xxx + 252 pp. ISBN 0-470-26702-X (Editors) **80f:90004** 90-01 (90A07)
- Mirkin, A. S. On a modification of the averaging method and estimates of higher approximations. *Prikl. Mat. Meh.* 41 (1977), no. 5, 876-884 (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 5, 901-909 (1979). (Author's summary) **80b:34056** 34C29
- Mirkowska, Grażyna (with Orłowska, Ewa) An elimination of iteration quantifiers in a certain class of algorithmic formulas. *Fund. Inform.* (4) 1 (1977/78), no. 3, 347-355 (errata insert). (G. E. Peterson) **80a:03070** 03F50 (03B35, 68C05)
- Mirman, R. Nonexistence of superselection rules: definition of term "frame of reference". *Found. Phys.* 9 (1979), no. 3-4, 283-299. (Author's summary) **80b:81011** 81B10
- Mirman, M. (with Oster, George F.) Competition, kin selection, and evolutionary stable strategies. *Theoret. Population Biol.* 13 (1978), no. 3, 304-339. (K. Gopalsamy) **80c:92053** 92A15
- Miron, R. The minimality of Weyl's system of axioms for the affine geometry over an unitary ring. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sec. I a Mat. (N.S.)* 24 (1978), no. 1, 15-19. (A. Cronheim) **80a:51007** 51C05
- Mironenko, V. I. Stationary integrals and invariants of the shift operator along the solutions of differential systems. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 12, 2170-2177, 2299-2300. (R. F. Matlak) **80i:34015** 34A34
- Mironjuk, L. N. (with Citric'kil, O. E.) On the Riesz-Markov theorem for stochastic vector measures. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 4, 842-851. (M. P. Erlov) **80d:60077** 60H05 (28C05)
- Mironov, A. A. (with Baničuk, N. V.; Kartveliškii, V. M.) Optimization problems with local performance criteria in the theory of plate bending. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* 13 (1978), no. 1, 124-131 (Russian); translated as *Mech. Solids* 13 (1978), no. 1, 116-122. (H. J. Weinitschke) **80f:73054** 73K10 (49H05)
- Mironov, A. V. (with Zimakov, N. P.) Regular representations and normability of topological algebras over a semifield. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 6, 9-10. (G. L. Litvinov) **80b:46056** 46H15
- (with Vahidov, Š.) Conditions for convergence of an iteration process for an operator equation in a locally compact space. (Russian) *Taškent. Gos. Univ. Sb. Nauchn. Trudov* No. 573 *Funktsional. Anal.* (1978), 22-24, 108. (Authors' summary) **80a:47000** 47H17
- Boundedness and continuity of order-bounded linear mappings. (Russian) *Taškent. Gos. Univ. Sb. Nauchn. Trudov* No. 573 *Funktsional. Anal.* (1978), 39-42, 109. (Authors' summary) **80a:47038** 47B55
- (with Sarymsakov, B. T.) Some properties of positive mappings of topological semi-ordered groups and vector spaces. (Russian) *Taškent. Gos. Univ. Sb. Nauchn. Trudov* No. 573 *Funktsional. Anal.* (1978), 42-50, 109-110. (Authors' summary) **80a:47039** 47B55 (46A99)
- Mironov, N. P. Second-order linear differential equations with lag. (Russian) *Differentsial'nye Uravneniya (Ryazan)* No. 11 (1978), 116-119. (D. Bainov) **80b:34090** 34K15
- Estimation of the solutions of first order differential equations with lag. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 2(189), 59-61. (Editors) **80a:34107** 34K15
- Mironov, O. K. Multiplications in cobordism theories with singularities and the Steenrod-tom Dieck operations. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 4, 789-806. (Michiel Hazewinkel) **80d:55005** 55N22 (57R90)
- Mironov, V. G. Graphs and algorithms for the analysis of circuits with operational boosters. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst.* No. 348 *Teor. Grafov* (1977), 13-19. (From the introduction) **80b:94050** 94C15
- Mironov, V. L. (with Aksekov, V. P.) The effect of backscattering amplification under the conditions of strong intensity fluctuations. (Russian. English summary) *Izv. Vysš. Učebn. Zaved. Radiofizika* 22 (1979), no. 2, 141-149. (Authors' summary) **80c:78014** 78A45 (86A35)
- Mironovskii, Ju. Z. Self-similar solutions of the Cauchy problem for internal waves in an unbounded fluid. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* 14 (1978), no. 9 (Russian); translated as *Izv. Acad. Sci. USSR Atmospher. Ocean. Phys.* 14 (1979), no. 9, 673-679. (Robert Pearson) **80g:86005** 86A05 (35Q20, 76C10, 86A30)
- (with Leonov, A. I.; Tamsalu, R. E.) Nonlinear stationary internal and surface waves in shallow seas. (Russian summary) *Tellus* 31 (1979), no. 2, 150-160. (K. K. Puri) **80g:76011** 76B25
- Mironin, N. V. The exterior Dirichlet problem for a degenerate elliptic operator. (Russian) Studies in the theory of differentiable functions of several variables and its applications, VII. *Trudy Mat. Inst. Steklov.* 150 (1979), 198-211, 323. (Todor G. Genčev) **80j:35040** 35J70
- Mironiuc, T. P. Distinguishing between two simple hypotheses with delayed observations. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 6(204), 223-224. (A. Ja. Dorogovcev) **80c:62103** 62M02
- Mironin, A. R. (with Muhin, V. V.) Invariant measures that extend from a semigroup to the group of its quotients. (Russian) *Mat. Zametki* 24 (1978), no. 6, 819-828, 894. (Z. Lipecki) **80b:28013** 28C10 (43A05)
- Invariant measures in a locally compact left group. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 2, 120-121, 143. (K. A. Rosa) **80i:43003** 43A05
- Mirshadiev, B. The method of lines for a system of equations of parabolic type. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Taškent)* No. 53 (1978), 31-43, 180. (Authors' summary) **80f:65135** 65P05
- Mirvaliev, V. M. An inverse inhomogeneous problem of grid bending. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 2, 105-110. (S. P. Gavelja) **80d:73097** 73K15 (35R30)
- (with Maksudov, F. G.; Babičeva, L. A.) Determination of the optimal cooling rate in continuous casting. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 35 (1979), no. 8, 12-15. (Authors' summary) **80a:80006** 80A20
- Mirvaliev, M. (with Bol'šev, L. N.) A chi-square goodness-of-fit test for the Poisson, binomial and negative binomial distributions. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 3, 481-494. (M. S. Nikulin) **80c:62057** 62G10
- The rejection of outlying observations in regression analysis. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 3, 619-624. (S. Kotz) **80c:62000** 62J05 (62F03)
- Rejection of outliers in angular measurements. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 4, 846-851. (Lubomir Kubáček) **80c:62007** 62J10 (62F05)
- Mirzaev, Č. E. Multipoint approximation of the Cauchy-Riemann equation and entire functions with discrete complex argument. (Russian) *Taškent. Gos. Univ. Nauchn. Trudy* No. 548 *Voprosy Mat.* (1977), 61-64, 142-143. (C. R. Deeter) **80a:30060** 30G25
- Mirzazadeh, E. A. Balancing the elements of a multi-dimensional matrix by the method of equalizing the means of the deviations. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 12, 18-21. (O. Pokorná) **80c:65062** 65K05 (90C99)
- Mirzazadeh, G. L. A minimal control problem for a finite Markov chain with arbitrary chains of solutions and a small probability of termination. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* 91 (1978), no. 3, 557-560. (O. G. Nakonečnij) **80c:93147** 93E20
- The existence of an  $\epsilon$ -optimal stationary strategy in a controlled finite Markov chain and Bellman operator stability. (Russian. English and Georgian summaries) *Soobšč. Akad. Nauk Gruz. SSR* 92 (1978), no. 1, 33-36. (Authors' summary) **80d:93084** 93E20 (90C40)
- Mirzajani, M. M. Maximality theorems for arbitrary and meromorphic functions along tangential directions. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 66 (1978), no. 4, 200-204. (C. Tanaka) **80c:30029** 30D40
- The characteristic of boundary peculiarities of meromorphic functions and functions that are generated by cluster sets along tangential directions. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 66 (1978), no. 5, 263-266. (C. Tanaka) **80c:30030** 30D40
- On limit sets of mappings of topological spaces. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 1, 37-40. (V. V. Miškin) **80f:54005** 54C05
- Mirzajani, V. A. Submanifolds with parallel second fundamental form in spaces of constant curvature. (Russian. Estonian and English summaries) *Tartu Riikl. Ül. Toimetised* No. 464 *Trudy Mat. i Meh.* no. 22 (1978), 59-74. (V. Oproiu) **80c:53065** 53C40
- Mirzov, D. D. A Sturm-Liouville boundary value problem for a nonlinear system. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 4, 28-32. (C. Avramescu) **80c:34036** 34B25
- Miščev, N. M. The construction of flags of foliations. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 1(205), 237-238. (B. Cenkl) **80c:57035** 57R30
- Miščenko, A. E. Optimal resource distribution in the case of volume-scheduling of work complexes. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 6, 80-85. (K. V. Šahbazjan) **80b:90082** 90B35 (90C05)
- Miščenko, A. S. (with Solov'ev, Ju. P.) A classifying space for Hermitian  $K$ -theory. (Russian) *Trudy Sem. Vektor. Tenzor. Anal.* 18 (1978), 140-168. (A. A. Ranicki) **80g:57051** 57R67 (18F25, 57R65)
- Miščenko, E. F. The asymptotics of relaxation oscillations. (Russian) *Mat. Sb. (N.S.)* 107(149) (1978), no. 4, 533-540, 639. (V. G. Kolomic) **80d:34075** 34E15 (34C15)
- Miščenko, V. O. A generalized spectral matrix for a nonselfadjoint abstract hyperbolic differential operator and an inverse problem. (Russian) *Teor. Funkcii Funktsional. Anal. i Prilozhen.* No. 31 (1979), 110-119, 168. (Editors) **80c:34097** 34G10
- Miškinis, F. F. Some limit theorems for a sequence of independent  $s$ -dimensional random vectors. II. (Russian. Lithuanian and English summaries) *Lietuv. Mat. Sb.* 18 (1978), no. 4, 73-81, 200. (L. A. Anorina) **80c:60033** 60F05
- Mišnenkova, T. A. On the question of the solution of a nonlinear singular integral equation. (Russian) *Differentsial'nye Uravneniya (Ryazan)* No. 12 (1978), 93-104. (Authors' summary) **80c:35129** 35M05 (45G05)
- Misfeld, Jürgen (with Sigmon, Kermit) Completion of topological incidence groups. *J. Geom.* 11 (1978), no. 2, 150-160. (D. Klucký) **80b:51000** 51H10
- Mishra, Babban Prasad (with Singh, Dinesh) On  $A(R, \lambda, k)$  summability methods. *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 3-4, 170-174 (1978). (S. M. Mazhar) **80a:40004** 40G99
- (with Srivastava, Anand Prakash) Strong and absolute summabilities of functions based on  $(D, \alpha)$  summability methods. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 2, 279-286. (N. Kishore) **80f:40003** 40F05 (40D25)
- Mishra, K. K. (with Seervani, D. L.) On absolute Nörlund summability of Laplace series. *Math. Ed. (Siwan)* 13 (1979), no. 2, 21-26. (Authors' summary) **80j:40010** 40G05
- Mishra, K. L. P. (with Ramarajan, S.) Positivity of certain non-linear dynamic operators. *Internat. J. Control* 28 (1978), no. 5, 785-788. (A. P. Morgan) **80b:93122** 93D15
- Mishra, R. N. See Mishra, R. N.
- Mishra, R. S. Solutions of equations of Einstein's unified field theory. *Proceedings of the International Symposium on Relativity and Unified Field Theory (Calcutta, 1975-1976)*, pp. 45-51. *Bose Inst. Phys. Sci., Univ. Calcutta, Calcutta*, 1978. (From the text) **80a:83020** 83C20 (53A30)
- (with Pandey, S. N.) Semi-symmetric metric connections in an almost contact manifold. *Indian J. Pure Appl. Math.* 9 (1978), no. 6, 570-580. (Yoshiaki Maeda) **80b:53026** 53C15
- (with Singh, R. N.) On an invariant submanifold in a  $f(5,3)$ -structure manifold. *Indian J. Pure Appl. Math.* 9 (1978), no. 10, 1033-1038. (Yoshiaki Maeda) **80b:53027** 53C15
- (with Srivastava, J. P.; Rai, S. P.) Para  $f$ -structure in tangent bundle. *Indian J. Pure Appl. Math.* 9 (1978), no. 12, 1275-1281. (K. Yano) **80g:53028** 53C15
- (with Pandey, S. B.; Sharma, U.) On Kählerian submanifold with vanishing Bochner curvature tensor. *Indian J. Pure Appl. Math.* 9 (1978), no. 12, 1291-1297. (S. I. Husain) **80a:53029** 53B35

- Mishra, Ramadhar Application of fractional  $q$ -integration to the theory of a generalized  $q$ -Stieltjes transform. *Bull. Calcutta Math. Soc.* 69 (1977), no. 5, 247-255. (W. A. Al-Salam) 80i:44006 44A55 (26A33)
- Mishra, S. D. (with Gupta, R. K.) Infinite Mathieu transform. *Indian J. Pure Appl. Math.* 8 (1977), no. 12, 1431-1444. (Authors' summary) 80g:44004 44A15
- Mishra, S. N. Remarks on some fixed-point theorems in bimetric spaces. *Indian J. Pure Appl. Math.* 9 (1978), no. 12, 1271-1274. (S. K. Kaul) 80e:54060 54H25
- On sequences of mappings and fixed points in uniform spaces. II. *Indian J. Pure Appl. Math.* 10 (1979), no. 6, 699-703. (Mo Tak Kiang) 80e:54061 54H25
- On fixed points of orbitally continuous maps. *Nanta Math.* 12 (1979), no. 1, 83-90. (L. P. Belluce) 80i:54057 54H25
- Misic, Luciano A free surface problem in a natural convection. (Italian. English summary) *Rend. Accad. Naz.* XL (5) 3 (1977/78), 87-94 (1979). (Author's summary) 80e:76043 76R99
- Misjica, M. Consolidation induced by internal mobility of viscoelastic media and correlations with dual mechanics of continua. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* 23 (1978), no. 3, 325-340. (Author's summary) 80e:73040 73F99 (35Q99)
- Dual mechanics and applications in the theory of continuum media. I. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* 23 (1978), no. 5, 653-671. (Author's summary) 80e:73062 73S99 (00A89)
- Mišić, Ladislav Halbboresche Funktionen und extreme Ableitungen. (Russian summary) *Math. Slovaca* 27 (1977), no. 4, 409-421. (Author's summary) 80f:26004 26A21 (26A15)
- Extreme unilateral essential derivatives of continuous functions. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 1 (1978), 235-238. (B. K. Lahiri) 80e:26006 26A24
- Mišić, L. V. (with Suškevič, T. A.) Mathematical model of a space-frequency characteristic of an "underlying surface-atmosphere" system. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No.* 76 (1979), 29 pp. (Authors' summary) 80m:78003 78A10 (86A10)
- Misiti, M. (with Brauner, Claude-Michel; Crolet, M. H.; Gay, B.) Optimal control of the laminar boundary layer by blowing or suction at the wall. *Numerical methods in laminar and turbulent flow (Proc. First Internat. Conf., Univ. College Swansea, Swansea, 1978)*, pp. 369-378, Halsted, New York, 1978. (F. Milinazzo) 80e:76015 76D10 (93B40)
- Miskinis, Rimantas An estimate of the probability of misclassification of autoregressive sequences. (Russian. Lithuanian and English summaries) *Statist. Problemy Upravlenija—Trudy Sem. Protsessy Optimal. Upravlenija V Sekcija No.* 30 (1978), 29-52, 77. (M. Arató) 80i:62076 62M07 (62H30)
- Misjura, T. V. Characterization of the spectra of the periodic and antiperiodic boundary value problems that are generated by the Dirac operator. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* No. 30 (1978), 90-101, iv. (Author's summary) 80a:34025 34B25 (47E05)
- Characteristics of the spectra of the periodic and antiperiodic boundary value problems that are generated by the Dirac operator. II. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* No. 31 (1979), 102-109, 168. (Author's summary) 80i:34034 34B25 (47E05)
- Miškin, V. V. Regular sets and closed maps of nonmetrizable spaces. (Russian) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 12, 985-989 (1979). (Stojan Nedev) 80e:54011 54C10
- Mislin, Guido (with Hilton, Peter; Roitberg, Joseph; Steiner, Richard) On free maps and free homotopies into nilpotent spaces. *Algebraic topology (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 202-218, *Lecture Notes in Math.*, 673, Springer, Berlin, 1978. (Albert O. Shar) 80e:55007 55P60
- Conditions for finite domination for certain complexes. *Algebraic topology (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 219-224, *Lecture Notes in Math.*, 673, Springer, Berlin, 1978. (Kenneth S. Brown) 80e:55009 55P99 (55P60)
- (with Hilton, Peter; Roitberg, Joseph) On co-H-spaces. *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. II (Portuguese), pp. 729-751, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Albert O. Shar) 80i:55007 55P45
- Finitely dominated complexes with metacyclic fundamental groups. *Topology and algebra (Proc. Colloq., Eidgenöss. Tech. Hochschule, Zurich, 1977)*, pp. 233-235, *Monographies Enseignement Math.*, 26, Univ. Genève, Geneva, 1978. (Gerald A. Anderson) 80a:55013 55P99
- (with Hilton, Peter; Roitberg, Joseph) On co-H-spaces. *Comment. Math. Helv.* 53 (1978), no. 1, 1-14. (Richard Holzsager) 80d:55014 55P60
- Miljenović, Djura Seidel's improvement of Picard's method. (Serbo-Croatian. English summary) *Mat. Vesnik* 2(15)(30) (1978), no. 4, 369-375. (Author's summary) 80k:34016 34A45
- Milinaevskii, P. A. (with Ramm, A. G.) The uniqueness of a harmonic coordinate system in general relativity theory. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 1(205), 239-240. (M. A. H. MacCallum) 80g:83006 83C05
- Misner, Charles W. Harmonic maps as models for physical theories. *Phys. Rev. D* (3) 18 (1978), no. 12, 4510-4524. (Author's summary) 80a:81078 81E10 (58E20)
- Misner, O. G. The existence of the  $\epsilon$ -limit in the nonequilibrium statistical operator method. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1978, no. 3, 136-137. (From the introduction) 80k:82040 82A30
- Milnjakov, N. T. (with Nikolačuk, A. M.) Noether's theory for a general boundary value problem with Carleman shift and conjugation in a class of generalized analytic functions. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 4, 441-447, 479. (E. V. Tjurikov) 80k:34042 30E25 (30G20, 35J55)
- Mišić, Karel Nongravitational foci and apses of pencil of paths with two common points. *Acta Tech. ČSAV* 24 (1979), no. 5, 610-630. (Author's summary) 80i:70002 70D05
- Misra, R. Nonequilibrium entropy, Lyapounov variables, and ergodic properties of classical systems. *Proc. Nat. Acad. Sci. U.S.A.* 75 (1978), no. 4, 1627-1631. (From the summary) 80k:82045 82A35 (58F15, 70H05)
- (with Prigogine, Ilya; Courbage, M.) From deterministic dynamics to probabilistic descriptions. *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 8, 3607-3611. (Lawrence Sklar) 80g:82015 82A05
- (with Prigogine, Ilya; Courbage, M.) Lyapounov variable: entropy and measurement in quantum mechanics. *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 11, 4768-4772. (Brian DeFacio) 80j:81011 81B99 (82A30)
- Misra, B. L. (with Chandak, M. L.) On construction of PBIB designs through  $2^2$  factorial. *J. Indian Statist. Assoc.* 16 (1978), 7-14. (Sanpei Kageyama) 80g:62055 62K15 (62K15)
- Misra, D. N. (with Dutta, R.) Super almost compact and  $\xi$ -almost compact extensions. *Ann. Soc. Sci. Bruxelles Sér. I* 92 (1978), no. 3, 191-203. (R. F. Dickman, Jr.) 80a:54075 54D35 (54D30)
- Misra, Jayadev (with Maiti, S. N.) Effect of the presence of a crack on the thermal stresses in a long insulated cylinder. *Bull. Calcutta Math. Soc.* 70 (1978), no. 2, 63-71. (P. M. Gupta) 80g:73061 73M05
- (with Gries, David) A linear sieve algorithm for finding prime numbers. *Comm. ACM* 21 (1978), no. 12, 999-1003. (D. H. Lehmer) 80d:10010 10A25 (68C25)
- Some aspects of the verification of loop computations. *IEEE Trans. Software Engrg.* 4 (1978), no. 6, 478-486. (Author's summary) 80a:68012 68B05
- (with Chandy, K. Mani) Distributed simulation: a case study in design and verification of distributed programs. *IEEE Trans. Software Engrg.* 5 (1979), no. 5, 440-452. (Authors' summary) 80f:68113 68J05 (68A05)
- Space-time trade off in implementing certain set operations. *Inform. Process. Lett.* 8 (1979), no. 2, 81-85. (Giorgio Ausiello) 80g:68060 68C25 (68B15, 68E05)
- (with Chandy, K. Mani) Deadlock absence proofs for networks of communicating processes. *Inform. Process. Lett.* 9 (1979), no. 4, 185-189. (B. W. Stuck) 80m:68009 68A05 (68C15)
- Misra, Om Prakash (with Lavoine, Jean) Abelian theorems for the distributional Stieltjes transformation. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 2, 287-293. (L. Arteaga) 80f:44001 44A15
- (with Lavoine, Jean) Sur la transformation de Stieltjes des distributions et son inversion au moyen de la transformation de Laplace. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 3, A139-A142. (Authors' summary) 80m:44009 44A15
- Misra, R. B. A turning point in the theory of recurrent Finsler manifolds. *J. South Gujarat Univ.* 6 (1977), 72-96. (H. Rund) 80a:53032 53B40
- (with Meher, F. M.; Kishore, Nawal) On a recurrent Finsler manifold with a conical vector field. *Acta Math. Acad. Sci. Hungar.* 32 (1978), no. 3-4, 287-292. (Makoto Matsumoto) 80a:53033 53B40
- Misra, R. N. (with Wilson, D. A.) Optimal reduction of multivariable systems. *Internat. J. Control* 29 (1979), no. 2, 267-278. (Authors' summary) 80i:93017 93A15
- Misra, S. S. (with Naik, N.; Swamy, B. L. N.) A note on difference sets in Boolean algebras. *Math. Ed. (Siwan)* 12 (1978), no. 2, B35-B37. (Ph. Dwinger) 80d:06011 06E99
- Misra, U. N. (with Singh, Punyatma; Sharma, V. P.) Fluctuating boundary layer on a heated horizontal plate. (Spanish summary) *Acta Mech.* 30 (1978), no. 1-2, 111-128. (R. Manohar) 80i:76032 76N05
- (with Singh, Punyatma; Sharma, V. P.) Three dimensional free convection flow and heat transfer along a porous vertical plate. *Appl. Sci. Res.* 34 (1978), no. 1, 105-115. (Authors' summary) 80a:76046 76R99 (35Q99)
- (with Singh, Punyatma; Sharma, V. P.) Exact solution of transient heat transfer between a fluid and a porous plate. *Pure Appl. Math. Sci.* 10 (1979), no. 1-2, 135-144. (Authors' summary) 80m:80011 80A20
- Misra, M. M. (with Fairman, Frederick W.) Desensitizing observers for LQG feedback control. *Internat. J. Systems Sci.* 10 (1979), no. 2, 161-175. (Authors' summary) 80e:93051 93B35
- Misra, N. M. (with Evans, David J.) The modified alternating direction preconditioning method for the numerical solution of the elliptic self-adjoint second order and biharmonic equations. *BIT* 19 (1979), no. 2, 172-185. (L. Collatz) 80i:65000 65N20
- Misso, Paola Some properties of the symmetric center of a skew-field. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) 45 (1979), 105-112. (Manuel Ojanguen) 80i:16025 16A39 (16A28)
- Misuno, O. The  $Q$ -mappings and the reduction of  $n$ -particle problems. *Rep. Math. Phys.* 14 (1978), no. 1, 57-64. (H. Wakita) 80a:81026 81C10 (47A99)
- Mišta, Krystyna Sur les inégalités bilinéaires de Grunsky pour les couples de fonctions qui n'empêchent pas l'une sur l'autre. I. *Demonstratio Math.* 12 (1979), no. 1, 71-103. (A. W. Goodman) 80i:30031 30C50
- Mistrangoli, Luigi Wave solutions of the field equations of Einstein's unified field theory. (Italian) *Intit. Lombardo Acad. Sci. Lett. Rend. A* 111 (1977), no. 2, 383-395 (1978). (N. D. Sengupta) 80e:83006 83C05
- Mistura, L. Change of variables in thermodynamics. (Italian and Russian summaries) *Nuovo Cimento B* (11) 51 (1979), no. 1, 125-146. (Author's summary) 80e:80003 80A10
- Misra, Ju. S. Convergence of random fields of step sums in the uniform topology. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist.* No. 19 (1978), 102-111, 159. (A. N. Starcev) 80g:60028 60F05
- Mita, Katsumori Euler-Lagrange equation and conservation laws for bilocal fields. *Phys. Rev. D* (3) 18 (1978), no. 12, 4545-4547. (Author's summary) 80a:81069 81E99 (49A99)
- Mita, T. On the estimating errors and the structures of identity observers and minimal order state observers. *Internat. J. Control* 27 (1978), no. 3, 441-454. (Author's summary) 80a:93038 93B05
- Mitani, Suketaka Completion theory performed on the basis of L.J. *Math. Japon.* 23 (1978/79), no. 4, 461-490. (Michael Bauer) 80b:68112 68G15 (03B35)
- Mitchell, A. Richard (with Chandra, Jagdish; Lakshminathan, V.) Existence of solutions of boundary value problems for nonlinear second-order systems in a Banach space. *Nonlinear Anal.* 2 (1978), no. 2, 157-168. (M. Švec) 80f:34056 34G20
- Mitchell, Christopher J. (with Beker, Henry J.) A construction method for point divisible designs. *J. Statist. Plann. Inference* 2 (1978), no. 3, 293-306. (K. Vijayan) 80e:05023 05B05
- Mitchell, Ian Marxism and German scientific materialism. *Ann. of Sci.* 35 (1978), no. 4, 379-400. (D. J. Struik) 80f:01012 01A55



- Mitchell, Jerrel R. (with Nail, James B.; McDaniel, Willie L., Jr.) Computation of cofactors of  $[I - A]$  with applications. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 637-638. (Authors' summary) **80k:93005** 93A10 (15A15)
- Mitchell, Sandra L. Another characterization of the centroid of a tree. *Discrete Math.* 24 (1978), no. 3, 277-280. (S. L. Hakimi) **80f:05021** 05C05 (90B10)
- (with Farley, Arthur; Hedetniemi, Stephen; Proskurowski, Andrzej) Minimum broadcast graphs. *Discrete Math.* 25 (1979), no. 2, 189-193. (B. R. Myers) **80g:94099** 94C15
- Linear algorithms to recognize outerplanar and maximal outerplanar graphs. *Inform. Process. Lett.* 9 (1979), no. 5, 229-232. (From the introduction) **80k:68052** 68E10 (68C05)
- (with Beyer, T.; Jones, W.) Linear algorithms for isomorphism of maximal outerplanar graphs. *J. Assoc. Comput. Mach.* 26 (1979), no. 4, 603-610. (Shin-Yee Lu) **80k:68048** 68E10
- (with Cockayne, E. J.; Hedetniemi, Stephen) Linear algorithms on recursive representations of trees. *J. Comput. System Sci.* 18 (1979), no. 1, 76-85. (Fabrizio Luccio) **80h:68016** 68B15 (68C05)
- Mitchell, T. J. (with Jones, E. R.) Design criteria for detecting model inadequacy. *Biometrika* 65 (1978), no. 3, 541-551. (Valery Fedorov) **80f:62072** 62K05
- Mitchell, Thomas P. Lie algebras associated with motion in axisymmetric electromagnetic fields. *J. Math. Phys.* 20 (1979), no. 3, 382-384. (Daniel A. Akyeampong) **80b:22025** 22E70 (81C40)
- Mitchell, W. J. R. Absolute suspensions and cones. *Fund. Math.* 101 (1978), no. 3, 241-244. (John Bryant) **80g:57017** 57N15 (54B15, 57P99)
- Homology manifolds, inverse systems and cohomological local connectedness. *J. London Math. Soc.* (2) 19 (1979), no. 2, 348-358. (Raymond Barre) **80f:57013** 57P99
- Mitchell, William Ramsey cardinals and constructibility. *J. Symbolic Logic* 44 (1979), no. 2, 260-266. (Thomas J. Jech) **80f:03063** 03E55
- Mitchell, William J. (with Osborn, J. Marshall) Prime commutative power-associative algebras with descending chain condition. *Comm. Algebra* 7 (1979), no. 5, 443-523. (C. Tsai) **80c:17001** 17A05
- Mitchem, John A short proof of Catlin's extension of Brooks' theorem. *Discrete Math.* 21 (1978), no. 2, 213-214. (Paul A. Catlin) **80b:05029** 05C15
- Miler, I. G. The use of a number of admissible solutions of equations in algorithms for purely integer problems of linear programming. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 1059-1061, 1085. (Author's summary) **80h:90103** 90C10 (90C05)
- Mitjagin, Boris See Mitjagin, B. S.
- Mittel, A. The interpolation of transformers of weak type in symmetrically normed ideals. (Russian) *Operators in Banach spaces. Mat. Issled.* 47 (1978), 120-134, 138. (P. Saworotnow) **80a:47061** 47B99 (46M35, 47D25)
- Mitjagin, B. S. (with Dubinsky, Ed) Quotient spaces without bases in nuclear Fréchet spaces. *Canad. J. Math.* 30 (1978), no. 6, 1296-1305. (M. S. Ramanujan) **80b:46008** 46A35
- Linearization of holomorphic operator functions. II. *Integral Equations Operator Theory* 1 (1978), no. 2, 226-249. (V. A. Tkačenko) **80d:47022** 47A65
- Mitnicki, V. Ja. (with Beloserkovskii, O. M.) Some exact solutions of the problem of a magnetic dipole surrounded by an infinitely conducting fluid. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 2, 464-473, 557. (J. F. Heyda) **80f:35016** 35C05 (78A25, 86A25)
- Mitra, Debasis (with Weiss, Alan) Digital adaptive filters: conditions for convergence, rates of convergence, effects of noise and errors arising from the implementation. *IEEE Trans. Inform. Theory* 25 (1979), no. 6, 637-652. (Authors' summary) **80j:93121** 93E11
- See also Chassen, T. A. C. M., **80d:93054**
- Mitra, G. An exposition of the (linear) complementarity problem. *Internat. J. Math. Ed. Sci. Tech.* 10 (1979), no. 3, 401-416. (Author's summary) **80j:90106** 90C33
- Mitra, P. Flow of a viscous incompressible dusty gas between two concentric co-axial circular cylinders. *J. Math. Phys. Sci.* 13 (1979), no. 4, 385-394. (Author's summary) **80d:76030** 76D99
- Mitra, Sujit Kumar (with Majumdar, Dibyen) Least squares under quadratic constraints. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977)*, pp. 321-333, Academic Press, New York, 1979. (N. N. Abdelmalek) **80f:65015** 65D15
- (with Puri, Madan L.) Shorted operators and generalized inverses of matrices. *Linear Algebra Appl.* 25 (1979), 45-56. (Donald Kershaw) **80b:15009** 15A09
- Mitra, Tapan A note on efficient growth with irreversible investment and the Phelps-Koopmans theorem. *J. Econom. Theory* 18 (1978), no. 1, 216-223. (James G. Morris) **80g:90032** 90A16 (90A14)
- On optimal economic growth with variable discount rates: existence and stability results. *Internat. Econom. Rev.* 20 (1979), no. 1, 133-145. (G. Chichilnisky) **80b:90036** 90A16
- Identifying inefficiency in smooth aggregative models of economic growth. A unifying criterion. *J. Math. Econom.* 6 (1979), no. 1, 85-111. (Author's summary) **80f:90040** 90A16
- Mitrovic, Dragoslav S. (with Bullen, P. S.; Vasić, P. M.) Means and inequalities connected with them. I. (Serbo-Croatian. English summary) *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* no. 600 (1977), 232 pp. (B. Crstici) **80b:26001** 26-02 (26Dxx)
- (with Popadić, Milan S.) ★Inequalities in number theory. *University of Niš, Department of Mathematics, Niš, 1978. vii + 183 pp. (H. Halberstam)* **80c:10002** 10-02
- Mitro, Joanna B. Dual Markov processes: construction of a useful auxiliary process. *Z. Wahrsch. Verw. Gebiete* 47 (1979), no. 2, 139-156. (M. G. Šur) **80g:60075** 60J40
- Dual Markov functionals: applications of a useful auxiliary process. *Z. Wahrsch. Verw. Gebiete* 48 (1979), no. 1, 97-114. (M. G. Šur) **80g:60076** 60J25 (60J55)
- Mitropolskii, Ju. O. (with Martinjuk, A. A.) Some trends in studies of the stability of periodic motions and the theory of nonlinear oscillations. (Russian) *Prikl. Meh.* 14 (1978), no. 3, 3-13, 140. (Authors' summary) **80b:70023** 70K20 (34C15)
- (with Martinjuk, A. A.) Some questions on the comparison method in nonlinear mechanics. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 6, 823-829, 862. (D. Bobrowski) **80b:34063** 34D20 (34C11)
- (with Balnov, D. D.; Miluševa, Svetla D.) Application of the averaging method to the solution of boundary value problems for ordinary differential and integro-differential equations. (Russian) *Mat. Fiz. No. 25* (1979), 3-22, 118. (R. R. Ahmerov) **80j:34048** 34C29 (34B15, 45J05)
- (with Samoilenko, A. M.) On the question of asymptotic expansions of nonlinear mechanics. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 1, 42-53, 111. (G. Bojadjiev) **80c:34043** 34C29
- (with Homa, G. P.) Averaging methods for hyperbolic systems with fast and slow variables. The Cauchy problem. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 2, 149-156, 222. (Ja. A. Roitberg) **80g:35014** 35B40 (35L45)
- (with Homa, G. P.) Averaging methods for hyperbolic systems with fast and slow variables. A mixed problem. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 4, 398-406, 477. (R. R. Ahmerov) **80j:35065** 35L60 (35B99)
- See also Stojanov, N. V.; et al., **80b:01026**; Complex analysis and manifolds, **80d:00004**; Group theoretic methods in mathematical physics, **80d:00010**; Aliev, F. A.; et al., **80d:93044**; Theory of functions and its applications, **80k:30001** and Samoilenko, A. M.; et al., **80k:65075**
- Mitrovic, Žarko M. On some relations in interval arithmetic. *Math. Balkanica* 6 (1976), 129-132 (1978). (H. Ratschek) **80g:65051** 65G10
- Contributions to the theory of interval arithmetic, and its applications. (Serbo-Croatian. English summary) *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz. No. 601* (1977), 58 pp. (1978). (M. Tomić) **80e:20079** 20M14
- Mitsch, H. Derivations and translations on  $\ell$ -semigroups. *Acta Sci. Math. (Szeged)* 40 (1978), no. 3-4, 301-307. (Joseph Chacron) **80b:20082** 20M15
- Inverse semigroups and their natural order. *Bull. Austral. Math. Soc.* 19 (1978), no. 1, 59-65. (Moham S. Putcha) **80c:06022** 06F05 (20M10)
- Mitschke, P. (with Wein, O.) Ähnlichkeitstheorie des Rayleighschen Problems für ein total-anisotropes Modell des viskoelastischen Verhaltens. (English summary) *Acta Mech.* 34 (1979), no. 1-2, 99-113. (F. V. Pohle) **80m:73042** 73F15 (65N99)
- Mitschke, A. (with Wille, Rudolf) Über freie modulare Verbände  $FM(\mathfrak{M})$ . *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 219-233, Heyn, Klagenfurt, 1979. (Ralph Freese) **80g:06010** 06C05
- Mitschke, Gerd The standardization theorem for  $\lambda$  calculus. *Z. Math. Logik Grundlag. Math.* 25 (1979), no. 1, 29-31. (Henk Barendregt) **80g:03013** 03B40
- Mitsunashi, Teruo (with Konno, Kimiaki; Ichikawa, Yoshi Hiko) Propagation of ion acoustic cnoidal wave. *J. Phys. Soc. Japan* 46 (1979), no. 6, 1907-1914. (From the summary) **80f:76054** 76X05 (76Q05)
- Mitsui, Takayoshi On the partition problem in an algebraic number field. *Tokyo J. Math.* 1 (1978), no. 2, 189-236. (Ernst Heppner) **80d:10071** 10J20 (12A99)
- Mitani, Taketomo The initial-value adjusting method for solving problems of the least squares type of ordinary differential equations. *Mem. Numer. Math. No. 6* (1979), 21-37. (Siegfried Filippi) **80f:65083** 65L05 (41A29, 65K10)
- Mittal, D. P. (with Sharma, Bhu Dev) New nonadditive measures of entropy for discrete probability distributions. *J. Math. Sci.* 10 (1975), 28-40 (1976). (Authors' summary) **80f:94010** 94A17
- (with Sharma, Bhu Dev) On nonadditive measures of entropy for a continuous probability distribution. *Math. Balkanica* 6 (1976), 194-203 (1978). (From the summary) **80i:94009** 94A17
- Mittal, M. L. (with Prasad, Gunraj) On strong matrix summability. *Indian J. Pure Appl. Math.* 9 (1978), no. 10, 1076-1082. (H.-H. Körle) **80k:40007** 40F05 (40C05)
- (with Govinda Thiritha, D.) Nonlinear hydromagnetic waves in two-electron temperature plasma. *Acta Phys. Acad. Sci. Hungar.* 46 (1979), no. 1, 31-37. (Authors' summary) **80b:76048** 76W05
- Mittal, R. C. (with Iyengar, S. R. K.) High accuracy difference schemes for the cylindrical heat conduction equation. *J. Inst. Math. Appl.* 22 (1978), no. 3, 321-330. (Authors' summary) **80a:65213** 65N20
- Mittal, S. C. (with Sinha, Rajiv; Arora, J. P.) On the degree of approximation of polynomial operators. *Acta Cienc. Indica* 5 (1979), no. 3, 123-127. (Authors' summary) **80g:41009** 41A10
- Mittal, Yashovin A new mixing condition for stationary Gaussian processes. *Ann. Probab.* 7 (1979), no. 4, 724-730. (Jack Cuzick) **80g:60034** 60G15 (60G17)
- Extreme value distribution for normalized sums from stationary Gaussian sequences. *Stochastic Process. Appl.* 9 (1979), no. 1, 67-84. (Simeon M. Berman) **80b:60050** 60G10 (60G15)
- Mittas, Jean (with Konstantinidou, Marie) Introduction à l'hyperalgèbre de Boole. *Math. Balkanica* 6 (1976), 314-320 (1978). (F. Lapacher) **80f:06014** 06E05
- ramirez Mittelbrunn, J. See Ramirez Mittelbrunn, J.
- Mittelstaedt, Peter (with Stachow, E.-W.) The principle of excluded middle in quantum logic. *J. Philos. Logic* 7 (1978), no. 2, 181-208. (Philip L. Quinn) **80a:03076** 03G12 (81B10)
- Quantum logic. *Physical theory as logico-operational structure*, pp. 153-166, Univ. Western Ontario Series in Philos. Sci., T. Reidel, Dordrecht, 1979. (M. J. Męczyński) **80f:03072** 03G12 (81B10)
- Mittler, H. (with Widder, F.) Classical solutions of a nonlinear field equation. *J. Phys. A* 12 (1979), no. 11, 1981-1990. (Gheorghe Nenciu) **80j:81101** 81M05 (35Q20)
- Mittler, Jagdish (with Sharma, Bhu Dev; Mohan, Man) On measures of "useful" information. *Inform. and Control* 39 (1978), no. 3, 323-336. (L. L. Campbell) **80e:94009** 94A17
- (with Sharma, Bhu Dev; Mohan, Man) On generalized "useful" information. *J. Combin. Inform. System Sci.* 3 (1978), no. 2, 82-93. (Authors' summary) **80g:94034** 94A17
- Mittler, P. K. Massless renormalizable field theories and the Yang-Mills field. *New developments in quantum field theory and statistical mechanics (Proc. Cargèse Summer Inst., Cargèse, 1976)*, pp. 225-239, NATO Adv. Study Inst. Ser., Ser. B: Physics, 26, Plenum, New York, 1977. (Author's introduction) **80c:81071** 81E10
- (with Daniel, M.; Viallet, C.-M.) Local stability of deformations of self-dual Yang-Mills fields on  $S^4$ . *Phys. Lett. B* 77 (1978), no. 1, 77-79. (Editors) **80c:80022** 58G05 (81E10)
- Mitra, Raj (with Rahmat-Samii, Y.) A spectral domain analysis of high frequency diffraction problems. *Electromagnetic scattering*, pp. 121-183, Academic Press, New

- York, 1978. (J. A. Bennett) **80b:78026** 78A45 (35P25)  
 (with Ko, W. L.; Rahmat-Samii, Y.) Solution of electromagnetic scattering and radiation problems using a spectral domain approach—a review. *Wave Motion* 1 (1979), no. 2, 95–106. (Authors' summary) **80b:78027** 78A40  
 (with Hou, Yun Li; Jamnejad, Vahraz) Analysis of open dielectric waveguides using mode-matching technique and variational methods. *IEEE Trans. Microwave Theory Tech.* 28 (1980), no. 1, 36–43. (Authors' summary) **80m:78026** 78A50
- Mitzel, Glenn E. (with Clancy, Steven J.; Rugh, Wilson J.) On transfer function representations for homogeneous nonlinear systems. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 242–249. (Authors' summary) **80b:93018** 93A99
- Mitra, S. (with Tamura, K.) Necessary and sufficient conditions for local and global nondominated solutions in decision problems with multi-objectives. *J. Optim. Theory Appl.* 28 (1979), no. 4, 501–523. (Pierre Loridan) **80j:90101** 90C31
- Miura, Takashi Relativistic path integrals. *Progr. Theoret. Phys.* 61 (1979), no. 5, 1521–1535. (Author's summary) **80i:81039** 81C35 (81M05)
- Miwa, Takao An example of a topological space whose cardinality is not inherited by its  $k$ -leader. (Japanese) *Sigaku* 29 (1977), no. 4, 360 (1978). (Tsugio Tani) **80b:54003** 54A25
- Miyadera, Isao Asymptotic behavior of iterates of nonexpansive mappings in Banach spaces. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 7, 212–214. (L. P. Belluce) **80d:47009a** 47H10  
 Asymptotic behavior of iterates of nonexpansive mappings in Banach spaces. II. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 10, 318–321. (L. P. Belluce) **80d:47009b** 47H10  
 (with Shimizu, Makoto) Perturbation theory for cosine families on Banach spaces. *Tokyo J. Math.* 1 (1978), no. 2, 333–343. (S. Kurepa) **80e:47035** 47D05
- Miyahara, Yasuaki On relations between conformal mappings and isomorphisms of spaces of analytic functions on Riemann surfaces. *J. Math. Soc. Japan* 31 (1979), no. 2, 373–389. (A. D. Mednyh) **80e:30005** 30C35 (30F10, 46E10)
- Miyajima, Kimio On the existence of Kuranishi family for deformations of holomorphic maps. *Sci. Rep. Kagoshima Univ.* No. 27 (1978), 43–76. (H. Kerner) **80a:32017** 32G05
- Miyakawa, Makoto (with Watanabe, Shinsuke; Yajima, Nobuo) Method of conservation laws for solving nonlinear Schrödinger equation. *J. Phys. Soc. Japan* 46 (1979), no. 5, 1653–1659. (Authors' summary) **80e:35092** 35Q20 (81C05)
- Miyama, Tōru Note on functional completeness in many valued logics. *Math. Japon.* 23 (1978/79), no. 4, 427–432. (V. V. Gorlov) **80e:03027** 03B50
- Miyamoto, Haruo (with Shudo, Takafumi) On the decomposition of coalgebras. *Hiroshima Math. J.* 8 (1978), no. 3, 499–504. (Surender K. Gupta) **80a:16018** 16A24
- Miyamoto, Sadaaki (with Sawaragi, Yoshikazu) State estimation formula for a parabolic system with unknown input function. *J. Math. Anal. Appl.* 68 (1979), no. 2, 431–440. (Authors' summary) **80e:93117** 93E10  
 (with Nakamori, Yoshiteru; Ikeda, Saburo; Sawaragi, Yoshikazu) Sensitivity approach to measurement optimization in distributed parameter systems. (Japanese. English summary) *Systems and Control* 23 (1979), no. 4, 247–255. (Authors' summary) **80e:93087** 93C99
- Miyamoto, Takao On a generalization of Čebyšev's inequality. (Japanese. English summary) *Sci. Bull. Fac. Ed. Nagasaki Univ.* No. 30 (1979), 5–8. (Author's summary) **80e:60028** 60E15
- Miyazaki, Masayoshi Unirational quasi-elliptic surfaces. *Japan. J. Math. (N.S.)* 3 (1977), no. 2, 395–416. (T. Kambayashi) **80m:14022** 14J25 (14J10)  
 (with Kambayashi, T.) On flat fibrations by the affine line. *Illinois J. Math.* 22 (1978), no. 4, 662–671. (William C. Waterhouse) **80f:14028** 14M20 (13B25, 14L99)  
 Simple birational extensions of a polynomial ring  $k[x, y]$ . *Osaka J. Math.* 15 (1978), no. 3, 663–677. (T. Kambayashi) **80k:14046** 14J25 (14M20)  
 Polynomial rings and related topics. (Japanese) *Sigaku* 31 (1979), no. 2, 97–109. (T. Kambayashi) **80m:14023** 14J25 (13F20)
- Miyano, Satoru A note on one-way pushdown automata with weak-counters. *Res. Inst. Fund. Inform. Sci. Res. Rep. No. 94* (1979), ii + 13 pp. (Author's introduction) **80b:68049** 68D25 (68F10)
- Miyao, Takahiro A probabilistic model of location choice with neighborhood effects. *J. Econ. Theory* 19 (1978), no. 2, 347–358. (Edwin Burmeister) **80e:90021** 90A14
- Miyazaki, Kiyonori (with Fujino, Eiichi; Ishii, Naohiro) On properties of the maximum periodic sequence realizable by a network of threshold elements. *Systems-Comput. Controls* 8 (1977), no. 6, 41–49 (1979). (Authors' summary) **80f:68073** 68D90 (94C99)
- Miyazaki, Yūichi On a skew polynomial ring. *J. Math. Soc. Japan* 31 (1979), no. 2, 317–330. (Jean-Luc Chabert) **80f:16003** 16A05 (16A16, 16A36)
- Miyata, Yoshimasa On the module structure in a cyclic extension over a  $p$ -adic number field. *Nagoya Math. J.* 73 (1979), 61–68. (H. Yokoi) **80f:12013** 12B17
- Miyatake, Sadao Théorèmes de comparaison pour les équations différentielles du second ordre. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 5, A345–A347. (Author's summary) **80i:34053** 34C11 (34C10)
- Miyawaki, T. (with Gupta, A. K.) On a uniform mixture model. *Biometrical J.* 20 (1978), no. 7-8, 631–637. (G. S. Lingappaiah) **80m:62029** 62F10
- Miyazaki, Shigeji (with Nishiyama, Noriyuki; Hashimoto, Fumio) An adjacent pairwise approach to the mean flow-time scheduling problem. (Japanese summary) *J. Oper. Res. Soc. Japan* 21 (1978), no. 2, 287–301. (Masafumi Sasaki) **80e:90080** 90B35
- Miyazawa, Masahiko A formal approach to queueing processes in the steady state and their applications. *J. Appl. Probab.* 16 (1979), no. 2, 332–346. (Dietrich Stoyan) **80d:60135** 60K25
- Miyazawa, Teiuro Some theorems on conformally symmetric spaces. *Tensor (N.S.)* 32 (1978), no. 1, 24–26. (T. Nagano) **80e:53017** 53B20  
 On projectively recurrent spaces. *Tensor (N.S.)* 32 (1978), no. 2, 216–218. (T. Ohkubo) **80e:53018** 53B20  
 (with Adati, Tuzui) Some transformations on  $P$ -Sasakian manifolds. *TRU Math.* 14 (1978), no. 1, 17–28. (N. Prakash) **80d:53032a** 53C25  
 On a torse-forming vector field in a  $P$ -Sasakian manifold. *TRU Math.* 14 (1978), no. 1, 39–42. (N. Prakash) **80d:53032b** 53C25  
 An invariant hypersurface immersed in an almost paracontact Riemannian
- manifold. *TRU Math.* 14 (1978), no. 2, 27–30. (Koichi Ogiue) **80e:53066** 53C40
- Miyoshi, Ken-ichi (with Iwasa, Junkyo) On the decomposition theorem for  $(n-2)$ -connected  $2n$ -dimensional  $w$ -manifolds. *Sci. Rep. Kanazawa Univ.* 24 (1979), no. 1, 1–8. (L. Guillou) **80j:57030** 57R65
- Miyoshi, Tetsuhiko (with Araki, Makoto) Remark on the unconditional stability of a finite element scheme for nonlinear plate problems. *Kumamoto J. Sci. (Math.)* B (1978/79), no. 2, 43–47. (G. Paria) **80e:73051** 73K25 (65N30)
- Mizel, Victor J. (with Leitman, M. J.) Asymptotic stability and the periodic solutions of  $x(t) + \int_{-\infty}^t a(t-s)g(s, x(s))ds = f(t)$ . *J. Math. Anal. Appl.* 66 (1978), no. 3, 606–625. (A. Ramm) **80a:45009** 45G10  
 (with MacCamy, Richard C.) Nonlinear vector-valued hereditary equations on the line. *Volterra equations (Proc. Helsinki Symp. Integral Equations, Otaniemi, 1978, pp. 206–219, Lecture Notes in Math., 737, Springer, Berlin, 1979. (V. Lakshmikantham) **80j:45021** 45N05  
 (with Marcus, Moshe) Every superposition operator mapping one Sobolev space into another is continuous. *J. Funct. Anal.* 33 (1979), no. 2, 217–229. (Vo-Khac Khon) **80b:47039** 47B38 (46E35)  
 (with Marcus, Moshe) Complete characterization of functions which act, via superposition, on Sobolev spaces. *Trans. Amer. Math. Soc.* 251 (1979), 187–211. (Richard Bagby) **80j:46055** 46E35 (47H15)  
 (with Berger, Marc A.) Theorems of Fubini type for iterated stochastic integrals. *Trans. Amer. Math. Soc.* 252 (1979), 249–274. (W. J. Padgett) **80b:60072** 60B10 (60H20, 93E20)*
- Mizoguchi, V. N. (with Muhi, V. V.; Romanov, V. A.) Optimal statistical regularization of operator equations with restriction on the norm of the solution. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 1036–1040, 1084. (Authors' summary) **80e:65064** 65J10 (47A50)
- Mizohata, Sigeru Une remarque sur le théorème de Cauchy-Kowalewski. *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* 5 (1978), no. 3, 559–566. (Howard A. Levine) **80a:35086** 35A10
- Mizokami, Takemi Metacompactness and subparacompactness of product spaces. *J. Math. Soc. Japan* 31 (1979), no. 2, 263–272. (J. van der Slot) **80b:54026** 54D11 (54D10, 54E18)  
 On submetrizability and  $G_\delta$ -diagonals. *Proc. Amer. Math. Soc.* 78 (1980), no. 1, 111–115. (Stojan Nedev) **80j:54023** 54E35 (54B20, 54C10)
- Mizoroki, Pavlina (with Vidav, Ivan) On entire matrix-valued functions. *Linear Algebra Appl.* 22 (1978), 25–31. (B. Rodríguez-Salinas) **80b:30043** 30G30
- Mizrahi, Maurice M. The semiclassical expansion of the anharmonic-oscillator propagator. *J. Math. Phys.* 20 (1979), no. 5, 844–855. (N. Nakanishi) **80e:81069** 81E10
- Mizukami, Koichi Differential games with incomplete state information and optimal pursuit-evasion strategies. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978), Section I, pp. 413–424, Operations Research Verfahren, 31, Hain, Meisenheim, 1979. (Author's summary) **80e:90152** 90D26*
- Mizuno, Hirobumi (with Ando, Kiyoshi) On certain discontinuous groups. I. (Japanese. English summary) *Rep. Univ. Electro-Comm.* 29 (1978/79), no. 2, 187–198. (S. Murakami) **80f:32022** 32N05 (10D07, 20H10)  
 (with Ando, Kiyoshi) On certain discontinuous groups. II. (Japanese. English summary) *Rep. Univ. Electro-Comm.* 30 (1979/80), no. 1, 55–61. (S. Murakami) **80f:32032** 32M05
- Mizusawa, T. (with Kajita, T.; Naruoka, M.) Buckling of skew plate structures using  $B$ -spline functions. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 1, 87–96. (Authors' summary) **80j:73023** 73H05
- Mizuta, Yoshihiro Fine differentiability of Riesz potentials. *Hiroshima Math. J.* 8 (1978), no. 3, 505–514. (M. Ohtsuka) **80a:31004** 31B15
- Mizutani, T. (with Locher, M. P.) The use of analyticity in nuclear physics. *Phys. Rep.* 46 (1978), no. 2, 43–92. (Z. Janković) **80e:81001** 81-02 (81F99)
- Mjajić, V. F. Some variants of the regularization for a double encounter in the  $n$ -body problem. (Russian. English summary) *Bull. Inst. Teoret. Astronom.* 14 (1978), no. 6 (159), 370–378. (From the summary) **80a:70017** 70F10 (34C35)
- Mjaskov, V. I. Integral-free representation of a complex with a triple infinitely distant inflexional center. (Russian) *Ukrain. Geom. Sb.* No. 22 (1979), 115–122. 5. (Josef Vala) **80b:53017** 53A25
- Mjelde, K. M. Sufficiency of Kuhn-Tucker optimality conditions for a fractional programming problem. *BIT* 18 (1978), no. 4, 454–456. (John J. Dinkel) **80a:90135** 90C32  
 Convex-concave fractional programming—evaluation of solutions and optimality conditions. *BIT* 19 (1979), no. 2, 270. (Author's introduction) **80g:90096** 90C25 (90C32)
- The necessity of differentiability in componentwise optimization—a remark on a theorem of Oettli. *European J. Oper. Res.* 3 (1979), no. 4, 340. (Editors) **80b:90031** 90C25
- Discrete allocation and replenishment of resources with binary effectiveness. *J. Oper. Res. Soc.* 30 (1979), no. 7, 619–624. (Edwin Burmeister) **80e:90064** 90C08  
 Location of a discrete resource and its allocation according to a fractional objective. *European J. Oper. Res.* 4 (1980), no. 1, 49–53. (R. N. Kaul) **80j:90105** 90C32 (90C50)
- Mjuller, F. The realization of a class of automata mappings. (Russian) *Problemy Kibernet.* No. 34 (1978), 95–108, 272. (Boleslaw Mikolajczak) **80a:68069** 68D45
- Mkrtchian, E. S. A logarithmic residue formula in  $C^*$  and its application to the study of univalent mappings. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 6 (1979), no. 1, 14–16. (Harold P. Boas) **80b:32011** 32A27
- Mkrtchian, R. Z. (with Aleksandrian, R. A.) A criterion for the completeness of eigenelements of a selfadjoint operator with a spectrum of infinite multiplicity. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* 13 (1978), no. 3, 209–214, 265. (G. M. Gubreev) **80a:47083** 47A10
- Mkrtchian, S. M. Analytic determination of Shapley's vector for a generalized balanced market. (Russian. Lithuanian and English summaries) *Mat. Metody v Social. Nauk.—Trudy Sem. Processy Optimal. Upravleniya II Sekcija* No. 11 (1978), 37–78, 125. (Milan Mareš) **80b:90156** 90D12
- Mkrtchian, S. T. Stability of the characterizations of distributions and some characteristic properties, in a general sense, of a normal distribution. (Russian. Armenian summary)



- Akad. Nauk Armjan. SSR Dokl.* 67 (1978), no. 3, 129–131. (S. G. Malochevskii) 80b:62029 62E10
- Mikrijärvi, S.** See **Mikrijärvi, S. M.**
- Mikrijärvi, R. R.** A fourth-order linear equation. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 4, 740–742, 767. (M. Ráb) 80b:34009 34A30  
(with Lukašević, N. A.) Linear second-order equations with special particular solutions. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 6, 488–491, 571. (J. D. Kečkić) 80b:34008 34A30
- Milakov, K.** (with Kozarov, M.) The oscillations of elliptic cylindrical shells. (Bulgarian. Russian and English summaries) *Teoret. Prilož. Math.* 10 (1979), no. 3, 8, 11, 115–123. (Authors' summary) 80m:73057 73L20
- Milak, W.** Dissipative random processes. *Probability theory on vector spaces (Proc. Conf., Trzebiezowice, 1977)*, pp. 139–169, *Lecture Notes in Math.*, 656, Springer, Berlin, 1978. (Hannu Niemi) 80g:60032 60G12 (47A20, 47D05)
- Szegő measures related to compact plane sets. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 1 (1978), 239–249. (R. G. Douglas) 80b:46068 46J25 (47A99)
- Milak, J.** A note on cofinal extensions and segments. *Comment. Math. Univ. Carolin.* 19 (1978), no. 4, 727–742. (James H. Schmerl) 80b:03045 03C50 (03C65)
- Miljanić, H.-P.** (with Argyris, John H.; Johnsen, T. L.) On accurate stress calculation in static and dynamic problems using the natural factor approach. *Comput. Methods Appl. Mech. Engrg.* 19 (1979), no. 2, 277–308. (N. Gass) 80f:73064 73K30 (65N30)
- Mink, D. S.** (with Saff, Edward B.; Varga, Richard S.) On the zeros of Jacobi polynomials  $P_n^{(\alpha, \beta)}(x)$ . *Trans. Amer. Math. Soc.* 249 (1979), no. 1, 159–162. (Y. L. Luke) 80g:33021 33A65
- Misulis, M.** (with Pulul, J.; Sifakis, Joseph) Synchronized Petri nets: a model for the description of non-autonomous systems. *Mathematical foundations of computer science, 1978 (Proc. Seventh Sympos., Zakopane, 1978)*, pp. 374–384, *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (Guy Vidal-Naquet) 80d:68075 68D90  
(with Pulul, J.; Sifakis, Joseph) Réseaux de Petri synchronisés. *RAIRO Automat.* 12 (1978), no. 2, 103–130. (Rüdiger Valk) 80f:68096 68A05 (68B20, 68D90)
- Misuro, Vinko** (with Leela, S.) Existence of solutions in a closed set for delay differential equations in Banach spaces. *Nonlinear Anal.* 2 (1978), no. 1, 47–58. (Hans Kaper) 80c:34070 34K30  
(with Lakshmikantham, V.; Leela, S.) Existence and uniqueness of solutions of delay differential equations on a closed subset of a Banach space. *Nonlinear Anal.* 2 (1978), no. 3, 311–327. (Hans Kaper) 80c:34069 34K30
- Mohbs, F. R.** (with Barillon, A.; Brindley, J.; Lessen, M.) Marginal instability in Taylor-Couette flows at a very high Taylor number. *J. Fluid Mech.* 94 (1979), no. 3, 453–463 (6 plates). (W. O. Criminale, Jr.) 80k:76044 76E30
- Molnar, V. V.** The Riemann problem on an open Riemann surface of the class  $O_{KD}$ . (Russian) *Trudy Sem. Kraev. Zadacham No. 14* (1977), 175–182. (S. A. Tersenov) 80c:30021 30F10
- Mocanu, Constanta** A generalization of the invariant of H. Leptin. (Romanian. English summary) *Studia Univ. Babeş-Bolyai Math.* 23 (1978), no. 1, 45–49. (Ş. Strătilă) 80i:22014 22D05 (43A05)
- Mocanu, Petru T.** (with Miller, Sanford S.) Second-order differential inequalities in the complex plane. *J. Math. Anal. Appl.* 65 (1978), no. 2, 289–305. (M. M. Schiffer) 80i:30009 30C45 (34A20)  
(with Miller, Sanford S.; Reade, Maxwell O.) Starlike integral operators. *Pacific J. Math.* 79 (1978), no. 1, 157–168. (Author's review (P. T. M.)) 80g:30008 30C45  
(with Miller, Sanford S.) Second order differential inequalities in the complex plane. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 301–322, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (Olusola Akinyele) 80m:34006 34A20 (31C05, 32A30)
- Moder, J.** (with Blažević, B. I.) Topological analysis of the graph of a circuit by the method of accumulation in the decomposition of the graph into elementary subgraphs. (Russian) *Otbor i Peredači Informacii No. 50* (1977), 49–55, 124. (Authors' summary) 80a:94066 94C15
- Mochizuki, Horace Y.** (with Bachmuth, Seymour) IA-automorphisms of the free metabelian group of rank 3. *J. Algebra* 55 (1978), no. 1, 106–115. (V. N. Remeslennikov) 80a:20036 20E36  
(with Bachmuth, Seymour) Automorphism groups and subgroups of  $SL_2$  over division rings. *Comm. Algebra* 7 (1979), no. 14, 1531–1558. (M. M. Murač) 80j:20044 20G35 (20H25)
- Mochizuki, Kiyoshi** (with Uchiyama, Jun) Radiation conditions and spectral theory for 2-body Schrödinger operators with "oscillating" long-range potentials. II. *J. Math. Kyoto Univ.* 19 (1979), no. 1, 47–70. (D. M. Eidus) 80g:35100 35P25 (35J10)
- Mochizuki, Bohdan** (with Grzymkowski, Radosław) Some problems of differential approximation of boundary conditions of heat flow at the contact of two media. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 29 (1979), 93–100. (Authors' summary) 80i:80005 80A20
- Mock, George** On almost contact affine connections in orthogonal congruences. (Romanian. English summary) *Bul. Inst. Politehn. Bucureşti Ser. Mec.* 40 (1978), no. 2, 11–18. (R. Roşca) 80k:53029 53B05  
Sur la dérivée Lie dans les espaces non holonomes. *Mathematica (Cluj)* 20(43) (1978), no. 1, 31–38. (L. Tamásy) 80k:53028 53B05
- Mock, M. S.** Some higher order difference schemes enforcing an entropy inequality. *Michigan Math. J.* 25 (1978), no. 3, 325–344. (Rémi Vaillancourt) 80a:65198 65M10 (35L65)  
The half-line boundary value problem for  $u_{xx} = f(u)$ . *J. Differential Equations* 32 (1979), no. 2, 258–273. (Charles C. Conley) 80k:35059 35Q20 (34B15)
- Mocker, Jiri** Topological groups of divisibility. *Colloq. Math.* 39 (1978), no. 2, 301–311. (Klaus Keimel) 80i:06016 06F20 (06F30, 13A05)
- Mochas, Jonas** Sufficient conditions for the convergence of Bayesian methods to the absolute minimum of continuous functions. (Russian. Lithuanian and English summaries) *Teor. Optimal. Reizen—Trudy Sem. Procezy Optimal. Upravleniya VI Sekciya No. 4* (1978), 67–88, 115. (Author's summary) 80k:65086 65K10
- Molares-Yandi, Mohammad** (with Miller, Bruce L.) The distribution of recoverable inventory items from a repair center when the number of consumption centers is large. *Naval Res. Logist. Quart.* 25 (1978), no. 4, 597–604 (1979). (Kailash K. Kapur) 80b:90051 90B05 (90B25)
- Mode, Charles J.** A population projection component of a computer system—population policies and birth targets. *Math. Biosci.* 36 (1977), no. 1–2, 87–107. (Author's summary) 80c:92037 92A15  
(with Pickens, Gary) An analysis of postpartum contraceptive strategies—policies for preventive medicine. *Math. Biosci.* 47 (1979), no. 1–2, 91–113. (Authors' summary) 80h:92017 92A15
- Model, B. I.** A certain class of differential games. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 2, 53–59, 220 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 2, 32–38 (1979). (D. J. Wilson) 80d:90097 90D25
- Model, R.** Kombinationsresonanz eines stochastisch erregten Schwingungssystems. (English and Russian summaries) *Z. Angew. Math. Mech.* 58 (1978), no. 9, 377–382. (Author's summary) 80a:70024 70L05 (34C15)
- Moder, Joseph J.** See **Handbook: Operations research**, 80a:90047
- Modestino, James W.** (with Daut, David G.) Combined source-channel coding of images. *IEEE Trans. Comm.* 27 (1979), no. 11, 1644–1659. (Authors' summary) 80b:94021 94A29
- Modi, G. C.** Contour integrals involving generalized  $H$ -functions. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)*, 23(71) (1979), no. 1, 65–70. (R. G. Buschman) 80g:33011 33A35
- Modica, Giuseppe** (with Giaquinta, Mariano; Souček, J.) Functionals with linear growth in the calculus of variations. I, II. *Comment. Math. Univ. Carolin.* 20 (1979), no. 1, 143–156, 157–172. (Authors' summary) 80b:35047 35J20 (49A34)  
(with Giaquinta, Mariano) Almost-everywhere regularity results for solutions of nonlinear elliptic systems. *Manuscripta Math.* 28 (1979), no. 1–3, 109–158. (V. A. Kondrat'ev) 80m:35033 35J60  
(with Giusti, Enrico) A note on regular points for solutions of elliptic systems. *Manuscripta Math.* 29 (1979), no. 2–4, 417–426. (J. Kačur) 80m:35017 35D10 (35J15)
- Modica, Luciano**  $\Gamma$ -convergence to minimal surfaces problem and global solutions of  $\Delta u = 2(u^2 - u)$ . *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis (Rome, 1978)*, pp. 223–244, *Pitagora, Bologna*, 1979. (Paolo Marcellini) 80g:49042 49F10 (35J60, 49B50)  
A note on almost minimal currents. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 3, 617–624. (F. J. Almgren, Jr.) 80g:49040 49F22 (53A10)
- Modina, L. S.** Domination ambiguity of context-free languages. (Russian) *Problemy Peredači Informacii* 14 (1978), no. 2, 86–98. (Siegmund Gerber) 80b:68093 68F05
- Modugno, Marco** (with Stefani, Gianna) On the geometrical structure of shock waves in general relativity. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 30 (1979), no. 1, 27–50. (Authors' summary) 80g:83021 83C55 (53C80)
- Moegele, Colette** Idéaux primitifs dans les algèbres enveloppantes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 15, 709–712. (Author's summary) 80b:17007 17B35
- van Moerbeke, Pierre** (with Mumford, David) The spectrum of difference operators and algebraic curves. *Acta Math.* 143 (1979), no. 1–2, 93–154. (Mark Adler) 80c:58028 58F07 (14H45, 34C05)
- Moeschlin, Otto** (with Hild, Claus) Ein weitgefaster "workability"-Begriff für Input-Output-Systeme und verallgemeinerte Hawkins-Simon-Bedingungen. *Quantitative Wirtschaftsforschung*, pp. 507–512, Mohr, Tübingen, 1977. (Trout Rader) 80b:90043 90A17  
See also *Game theory and related topics*, 80j:90003
- Moesner, L.** Vektorwertige dynamische Optimierung bei vollständiger beziehungsweise unvollständiger Information über zeitabhängige Einflussparameter. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 3, 407–421. (K. Zimmermann) 80c:90145 90C39
- Moes, H. J. K.** (with Eckhaus, Wiktor) Asymptotic solutions in free boundary problems of singularly perturbed elliptic variational inequalities. *Differential equations and applications (Proc. Third Scheveningen Conf., Scheveningen, 1977)*, pp. 59–73, North-Holland Math. Studies, 31, North-Holland, Amsterdam, 1978. (Gianfranco Bottaro) 80c:49004 49A29 (35C20, 35J99)  
A note on the asymptotic behavior of solutions of the KPP equation. *SIAM J. Math. Anal.* 10 (1979), no. 4, 728–732. (Author's summary) 80b:35017 35B40 (35Q20)
- Moffat, J. W.** (with Kunstat, G.) Conservation laws in a generalized theory of gravitation. *Phys. Rev. D* (3) 19 (1979), no. 4, 1084–1092. (Authors' summary) 80b:83030 83C50 (49A99)  
New theory of gravitation. *Phys. Rev. D* (3) 19 (1979), no. 12, 3554–3558. (Kenneth Dunn) 80i:83050 83D05 (53B50)  
(with Kunstat, G.; Savaria, P.) Cosmological solution of Bianchi type I in a new theory of gravitation. *Phys. Rev. D* (3) 19 (1979), no. 12, 3559–3561. (Authors' summary) 80m:83049 83F05 (53B50, 83D05)  
Static spherically symmetric solution for the field of a charged particle in a theory of gravity. *Phys. Rev. D* (3) 19 (1979), no. 12, 3562–3564. (Andrew King) 80i:83051 83D05
- Moffat, H. K.** (with Moore, D. W.) The response of Hill's spherical vortex to a small axisymmetric disturbance. *J. Fluid Mech.* 87 (1978), no. 4, 749–760. (D. M. Sioan) 80b:76018 76C05 (65L05)
- Mogami, Isao** (with Kishimoto, Kazuo) Commutativity of certain rings. *Math. J. Okayama Univ.* 20 (1978), no. 2, 179–181. (Hal G. Moore) 80g:16040 16A70 (16A38)
- Mouri-Moghadam, M.** See **Nouri-Moghadam, M.**
- Mogi, Sanako** (with Retkin, Harry) Some combinatorial identities on matroids. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 343–344, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Jeremy Dawson) 80j:05048 05B35 (05B25)
- Mogilevskii, G. L.** (with Ostrouhov, D. A.) On a mechanical propositional calculus using Smullyan's analytical tableaux. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 4, 43–46. (P. Štěpánek) 80b:68113 68G15 (03B35)
- Mogk, Eberhard** (with Hoischen, Lothar) Bestimmung von Konvergenzfaktoren aus

- asymptotischen Approximationseigenschaften Dirichletscher Reihen. *J. Approx. Theory* 24 (1978), no. 4, 304–309. (M. E. Noble) 80b:40002 40D05 (30B50)
- Mögling, W. (with Böhm, J.; Börner, W.; Hertel, E.; Krötenheerdt, Otto; Stämmler, Ludwig) ★Geometrie. II. Analytische Darstellung der euklidischen Geometrie, Abbildungen als Ordnungsprinzip in der Geometrie, geometrische Konstruktionen. Second edition. Studienbücherei. Mathematik für Lehrer, 7. VEB Deutscher Verlag der Wissenschaften, Berlin, 1978. 218 pp. (H. Brauner) 80b:51001 51–01 (20B25)
- Zur darstellenden Geometrie des  $\mathbb{R}^3$  als einer speziellen Hyperebene des  $\mathbb{R}^4$ . *Vorträge von der Tagung Geometrie und Anwendungen (Gaussig, 1977)*, pp. 77–85. Weiterbildungszentrum Math. Kybernet. Rechentechn., 28. Tech. Univ. Dresden, Dresden, 1978. (L. Gyarmathi) 80b:51012 51N05
- Mogollos, Ramon Characterizing certain continuous flows. *J. Math. Phys. Sci.* 13 (1979), no. 4, 375–384. (A. Pelczar) 80b:54049 54H20
- Mogra, M. L. (with Juneja, Om Prakash) Radii of convexity for certain classes of univalent analytic functions. *Pacific J. Math.* 78 (1978), no. 2, 359–368. (Selden Trimble) 80b:30011 30C45
- (with Juneja, Om Prakash) On starlike functions of order  $\alpha$  and type  $\beta$ . *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 5, 751–765. (M. O. Gonzalez) 80b:30010 30C45
- On a class of functions with positive real part. *Riv. Mat. Univ. Parma* (4) 4 (1978), 101–108 (1979). (M. S. Robertson) 80b:30020 30C45 (30D50)
- Mogut'skiĭ, A. A. (with Borovkov, A. A.) Probabilities of large deviations in topological spaces. I. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 5, 988–1004, 1213. (S. A. Book) 80b:60045 60F10 (60B12)
- The law of the iterated logarithm in Chung's form for function spaces. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 2, 399–407. (Jerzy Sulgala) 80b:60012 60B12 (60F15)
- Mogyoródi, J. Remark on a theorem of J. Neveu. *Ann. Univ. Sci. Budapest. Eötvös Sect. Math.* 21 (1978), 77–81 (1979). (Roger L. Jones) 80b:60068 60G42
- (with Somogyi, A.) A convergence theorem and a strong law of large numbers for martingales. *Math. Nachr.* 84 (1978), 311–318. (Adhir K. Basu) 80b:60040 60F15 (60E15, 60G42)
- Moh, T. T. On Weierstrass points of analytic plane curves and a conjecture of Mumford. *Bull. Inst. Math. Acad. Sinica* 7 (1979), no. 1, 45–58. (R. F. Lax) 80b:14014 14F07 (30F10)
- On a normalization lemma for integers and an application of four colors theorem. *Houston J. Math.* 5 (1979), no. 1, 119–123. (Robert Gilmer) 80b:13004 13B20
- (with Heinzer, William) A generalized Lüroth theorem for curves. *J. Math. Soc. Japan* 31 (1979), no. 1, 85–86. (J. Čizmar) 80b:14017 14H05
- On generators of ideals. *Proc. Amer. Math. Soc.* 77 (1979), no. 3, 309–312. (Jonathan M. Wahl) 80b:14029 14H20 (13A17)
- Mohamed, Sand (with Müller, Bruno J.) Decomposition of dual-continuous modules. *Module theory (Proc. Special Session, Amer. Math. Soc., Univ. Washington, Seattle, Wash., 1977)*, pp. 87–94. *Lecture Notes in Math.*, 700, Springer, Berlin, 1979. (K. A. Byrd) 80b:16033 16A51 (16A50)
- (with Singh, Surjeet) Weak  $q$ -rings with zero singular ideal. *Proc. Amer. Math. Soc.* 76 (1979), no. 1, 25–30. (Javed Ashan) 80b:16027 16A48
- Mohammad, Asrar Rings whose proper homomorphic images are left  $q$ -rings. *Tamkang J. Math.* 9 (1978), no. 2, 265–268. (E.-A. Behrens) 80b:16035 16A52 (16A14)
- Mohammadi Hassaneabadi, A. Automorphisms of permutational wreath products. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 2, 198–208. (A. H. M. Hoare) 80b:20049 20E22
- Mohammed, I. B. Some properties of matrix of coefficients in Block's multiplication table of the simple modular Lie algebras of Block type. *Acta Math. Acad. Sci. Hungar.* 32 (1978), no. 1–2, 53–58. (Juri A. Bahturin) 80b:17008 17B20
- Mohammed, S. E. A. ★Retarded functional differential equations. A global point of view. *Research Notes in Mathematics*, 21. Pitman Publishing, Ltd., London-San Francisco, Calif., 1978. v + 147 pp. ISBN 0-273-08401-1 (Waldyr M. Oliva) 80a:58019 58Fxx (34K05)
- Mohan, C. (with Singh, K. R.) Nonradial oscillations of models of the generalized Roche series. *Astrophys. and Space Sci.* 64 (1979), no. 2, 467–479. (Authors' summary) 80b:85006 85A15 (76N99)
- Mohan, Man (with Sharma, Bhu Dev; Mitter, Jagdish) On measures of "useful" information. *Inform. and Control* 39 (1978), no. 3, 323–336. (L. L. Campbell) 80b:94009 94A17
- (with Sharma, Bhu Dev; Mitter, Jagdish) On generalized "useful" information. *J. Combin. Inform. System Sci.* 3 (1978), no. 2, 82–93. (Authors' summary) 80b:94034 94A17
- Mohan, N. R. On almost sure convergence of maximum of a sequence of random variables. *J. Indian Statist. Assoc.* 16 (1978), 127–130. (Sidney I. Resnick) 80b:60039 60F15 (62G30)
- Mohan Kumar, N. On two conjectures about polynomial rings. *Invent. Math.* 46 (1978), no. 3, 225–236. (J. W. Brewer) 80b:13010 13C15 (13F20)
- Mohanty, N. C. Binary and ternary signals with small cross correlations. *Inform. Sci.* 13 (1977), no. 1, 35–50. (Authors' summary) 80b:94015 94A12
- Transition density of phase error in a nonlinear tracking system. *Inform. Sci.* 13 (1977), no. 3, 239–252. (Authors' summary) 80b:93096 93E20
- Mohanty, S. P. The number of primes is infinite. *Fibonacci Quart.* 16 (1978), no. 4, 381–384. (V. C. Harris) 80b:10009 10A25
- (with Kane, V. G.) A lower bound on the number of vertices of a graph. *Proc. Amer. Math. Soc.* 72 (1978), no. 1, 211–212. (F. Harary) 80b:05043 05C35
- (with Kumar, Hemant) Powers of sums of digits. *Math. Mag.* 52 (1979), no. 5, 310–312. (From the text) 80b:10013 10A30
- Mohapatra, R. N. A note on approximation of continuous functions by generalised Szász operators. *Nanta Math.* 10 (1977), no. 2, 181–184. (A. Sharma) 80b:41010 41A36
- (with Senjanović, Goran) Are there limits on gauge hierarchies? *Hadronic J.* 1 (1978), no. 3, 903–915. (Philip Huddleston) 80b:81053 81D20 (22E70)
- (with Johnson, Peter D., Jr.) Sectional convergence in spaces obtained as inverse images of sequence spaces under matrix transformations. *Math. Japon.* 24 (1979/80), no. 2, 179–185. (G. M. Leibowitz) 80b:46016 46A45 (40H05)
- (with Johnson, Peter D., Jr.) Density of finitely nonzero sequences in some sequence spaces. *Math. Japon.* 24 (1979/80), no. 3, 253–262. (G. M. Leibowitz) 80b:46017 46A45 (40H05)
- (with Das, G.) Absolute summability factors involving Nörlund means. *Nanta Math.* 12 (1979), no. 1, 94–101. (John A. Fridy) 80b:40003 40F05 (40G05)
- (with Sakita, B.)  $SO(2N)$  grand unification in an  $SU(N)$  basis. *Phys. Rev. D* (3) 21 (1980), no. 4, 1062–1066. (Authors' summary) 80b:81033 81C40
- Moharir, S. K. (with Saxena, Rajendra K.) A new generalization of Tricomi's theorem. *Indian J. Pure Appl. Math.* 10 (1979), no. 7, 878–885. (J. P. Singhal) 80b:44007 44A45 (44A10, 44A20)
- Mohler, L. (with Fugate, J. B.) A note on fixed points in tree-like continua. *Proceeding of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977)*, II. *Topology Proc.* 2 (1977), no. 2, 457–460 (1978). (Józef Krasinkiewicz) 80b:54062 54F20 (54H25)
- Mohor'ko, A. Z. Differential and functional equations with factors. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 9, 1713–1715, 1727. (V. P. Petrenko) 80b:34007 34A20 (30D20, 30D30)
- Mohor, I. I. (with Golcyn, G. S.) Variational estimate of climate system stability in elementary models. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* 14 (1978), no. 6, 597–606. (Russian. English summary; translated as *Izv. Acad. Sci. USSR Atmosf. Ocean. Phys.* 14 (1978), no. 6, 426–431 (1979). (Authors' summary) 80b:86010 86A35
- Mohor, V. N. An optimality criterion for economic planning problems. (Russian) *Modelling and control in evolving systems (Russian)*, pp. 108–114, 259, "Nauka", Moscow, 1978. (M. Mañas) 80b:90041 90A16 (93C99)
- (with Iljutović, A. E.) Normative approach to describing capital incrementation processes in linear dynamic input-output models. *Avtomat. i Telemekh.* 1978, no. 12, 109–117 (Russian); translated as *Automat. Remote Control* 39 (1978), no. 12, part 2, 1825–1832 (1979). (Authors' summary) 80b:90038 90A16
- Mohr, H.-P. Wahl einer induktiven Methode mit entscheidungslogischen Mitteln. *Wiss. Z. Karl-Marx-Universität Leipzig Ges. Sprachwiss. Reihe* 28 (1979), no. 3, 351–360. (Yehuda Rav) 80b:03013 03A05 (03B60, 62C10)
- Mohr, Roger See Livercy, C. 80b:68004
- Möhring, K. (with Levit, S.; Smilansky, U.; Dreyfus, T.) Focal points and the phase of the semiclassical propagator. *Ann. Physics* 114 (1978), no. 1–2, 223–242. (Authors' summary) 80b:81044 81C99
- Möhring, R. (with Rademacher, F. J.) Profiles and homomorphisms. *First Symposium on Operations Research (Univ. Heidelberg, Heidelberg, 1976)*, Teil 3, pp. 88–112, *Operation Research Verfahren, XXVII*, Hain, Königstein, 1977. (Authors' introduction) 80b:90059 90B10 (06B99)
- (with Glinz, M.) Reduction theorems for networks with general sequencing relations. *First Symposium on Operations Research (Univ. Heidelberg, Heidelberg, 1976)*, Teil 3, pp. 124–162, *Operation Research Verfahren, XXVII*, Hain, Königstein, 1977. (Józef Grabowski) 80b:90082 90B35 (90B10)
- Molko, V. V. (with Beiko, I. V.; Gnatiuk, V. O.) The generalized  $L$ -problem of moments, and a method of solving it. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 2, 147–154, 281. (V. V. Ivanov) 80b:65127 65K05 (90C99)
- Molisev, B. D. (with Roždestvenskiĭ, B. L.; Levitan, Ju. L.; Priimak, V. G.; Sidorova, V. K.) Methods of numerical modeling of turbulent flows of an incompressible viscous fluid. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 14* (1979), 20 pp. (Authors' summary) 80b:76020 76F99 (65P05)
- Molisevko, G. E. Optimal partitioning of a system into subsystems. *Avtomat. i Telemekh.* 40 (1979), no. 7, 103–112 (Russian. English summary; translated as *Automat. Remote Control* 40 (1979), no. 7, part 1, 1029–1036. (Author's summary) 80b:49019 49B99 (93A10)
- Molisev, E. I. Uniqueness theorems for an equation of mixed type. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 1, 48–51. (Erich Miersemann) 80b:35130 35M05
- (with Ionkin, N. I.) A problem for a heat equation with two-point boundary conditions. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 7, 1284–1295, 1343. (Todor G. Genčev) 80b:35087 35K05
- The Tricomi problem for the Gellerstedt equation. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 2, 275–278. (B. P. Panejah) 80b:35131 35M05
- Molisev, N. N. Systems analysis of dynamical processes of the biosphere. Systems analysis and mathematical models. (Russian) *Vestnik Akad. Nauk SSSR* 1979, no. 1, 97–108. (I. S. Joel) 80b:92001 92–01 (00A69)
- Molisev, N. (with Certain, P. R.; Weinhold, F.) Resonance properties of complex-rotated Hamiltonians. *Molecular Phys.* 36 (1978), no. 6, 1613–1630. (Ernest R. Davidson) 80b:81030 81C10
- Mojtabi, A. (with Caltagirone, J. P.) Étude de la stabilité d'un écoulement de convection naturelle dans un espace annulaire horizontal. (English summary) *J. Mécanique* 18 (1979), no. 2, 225–241. (Authors' summary) 80b:76084 76R10
- Mok, Kam Ping On the differential geometry of frame bundles of Riemannian manifolds. *J. Reine Angew. Math.* 302 (1978), 16–31. (Shūichi Tanno) 80b:53057 53C25
- Infinitesimal automorphisms on the cotangent bundle. *Kodai Math. J.* 1 (1978), no. 3, 411–420. (Francesco Mercuri) 80b:53032 53C05
- Lifts of vector fields to tensor bundles. *Geom. Dedicata* 8 (1979), no. 1, 61–67. (David Blair) 80b:53050 53C05
- Complete lifts of tensor fields and connections to the frame bundle. *Proc. London Math. Soc.* (3) 38 (1979), no. 1, 72–88. (M. C. Chaki) 80b:53043 53C20
- Moketev, V. S. Periodic solutions of linear differential equations with deviating argument. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 9(196), 69–75. (M. K. Grammatikopoulos) 80a:34106 34K15
- Independence of the solution of boundary value problems from the fundamental basis. Selfadjointness of some problems. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 12, 67–71. (N. Cristescu) 80b:35022 35C10
- Mokhov, I. I. See Mohor, I. I.
- Mokhov, V. N. See Mohor, V. N.
- Mokhtar-Kharroubi, Hocine Sur quelques méthodes de gradient réduit sous contraintes linéaires. *Bull. Direction Études Rech. Sér. C Math. Inform.* 1978, no. 1, 53–66. (Hansgeorg Jeggle) 80b:90098 90C30 (49D07, 65K05)
- Sur quelques méthodes de gradient réduit sous contraintes linéaires. (English



- summary) *RAIRO Anal. Numér.* 13 (1979), no. 2, 167-180. (Pierre Loridan) **80b:90119** 90C25
- Maklin, Ju. I. Some methods for the approximate description of the stationary flow of electrons in a vacuum diode. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1186-1195, 1356. (Author's summary) **80d:81148** 81M05
- Conditions for the convergence of the method of macroparticles and the method of flow tubes. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 2, 444-457, 557. (Author's summary) **80b:78009** 78A55
- The convergence and accuracy of the macroparticle method. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 3, 665-674, 797. (V. V. Sokolov) **80b:78007** 78A20
- Mokobodski, Gabriel. Domination d'une mesure par une capacité (un analogue du théorème de Lebesgue-Nikodym). *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 489-490, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (P. Gérard) **80j:28002** 28A10
- Ensembles à coupes dénombrables et capacités dominées par une mesure. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 491-508, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (D. W. Bressler) **80i:28007a** 28A12 (28A35)
- (with Dellacherie, Claude) Deux propriétés des ensembles minces (abstracts). *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 564-566, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (P. Gérard) **80j:28001** 28A05
- Sur l'opérateur de réduite. Remarques sur un travail de J.-M. Bismut: "Sur un problème de Dynkin" [*Z. Wahrsch. Verw. Gebiete* 39 (1977), no. 1, 31-53; MR 56 #2576]. *Séminaire de Théorie du Potentiel*, No. 3 (Paris, 1976/1977), pp. 188-208, *Lecture Notes in Math.*, 681, Springer, Berlin, 1978. (Hermann Rost) **80i:60106** 60J45 (31D05)
- Espaces réticulés et algèbre de fonctions stables par composition avec les fonctions  $C^2$ . *Séminaire de Théorie du Potentiel*, No. 3 (Paris, 1976/1977), pp. 209-214, *Lecture Notes in Math.*, 681, Springer, Berlin, 1978. (Thomas E. Armstrong) **80m:31016** 31D05
- Ensembles compacts de fonctions fortement surmédiaies. *Séminaire de Théorie du Potentiel*, No. 4 (Paris, 1977/1978), pp. 178-193, *Lecture Notes in Math.*, 713, Springer, Berlin, 1979. (Denis Feyel) **80j:31013** 31C15
- See also *Séminaire: Théorie du Potentiel*, **80d:31001**; *Séminaire: Théorie du Potentiel*, **80e:31001**; *Dellacherie, Claude*, **80i:28007b** and *Yor, Marc*; et al., **80j:28011**
- Mol, C. (with Bertero, M.; Viano, G. A.) On the problems of object restoration and image extrapolation in optics. *J. Math. Phys.* 20 (1979), no. 3, 509-521. (V. H. Weston) **80d:78004** 78A10 (65J15, 68G10)
- Molčanov, A. An estimate of the number of phases. Locally interacting systems and their application in biology (*Proc. School-Sem. on Markov Interaction Processes in Biology*, Pushchino, 1976), pp. 140-148, *Lecture Notes in Math.*, 653, Springer, Berlin, 1978. (T. M. Liggett) **80a:60130** 60K35
- Molčanov, A. P. Absolute stability of sampled-data systems with several transient nonlinear components. *Avtomat. i Telemekh.* 1979, no. 3, 43-51. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 3, part 1, 355-362. (K. B. Datta) **80i:93047** 93D05
- Molčanov, I. M. (with Nikolenko, L. D.; Jakovlev, M. F.) Solution of a class of systems of linear algebraic equations with degenerate matrices. (Russian) *Computational methods in linear algebra (Proc. Fourth All-Union Conf., Acad. Sci. USSR, Novosibirsk, 1976)*, pp. 97-109, *Akad. Nauk SSSR Sibirsk. Otdel., Vyčisl. Centr. Novosibirsk, 1977*. (Zdeněk Dostál) **80m:65036** 65F20
- ★Численные методы решения некоторых задач теории упругости. (Russian) [Numerical methods of solving some problems of elasticity theory] "*Naukova Dumka*", Kiev, 1979, 316 pp. (Vadim Komkov) **80b:73020** 73C99
- Molčanov, S. A. (with Fereig, Nabih) Random walks on abelian groups with an infinite number of generators. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 5, 22-29. (Michael Keane) **80e:60012** 60B15 (60J15)
- Molčanov, V. A. Dense ideal imbeddings of restrictive semigroups. (Russian) *Theory of semigroups and its applications*, No. 4 (Russian), pp. 59-68, 125, *Saratov. Gos. Univ., Saratov*, 1978. (B. Pondělíček) **80m:20049** 20M12
- Molčanov, V. F. Reduction of representations of the supplementary series of the de Sitter group 2+3 with respect to the Lorentz group. (Russian. English summary) *Teoret. Mat. Fiz.* 37 (1978), no. 2, 274-280. (I. I. Jurik) **80e:22018** 22E45 (22E70, 81C40)
- Tensor products of unitary representations of the three-dimensional Lorentz group. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 4, 860-891, 967. (Eugene Gutkin) **80i:22030** 22E43 (22E30, 22E70)
- Molčanov, A. M. See Molčanov, A. P.
- Molčanov, A. P. See Molčanov, A. P.
- Moldabaev, S. M. Stabilization of the steady state motions of mechanical systems. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1979, no. 1, 47-52, 92. (Author's summary) **80b:70026** 70M05 (34D10)
- Moldavskii, M. A. (with Merkur'ev, V. V.) A family of convolutions of a vector-valued criterion for finding points in a Pareto set. *Avtomat. i Telemekh.* 1979, no. 1, 110-121. (Russian); translated as *Automat. Remote Control* 40 (1979), no. 1, part 2, 87-97. (Authors' summary) **80d:93048** 93C99
- Moldenhauer, Wolfgang (with Thielcke, Helmut) Zur Pivotsierung bei der Auflösung linearer Gleichungssysteme. *Rostock. Math. Kolloq.* No. 12 (1979), 59-63. (Siegfried Filippi) **80k:65030** 65F05
- (with Strauss, Raimond) Zur Lösung der Helmholtz-Gleichung in einem polygonberanderten Gebiet mittels des finite-Elemente-Verfahrens. *Rostock. Math. Kolloq.* No. 12 (1979), 101-111. (J. R. Cannon) **80k:65091** 65N30
- Lopez Rodriguez-Moldes, M.<sup>a</sup> E. See Lopez Rodriguez-Moldes, M.<sup>a</sup> E.
- Moldstad, Johan On the role of the successor function in recursion theory. *Generalized recursion theory, II (Proc. Second Sympos., Univ. Oslo, Oslo, 1977)*, pp. 283-301, *Studies in Logic and Foundations of Math.*, 94, North-Holland, Amsterdam, 1978. (Barry E. Jacobs) **80g:03046** 03D65
- Moldovan, D. I. (with Cooper, C. A.) Accuracy limits of arithmetic calculations performed on microprocessors. 1978 *IEEE International Symposium on Circuits and Systems (New York, 1978)*, pp. 1090-1096, *IEEE, New York*, 1978. (A. D. Booth) **80b:68006** 68A05 (68C99)
- Mole, R. H. A survey of local delivery vehicle routing methodology. *J. Oper. Res. Soc.* 30 (1979), no. 3, 245-252. (Author's summary) **80b:90143** 90C50 (90B20)
- Moler, Cleve B. Three research problems in numerical linear algebra. *Numerical analysis (Proc. Sympos. Appl. Math., Atlanta, Ga., 1978)*, pp. 1-18, *Proc. Sympos. Appl. Math.*, XXII, Amer. Math. Soc., Providence, R.I., 1978. (Author's summary) **80d:65040** 65Fxx (65-04)
- (with Davis, George J.) Sensitivity of matrix eigenvalues. *Internat. J. Numer. Methods Engrg.* 12 (1978), no. 9, 1367-1373. (Colin M. Campbell) **80a:65072** 65F15
- (with Stewart, G. W.) On the Householder-Fox algorithm for decomposing a projection. *J. Comput. Phys.* 28 (1978), no. 1, 82-91. (A. S. Householder) **80a:65083** 65F25
- (with Van Loan, Charles) Nineteen dubious ways to compute the exponential of a matrix. *SIAM Rev.* 20 (1978), no. 4, 801-836. (C. G. Cullen) **80c:15004** 15A15
- (with Cline, A. K.; Stewart, G. W.; Wilkinson, J. H.) An estimate for the condition number of a matrix. *SIAM J. Numer. Anal.* 16 (1979), no. 2, 368-375. (R. P. Tewarson) **80g:65048** 65F35 (65F05)
- Moles, M. (with Guéret, Ph.; Merat, P.; Vigier, J.-P.) Stable states of a relativistic harmonic oscillator imbedded in a random stochastic thermostat. *Lett. Math. Phys.* 3 (1979), no. 1, 47-56. (Ronald F. Fox) **80b:82016** 82A15 (53C10, 58F06)
- (with Fenech, Ch.; Vigier, J.-P.) Internal rotations of spinning particles. *Lett. Nuovo Cimento* (2) 24 (1979), no. 2, 56-62. **80b:81048** 81C99 (58F06)
- Molina, A. (with Lapedra, R.) Classical predictive electrodynamics of two charges with radiation: general framework. *I. J. Math. Phys.* 20 (1979), no. 7, 1308-1315. (Ilija Lukačević) **80b:83023a** 83C50 (78A25, 81C05)
- (with Lapedra, R.; Marqués, F.) Classical predictive electrodynamics of two charges with radiation: energy and 3-momentum balance and scattering cross sections. *II. J. Math. Phys.* 20 (1979), no. 7, 1316-1320. (Ilija Lukačević) **80b:83023b** 83C50
- Molina, H. L. (with Djolos, R. V.; Solov'ev, V. G.) Effect of the Pauli principle on properties of two-phonon states. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 2, 245-250. (Authors' summary) **80i:81070** 81G35
- Lopez Molina, J. A. See Lopez Molina, J. A.
- Molinari, Alain (with Alberico, W. M.; Cenni, R.) The response function of the infinite nuclear matter. *Riv. Nuovo Cimento* (3) 1 (1978), no. 4, 1-35. (B. Banerjee) **80k:81179** 81G35
- Ondes progressives en milieux dissipatifs: une théorie des rayons différés. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 14, B233-B236. (Author's summary) **80k:35061** 35C99 (73D99)
- Thermoélasticité dynamique: un demi-espace soumis à un échelon de flux thermique. (English summary) *J. Mécanique* 18 (1979), no. 1, 73-101. (D. Işcan) **80d:73123** 73U05
- Réponse dynamique d'un demi-espace thermoélastique à un dépôt d'énergie. (English summary) *J. Mécanique* 18 (1979), no. 3, 433-468. (D. Işcan) **80k:73075** 73U05
- Molinari, Brian P. Structural invariants of linear multivariable systems. *Internat. J. Control* 28 (1978), no. 4, 493-510. (Clyde F. Martin) **80a:93075** 93C05
- Molinari, V. G. (with Boffi, V. C.) Integral transport theory for charged particles in electric and magnetic fields. (Italian and Russian summaries) *Nuovo Cimento B* (11) 49 (1979), no. 1, 77-98. (Authors' summary) **80b:82061** 82A70 (45K05)
- Mollin, Pierre Feuilletages riemanniens sur les variétés compactes; champs de Killing transverses. (English summary) *C. R. Acad. Sc. Paris Sér. A-B* 289 (1979), no. 7, A421-A423. (Author's summary) **80j:57026** 57R30
- Moliz, Wojciech Optimization of information flow distribution. (Polish. English and Russian summaries) *Arch. Automat. Telemekh.* 24 (1979), no. 1, 107-122. (Author's summary) **80e:90123** 90C50 (90B10)
- Mollitor, Anton (with Küpper, Tassilo) Nonlinear vibrations of simply supported beams. *Nonlinear Anal.* 3 (1979), no. 1, 45-48 (1978). (G. Bojadziev) **80b:34039** 34C15
- Moll, Konrad ★Der junge Leibniz. I. Die wissenschaftstheoretische Problemstellung seines ersten Systementwurfs. Der Anschluss an Erhard Weigels Scientia Generalis. *Frommann-Holzboog, Stuttgart*, 1978, 129 pp. ISBN 3-7728-0730-5 (F. C. Kreiling) **80c:01004** 01A45 (03-03, 03A05)
- Moller, C. The crisis in the theory of gravitation. *Proceedings of the Symposium on the Foundations of Modern Physics (Loma-Lito, 1977)*, pp. 1-16, *Publ. Univ. Joensuu, Ser. B1*, 14, Univ. Joensuu, Joensuu, 1978. (B. N. Frolov) **80m:83041** 83D05 (53B20)
- Mollin, Richard The Schur group of a field of characteristic zero. *Pacific J. Math.* 76 (1978), no. 2, 471-478. (Jack Sonn) **80j:12018** 12A80
- Uniform distribution classified. *Math. Z.* 165 (1979), no. 3, 199-211. (B. Fein) **80i:12011** 12A80 (13A20, 13B05)
- Mollison, Denis Markovian contact processes. *Adv. in Appl. Probab.* 10 (1978), no. 1, 85-108. (Author's summary) **80c:60101** 60J85 (60K99, 92A15)
- Molluzzo, John C. Steinhilber graphs. *Theory and applications of graphs (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976)*, pp. 394-402, *Lecture Notes in Math.*, 642, Springer, Berlin, 1978. (Heiko Harborth) **80b:05012** 05C99
- Molnár, J. (with Florian, A.; Hárs, L.) On the  $p$ -systems of  $c$ -cubes. *Acta Math. Acad. Sci. Hungar.* 34 (1979), no. 1-2, 205-221. (J. B. Wilker) **80j:52011** 52A45
- Molnár, D. (with Farzan, R. H.; Fái, L.) An application of the implicit difference scheme for the solution of a one-dimensional differential equation of parabolic type with a weak nonlinearity. (Russian. Hungarian and English summaries) *Közl.—MTA Számítástech. Automat. Kutató Int. Budapest* No. 21 (1978), 43-54. (Ju. K. Dem'janovici) **80b:65126** 65N10
- Molodtsov, V. N. A. Cauchy and the revolution in mathematical analysis in the first quarter of the XIXth century. (Russian) *Istor.-Mat. Issled.* No. 23 (1978), 32-55, 357. (Esther R. Phillips) **80a:01022** 01A55
- Molotvov, V. S. Equilibrium strategies in a differential stochastic game. (Russian) *Sb. Trudov Inst. Problem Upravlen. No. 7* (1975), 22-27, 108. (Author's summary) **80b:90131** 93E05 (90D15, 90D25)
- Molotkov, I. A. (with Starkov, A. S.) Local degeneration of waves in a thin waveguide. (Russian. English summary) Mathematical questions in the theory of wave propagation, *9. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 78 (1978), 138-148, 249. (Authors' summary) **80g:78018** 78A50 (35P99)
- Molotkov, L. A. (with Baimagambetov, U.) The study of wave propagation in layered

- transversal-isotropic elastic media. (Russian. English summary) *Mathematical questions in the theory of wave propagation*, 9. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 78 (1978), 149-173, 249-250. (V. M. Babic) **80c:35009** 86A15 (35Q99, 73D20)
- See also Questions in the dynamical theory of seismic wave propagation. **80m:73033a**
- Molzon, Robert E. Sets omitted by equidimensional holomorphic mappings. *Amer. J. Math.* 101 (1979), no. 6, 1271-1283. (D. Sundaraman) **80m:32004** 32A22 (32H30)
- Monahan, John F. Extensions of von Neumann's method for generating random variables. *Math. Comp.* 33 (1979), no. 147, 1065-1069. (Author's summary) **80c:65022** 65C10
- Monahan, O. G. (with Korneev, V. V.) Graphs of the intermachine connections of uniform computer systems. (Russian) *Vychisl. Sistemy No. 73 Voprosy Teorii i Prostroenija Vychislitel'nykh Sistem* (1978), 93-106, 170. (Authors' summary) **80c:68009** 68A05 (68E10)
- Monahan, V. N. (with Antonov, S. N.; Kazhikov, A. V.) Solvability of boundary value problems for some models of inhomogeneous fluids. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 30-33, Moscow, Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978. (Authors' summary) **80c:76049** 76V05 (35Q20)
- (with Antonov, S. N.) Three-dimensional problems of transient two-phase filtration in inhomogeneous anisotropic porous media. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 3, 553-556. (From the text) **80i:76038** 76S05
- Monahan, V. S. Orders of Sylow subgroups of the general linear group. (Russian) *Algebra i Logika* 17 (1978), no. 1, 79-85, 122. (J. L. Brenner) **80c:20064** 20G40 (20D20)
- Monahan, V. N. A reduction principle in stability theory for some nonautonomous nonlinear systems. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 4, 145-146, 154. (Author's summary) **80c:34057** 34D20
- Monakov-Rapchuk, A. The structure of spaces of measurable functions that admit lifting. (Russian. Estonian and English summaries) *Tartu Riikl. Ül. Toimetised* No. 448 (1978), 12-20. (J. Lukeš) **80c:46037** 46G15 (46E30)
- Monastyrskii, P. I. Invariant imbedding and reduction in boundary value problems for systems of nonlinear ordinary differential equations. (Russian) *Berichte der Tagung "Numerische Behandlung Gewöhnlicher Differentialgleichungen" (Humboldt Univ., Berlin, 1978)*, pp. 71-87, Seminarberichte, 11, Humboldt Univ., Berlin, 1978. (K. Vissak) **80a:65061** 65L10
- On the theory of the method of invariant imbedding for boundary value problems. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 22 (1978), no. 4, 303-306, 379. (Author's summary) **80a:34028** 34B99 (65L10)
- The convergence of the multiple two-sided shooting method. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 22 (1978), no. 5, 393-396, 475. (G. W. Hedstrom) **80a:65176** 65L10
- (with Šostak, T. L.) On the question of the modification of Newton's method in the case of ill-posed systems of nonlinear equations. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1978, no. 1, 14-18. (From the introduction) **80a:65102** 65H10
- Convergence of the interval shooting method. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1139-1145, 1355. (I. P. Gavriljuk) **80a:65177** 65L10
- (with Radaeva, V. A.) On the question of a complete estimate of computational error in the orthogonal differential double sweep method. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 4, 30-36, 140. (Authors' summary) **80c:65096** 65L10
- Monastyrskii, M. I. (with Golo, V. L.) Topological charges and high dimensional instantons. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 29 (1978), no. 2, 157-167. (Authors' summary) **80d:81072** 81E10 (55R50)
- (with Golo, V. L.; Novikov, S. P.) Solutions to the Ginzburg-Landau equations for planar textures in superfluid  $^3\text{He}$ . *Comm. Math. Phys.* 69 (1979), no. 3, 237-246. (Authors' summary) **80i:81001** 81J05
- Moncayo, A. R. (with Gorostiza, L. G.) Almost-sure invariance principle for branching Brownian motion. *Studies in probability and ergodic theory*, pp. 95-111, *Advances in Math., Suppl. Studies*, 2, Academic Press, New York, 1978. (Søren Asmussen) **80c:60097** 60J80
- Moncrief, Vincent Quantum linearization instabilities. *Gen. Relativity Gravitation* 10 (1979), no. 2, 93-97. (G. R. Alcock) **80c:83018** 83C45 (53C80, 58D30)
- Gribov degeneracies: Coulomb gauge conditions and initial value constraints. *J. Math. Phys.* 20 (1979), no. 4, 579-585. (Author's summary) **80d:81091** 81E15 (58D30)
- Mond, B. (with Schechter, Murray) A duality theorem for a homogeneous fractional programming problem. *J. Optim. Theory Appl.* 25 (1978), no. 3, 349-359. (Authors' summary) **80b:90127** 90C32
- (with Craven, Bruce Desmond) A note on duality in homogeneous fractional programming. *Naval Res. Logist. Quart.* 26 (1979), no. 1, 153-155. (R. N. Kaul) **80d:90076** 90C32
- (with Zlobec, S.) Duality for nondifferentiable programming without a constraint qualification. *Utilitas Math.* 15 (1979), 291-302. (Chanchal Singh) **80a:90128** 90C30 (90C25)
- (with Craven, Bruce Desmond) On duality for fractional programming. *Z. Angew. Math. Mech.* 59 (1979), no. 6, 278-279. (K. Swarup) **80i:90084** 90C30
- See also Alders, C. D.; et al., **80c:90089**
- Mondadori, Marco The probability of "laws of nature": a case for Hintikka's inductive logic. (Italian and French summaries) *Statistica (Bologna)* 38 (1978), no. 4, 517-536. (J. F. A. K. van Benthem) **80c:63040** 03B60 (60A05)
- Monmaga, G. (with Kahaner, D. K.) Nonexistence of extended Gauss-Laguerre and Gauss-Hermite quadrature rules with positive weights. (German summary) *Z. Angew. Math. Phys.* 29 (1978), no. 6, 983-986. (Editors) **80d:65034** 65D30
- (with Lyness, J. N.) On the numerical evaluation of a particular singular two-dimensional integral. *Math. Comp.* 33 (1979), no. 147, 993-1002. (K. Jetter) **80c:65050** 65D30 (65B05)
- (with Lyness, J. N.) Quadrature error functional expansions for the simplex when the integrand function has singularities at vertices. *Math. Comp.* 34 (1980), no. 149, 213-225. (Thomas A. Atchison) **80m:65017** 65D32 (41A55, 41A60)
- Abdel-Monem, T. M. See Abdel-Monem, T. M.
- Monfort, Alain Approche de Box-Jenkins et approche économétrique des séries temporelles. (English and Spanish summaries) *Ann. I.N.S.E.E.* No. 32 (1978), 33-55. (Robert Fernholz) **80j:62101** 62P20 (62M10)
- (with Gourieroux, Christian; Laffont, Jean-Jacques) Disequilibrium econometrics in simultaneous equations systems. *Econometrica* 48 (1980), no. 1, 75-96. (G. Tinier) **80c:62111** 62P20
- Moog, J. (with Dauchet, M.) Image de noyaux reconnaissables par diverses classes de transformations. (English summary) *Les arbres en algèbre et en programmation (4ème Colloq. Lille, Lille, 1979)*, pp. 79-101, Univ. Lille I, Lille, 1979. (Authors' summary) **80m:68065** 68F05
- Monjardet, B. Caractérisations et propriété de Sperner des treillis distributifs planaires finis. (English summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 297-300, Colloques Internat. CNRS, 260, CNRS, Paris, 1978. (V. S. Krishnan) **80c:06016** 06D99
- Axiomatiques et propriétés des quasi-ordres. (English summary) *Math. Sci. Humaines* No. 63 (1978), 51-82, 95. (Author's summary) **80c:06009** 06A99
- garnir-Monjole, F. S. See Garnir-Monjole, F. S.
- Monk, J. Donald Omitting types algebraically. *Ann. Sci. Univ. Clermont Math.* No. 16 (1978), 101-105. (S. Comer) **80c:03077** 03G15 (03C75)
- (with Rassbach, W.) The number of rigid Boolean algebras. *Algebra Universalis* 9 (1979), no. 2, 207-210. (Sabine Koppelberg) **80c:06020** 06E10
- Monkewitz, Martin A. Analytic pseudorthogonalization methods for linear two-point boundary value problems illustrated by the Orr-Sommerfeld equation. (German summary) *Z. Angew. Math. Phys.* 29 (1978), no. 6, 861-870. (From the introduction) **80c:65170** 65L10
- Monkewitz, Peter A. The linearized treatment of general forced gas oscillations in tubes. *J. Fluid Mech.* 91 (1979), no. 2, 357-397. (Michael J. O'Carroll) **80c:76038** 76N99 (35P99)
- Monkewitz, Charles J. Two-dimensional plots for interpreting interactions in the three-factor analysis of variance model. *Amer. Statist.* 33 (1979), no. 2, 63-69. (Author's summary) **80c:62088** 62J10
- Monma, Clyde L. (with Kannan, Ravindran) On the computational complexity of integer programming problems. *Optimization and operations research (Proc. Workshop, Univ. Bonn, Bonn, 1977)*, pp. 161-172, *Lecture Notes in Econom. and Math. Systems*, 157, Springer, Berlin, 1978. (Authors' summary) **80c:90107** 90C10
- (with Sidney, Jeffrey B.) Sequencing with series-parallel precedence constraints. *Math. Oper. Res.* 4 (1979), no. 3, 215-224. (Authors' summary) **80m:90058** 90B35
- (with Trotter, L. E., Jr.) On perfect graphs and polyhedra with  $\{0, 1\}$ -valued extreme points. *Math. Programming* 17 (1979), no. 2, 239-242. (Ethan D. Bolker) **80i:90079** 90C10 (52A25)
- Monna, A. F. La théorie des fonctions, réflexions historiques. *Nieuw Arch. Wisk.* (3) 26 (1978), no. 1, 41-53. (J. Dieudonné) **80c:01019** 01A60
- See also Biography: Gauss, Carl Friedrich. **80c:01034**
- Monrad, Ditlev (with Silverstein, Martin L.) Stable processes: sample function growth at a local minimum. *Z. Wahrsch. Verw. Gebiete* 49 (1979), no. 2, 177-210. (Bert Fristedt) **80j:60102** 60J30
- Moore, G. P. (with Eyland, R. W.) The history of mathematical ideas option at Sydney University—a follow up. *Austral. Math. Soc. Gaz.* 5 (1978), no. 1, 20-24. (Phillip S. Jones) **80c:01002** 01A05
- (with Taylor, D. E.) On multiply transitive permutation groups. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 1, 57-58. (Wolfgang Knap) **80c:20005** 20B20
- Moss, B. (with Leonides, Cornelius T.) On-line solution of a stochastic pursuit-evasion game. *J. Optim. Theory Appl.* 28 (1979), no. 3, 411-428. (Authors' summary) **80c:90133** 90D26
- Monson, Michel (with Gautier, M.; Sagaspe, J. P.) Determination of a Volterra kernel representation for a nonlinear physiological system. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976)*, Part 1, pp. 609-615, North-Holland, Amsterdam, 1978. (Authors' summary) **80c:92009** 92A09 (65R20)
- Identification des noyaux de Volterra d'un système non linéaire par la transformée de Walsh. (English summary) *RAIRO Automat.* 12 (1978), no. 3, 277-289, iii. (D. Rebuhin) **80i:93071** 93E25
- On analysis of non-linear systems by multidimensional Laguerre transform. (Russian summary) *Systems Sci.* 4 (1978), no. 3, 233-240. (Kimiio Kanai) **80a:93003** 93C10 (45D05)
- Montagna, Franco On the formulas of Peano arithmetic which are provably closed under modus ponens. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 1, 196-211. (Roman Murawski) **80c:03004** 03F30
- Montaldi, E. (with Marioni, C.) On modified normalization conditions in quantum field theory. *Lett. Nuovo Cimento* (2) 26 (1979), no. 7, 193-199. (From the text) **80c:81059** 81E10
- On the Radon inversion formula. *Lett. Nuovo Cimento* (2) 26 (1979), no. 18, 593-598. (Editors) **80c:44003** 44A15
- Montanero, Carlo Program specification and optimization of function over recursive data structures. *Transformations de programmes (Proc. Third Internat. Sympos. Programming, Paris, 1978)*, pp. 336-351, Dunod, Paris, 1978. (Gianni Aguzzi) **80c:68048** 68B15
- Jimenez Montano, M. A. See Jimenez Montano, M. A.
- Montaron, Bernard (with Cohen, Gérard) Emplacements parfaits de boules dans les espaces vectoriels binaires. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 11, A579-A582. (Authors' summary) **80c:94027** 94B25 (05A17, 05B40, 52A45)
- (with Cohen, Gérard) Codes parfaits binaires à plusieurs rayons. (English summary) *Rev. CETHEDC Cahier* 1979, no. 2, 35-58. (Authors' summary) **80m:94061** 94B25 (52A45)
- Montazer-Haghighi, A. Many-server queueing systems with feedback. *Proceedings of the Eighth National Mathematics Conference (Arya-Mehr Univ. Tech., Tehran, 1977)*, pp. 228-249, Arya-Mehr Univ. Tech., Tehran, 1977. (Jos. H. A. de Smit) **80c:60105** 60K25
- Monte, Anna-Maria (with Maio, Alfonso) The propagation of electromagnetic waves in an ionized gas. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 1-2, 52-58 (1978). (G. P. Bava) **80i:78007** 78A40
- (with d'Anna, Armando; Maio, Alfonso) Stability questions for boundary value problems. *Ann. Soc. Sci. Bruxelles Sér. I* 92 (1978), no. 3, 109-126. (Michel Costantini) **80c:35011** 35B35



- Monteiro, Luiz** Construction des algèbres de Tarski libres sur un ensemble ordonné. *Math. Japon.* 23 (1978/79), no. 4, 433-437. (S. Comer) **80f:6376** 03G25
- Montes, Carlos** Nonlinear kinetic equation in plasma physics leading to soliton structures. *Nonlinear problems in theoretical physics (Proc. IX G.I.F.T. Internat. Sem. Theoret. Phys., Univ. Zaragoza, Jaca, 1978)*, pp. 205-216. *Lecture Notes in Phys.*, 98, Springer, Berlin, 1979. (F. C. Auluck) **80k:82051** 82A45 (45K05)
- Montes, José Rios** See **Rios Montes, José**
- Montesinos, Angel** Geometry of spacetime founded on spacelike metric. *J. Math. Phys.* 20 (1979), no. 5, 953-965. (R. Behari) **80g:83003** 83A05 (51B20, 53C50, 58A05)
- Montesinos Amilibia, José María** (with Hilden, Hugh M.) A method of constructing 3-manifolds and its application to the computation of the  $\mu$ -invariant. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976)*, Part 2, pp. 61-69. *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (W. D. Neumann) **80e:57003** 57M12 (57N10)
- 4-manifolds, 3-fold covering spaces and ribbons. *Trans. Amer. Math. Soc.* 245 (1978/79), 453-467. (R. C. Kirby) **80k:57001** 57M10 (57N15)
- Heegaard diagrams for closed 4-manifolds. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 219-237. *Academic Press*, New York, 1979. (J. S. Birman) **80k:57022** 57N15
- Montfort, Martin A. J.** (with Otten, Albert) On testing a shape parameter in the presence of a location and a scale parameter. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 9 (1978), no. 1, 91-104. (G. S. Lingappaiah) **80a:62035** 62F05 (62N05)
- Montgomery, Henry** (with Eisler, Hannes; Holm, Sören) The general psychophysical differential equation: a comparison of three specifications. *J. Math. Psych.* 20 (1979), no. 1, 16-34. (Authors' summary) **80h:92022** 92A27
- Montgomery, Hugh L.** (with Niederreiter, Harald) Estimation optimale de sommes exponentielles. *Bull. Soc. Math. Grèce (N.S.)* 18 (1977), no. 2, 291-301. (E. Stankus) **80c:10042** 10G10
- Montgomery, John A., Jr.** (with Chandler, David; Berne, Bruce J.) Trajectory analysis of a kinetic theory for isomerization dynamics in condensed phases. *J. Chem. Phys.* 70 (1979), no. 9, 4056-4066. (Authors' summary) **80c:82032** 82A40
- Montgomery, John T.** On the homotopy index of Conley. *J. Differential Equations* 32 (1979), no. 1, 32-40. (Ju. E. Gliklikh) **80e:58031** 58F10 (34D99)
- (with Sine, Robert; Thomas, Edward) Some topological properties of weakly almost periodic mappings. *Topology Appl.* 11 (1980), no. 1, 69-85. (V. V. Obuhovskii) **80k:54078** 54H20 (47D05)
- Montgomery, Susan** (with Passman, D. S.) Crossed products over prime rings. *Israel J. Math.* 31 (1978), no. 3-4, 224-256. (Kenneth A. Brown) **80a:16022** 16A27 (16A12)
- Outer automorphisms of semi-prime rings. *J. London Math. Soc.* (2) 18 (1978), no. 2, 209-220. (Robert L. Snider) **80b:16028** 16A72 (16A26, 16A34)
- de Montmort, Pierre Rémond** See **Dupont, Pascal**, **80c:01026**
- Montroll, Elliott W.** (with Ginsburg, Charles A.) On wave functions and energy levels of a three-dimensional anharmonic oscillator with quartic anharmonicity. *The Ta-Yu Wu Festschrift: Science of matter*, pp. 207-222. *Gordon & Breach*, New York, 1978. (H. Primas) **80j:81020** 81C12
- Social dynamics and the quantifying of social forces. *Proc. Nat. Acad. Sci. U.S.A.* 75 (1978), no. 10, 4633-4637. (Stephen B. Seidman) **80c:92046** 92A20
- Montet de Monvel, Louis** See **Boutet de Monvel, Louis**
- Moodie, James A.** A boundary-value problem for an ordinary differential equation whose coefficients are in a  $B^*$ -algebra. *Proc. Roy. Soc. Edinburgh Sect. A* 80 (1978), no. 3-4, 323-332. (Alexander Alenicy) **80d:34083** 34G10 (34B25)
- Weyl's  $m$ -coefficient in a  $B^*$ -algebra. *Proc. Roy. Soc. Edinburgh Sect. A* 82 (1978/79), no. 3-4, 241-250. (M. S. P. Eastham) **80c:34023** 34B20
- Moody, Robert V.** Polynomial invariants of isometry groups of indefinite quadratic lattices. *Tôhoku Math. J. (2)* 30 (1978), no. 4, 525-535. (James F. Hurley) **80a:20047** 20G15
- (with Berman, S. D.) Lie algebra multiplicities. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 223-228. (Floyd L. Williams) **80h:17013** 17B65 (17B20, 17B35)
- Moak, Dean T.** (with Nayfeh, Ali Hasan) Nonlinear oscillations. Pure and Applied Mathematics. *Wiley-Interscience (John Wiley & Sons)*, New York, 1979. xiv+704 pp. ISBN 0-471-03555-6 (G. V. Hmelevskaja-Plotnikova) **80m:70002** 70-01 (34C15, 70-02)
- Moon, Byung Soo** Ideal theory of ordered locally convex spaces. *J. Korean Math. Soc.* 15 (1978/79), no. 2, 81-99. (Alan J. Ellis) **80f:46007** 46A40
- Moss, I. Douglas** Effect of sectoral optimization on structural stability of a single-period dynamic input-output system. *IEEE Trans. Systems Man Cybernet.* 9 (1979), no. 11, 728-732. (Marwan Simaan) **80i:90043** 90A17
- Moon, J. W.** (with Meir, A.) On the altitude of nodes in random trees. *Canad. J. Math.* 30 (1978), no. 5, 997-1015. (C. St. J. A. Nash-Williams) **80k:05043** 05C05 (60C05)
- (with Meir, A.) Path edge-covering constants for certain families of trees. *Utilitas Math.* 14 (1978), 313-333. (Authors' summary) **80k:05073** 05C05
- Tournaments whose subtournaments are irreducible or transitive. *Canad. Math. Bull.* 22 (1979), no. 1, 75-79. (L. W. Beineke) **80k:05028** 05C20
- Some enumeration problems for similarity relations. *Discrete Math.* 26 (1979), no. 3, 251-260. (Volker Strehl) **80j:05006** 05A15
- Mooney, J. W.** Monotone methods for the Thomas-Fermi equation. *Quart. Appl. Math.* 36 (1978/79), no. 3, 305-314. (Mario Primicerio) **80b:80011** 80A30 (34B30)
- A unified approach to the solution of certain classes of nonlinear boundary value problems using monotone iterations. *Nonlinear Anal.* 3 (1979), no. 4, 449-465. (From the introduction) **80b:65093** 65N99
- Moér, Arthur** Über nicht-holonome Ötsukische Räume. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 3-4, 369-378. (Makoto Matsumoto) **80k:53015** 53B15
- Über die Veränderung der Länge der Vektoren in Weyl-Ötsukischen Räumen. *Acta Sci. Math. (Szeged)* 41 (1979), no. 1-2, 173-185. (A. Kawaguchi) **80k:53016** 53B15
- Moore, Bruce C.** (with Laub, Alan J.) Computation of supremal  $(A, B)$ -invariant and controllability subspaces. *IEEE Trans. Automat. Control* 23 (1978), no. 5, 783-792. (Arlid Thowson) **80a:93039** 93B05
- Moore, Calvin C.** Approximately finite von Neumann algebras. *Amer. Math. Monthly* 85 (1978), no. 8, 657-659. (From the text) **80b:46077** 46L30
- (with Zimmer, Robert J.) Groups admitting ergodic actions with generalized discrete spectrum. *Invent. Math.* 51 (1979), no. 2, 171-188. (S. G. Dani) **80m:22008** 22D40 (28D15)
- (with Howe, Roger E.) Asymptotic properties of unitary representations. *J. Funct. Anal.* 32 (1979), no. 1, 72-96. (Jonathan M. Rosenberg) **80g:22017** 22E50 (22D10, 22E50, 43A30, 43A80)
- Moore, D. W.** (with Moffatt, H. K.) The response of Hill's spherical vortex to a small axisymmetric disturbance. *J. Fluid Mech.* 87 (1978), no. 4, 749-760. (D. M. Sloan) **80a:76018** 76C05 (65L05)
- (with Hocking, L. M.; Walton, I. C.) The drag on a sphere moving axially in a long rotating container. *J. Fluid Mech.* 90 (1979), no. 4, 781-793. (J. C. Burns) **80k:76010** 76D99 (65R10)
- The spontaneous appearance of a singularity in the shape of an evolving vortex sheet. *Proc. Roy. Soc. London Ser. A* 365 (1979), no. 1720, 105-119. (Authors' summary) **80b:76006** 76C05 (35B99)
- Moore, Dan** (with Case, John) The complexity of total order structures. *J. Comput. System Sci.* 17 (1978), no. 2, 253-269. (Barry E. Jacobs) **80g:03038** 03D15 (68C25)
- Moore, E. J.** (with Teo, K. L.) On directional derivative methods for solving optimal parameter selection problems. *Internat. J. Systems Sci.* 9 (1978), no. 9, 1029-1041. (Authors' summary) **80a:93158** 93E10 (49C20)
- Moore, G. William** (with Hutchins, Grover M.; Bulkley, Bernadine H.) Certainty levels in the nullity method of symbolic logic: application to the pathogenesis of congenital heart malformations. *J. Theoret. Biol.* 76 (1979), no. 1, 53-81. (Authors' summary) **80c:92008** 92A09 (68C05)
- Moore, J. C.** (with Cohen, F. R.; Neisendorfer, Joseph) Torsion in homotopy groups. *Ann. of Math. (2)* 109 (1979), no. 1, 121-168. (V. P. Smith) **80c:55024** 55Q40
- Moore, James C.** (with Chipman, John S.) The new welfare economics 1939-1974. *Internat. Econom. Rev.* 19 (1978), no. 3, 547-584. (Dale K. Osborne) **80c:90012** 90A10 (90A06)
- (with Chipman, John S.) On social welfare functions and the aggregation of preferences. *J. Econom. Theory* 21 (1979), no. 1, 111-139. (From the introduction) **80m:90019** 90A10
- Moore, James M.** (with Chachra, Vinod; Ghare, Prabhakar M.) Applications of graph theory algorithms. *North-Holland, New York-Oxford*, 1979. ix+421 pp. ISBN 0-444-00268-5 (Paul Jambor) **80f:90001** 90-01 (90B10)
- Moore, John B.** Statistical filtering. *Mathematical control theory (Proc. Conf., Australian Nat. Univ., Canberra, 1977)*, pp. 152-169. *Lecture Notes in Math.*, 680, Springer, Berlin, 1978. (T. Tobias) **80b:93150** 93E11
- (with Weiss, Haim) Recursive prediction error methods for adaptive estimation. *IEEE Trans. Systems Man Cybernet.* 9 (1979), no. 4, 197-205. (Arie Feuer) **80c:93065** 93E12
- Moore, John Douglas** (with White, James H.) Normal characteristic forms: conformal invariance and duality. *Math. Z.* 164 (1978), no. 2, 125-141. (Alan West) **80c:58006** 58A10 (53C40, 57R20)
- Codimension two submanifolds of positive curvature. *Proc. Amer. Math. Soc.* 70 (1978), no. 1, 72-74. (Jonathan Sacks) **80a:53063** 53C40 (58E99)
- Moore, Louis R.** (with Fishman, George S.) Estimating the mean of a correlated binary sequence with an application to discrete event simulation. *J. Assoc. Comput. Mach.* 26 (1979), no. 1, 82-94. (I. Váduva) **80c:68243** 68J05 (68F25)
- Moore, Marc** Alternatives aux estimateurs à vraisemblance maximale dans un modèle de Bernoulli avec dépendance. *Ann. Sci. Math. Québec* 3 (1979), no. 1, 119-133. (René Flavinig) **80k:62045** 62F10
- Moore, Marlon E.** Stability and boundedness results of stochastic differential equations relative to a generalized norm. *J. Math. Phys.* 20 (1979), no. 11, 2217-2220. (A. T. Bharucha-Reid) **80j:60094** 60H10
- Moore, R. E.** A computational test for convergence of iterative methods for nonlinear systems. *SIAM J. Numer. Anal.* 15 (1978), no. 6, 1194-1196. (John B. Kioustelidis) **80d:65057** 65H10
- Moore, Steven M.**  $\ast$ -algebras of unbounded operators in statistical mechanics. *Lett. Nuovo Cimento* (2) 23 (1978), no. 10, 361-363. (M. M. Skrziganov) **80c:81049** 81D05 (46L05, 47D40)
- Can stochastic physics be a complete theory of nature? *Found. Phys.* 9 (1979), no. 3-4, 237-259. (Authors' summary) **80f:82015** 82A05
- Moort, V. R. G.** (with Garner, J. B.) Existence and uniqueness theorems for three-point boundary value problems for third-order differential equations. *J. Math. Anal. Appl.* 70 (1979), no. 2, 370-385. (Hal Leslie Smith) **80k:34020** 34B15
- Mooy, B. H. M.** (with Hijmans, J.) Legendre transformation of a self-interacting polymer chain. *Phys. A* 98 (1979), no. 3, 442-466. (N. Trinajstić) **80j:82019** 82A42
- Morad, H.** Derivation and low density solution of a nonlinear Kirkwood-Salsburg equation. *Phys. A* 94 (1978), no. 2, 287-296. (R. K. Pathria) **80k:82049** 82A99 (45K05)
- Morais, Luiz Amílida** Holomorphy types and Runge domains. I. (Portuguese) *An. Acad. Brasil. Ciênc.* 50 (1978), no. 3, 277-293. (S. Dineen) **80m:32022a** 32E99 (32D99, 46G20)
- Holomorphy types and Runge domains. II. (Portuguese. English summary) *An. Acad. Brasil. Ciênc.* 51 (1979), no. 1, 5-25. (S. Dineen) **80m:32022b** 32E99 (32D99, 46G20)
- Moraga, Claudio** Comments on a method of Karpovskiy. *Inform. and Control* 39 (1978), no. 3, 243-246. (Authors' summary) **80d:94042** 94D05
- Logical design by means of exchange of vertices. (Spanish. English summary) *Scientia (Valparaiso)* No. 151 (1978), 135-144. (Authors' summary) **80k:94021** 94C10 (94A11)
- (with Coy, Wolfgang) Description and detection of faults in multiple-valued logic circuits. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979)*, pp. 74-81. *IEEE, Long Beach, Calif.*, 1979. (Authors' summary) **80m:94114** 94C99 (03B50)
- Extensions on multiple-valued threshold logic. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979)*, pp. 232-240. *IEEE, Long Beach, Calif.*, 1979. (From the summary) **80m:94094** 94C10
- Spectral characterisation of ternary threshold functions. *Electron. Lett.* 15 (1979),

- no. 22, 712-713. (Author's summary) **80j:94040** 94C10  
Characterisation of ternary threshold functions using a partial spectrum. *Electron. Lett.* 15 (1979), no. 24, 803-805. (Author's summary) **80m:94095** 94C10
- Morales, Claudio** Pseudocontractive mappings and the Leray-Schauder boundary condition. *Comment. Math. Univ. Carolin.* 20 (1979), no. 4, 745-756. (Rainald Schöneberg) **80k:47067** 47H10 (47H15)  
(with Kirk, W. A.) Condensing mappings and the Leray-Schauder boundary condition. *Nonlinear Anal.* 3 (1979), no. 4, 533-538. (T. C. Lim) **80k:47065** 47H10
- Morales, Pedro** (with Belley, Jean-Marc) Régularité d'une fonction d'ensembles à valeurs dans un groupe topologique. *Ann. Sci. Math. Québec* 3 (1979), no. 2, 185-197. (N. Dinculeanu) **80i:28022** 28B10
- Moras, D. A.** Corrigendum et addendum à: "Minimal cell coverings of sphere bundles over spheres" [Comment. Math. Univ. Carolin. 16 (1975), 147-149; MR 51 #1834]. *Comment. Math. Univ. Carolin.* 20 (1979), no. 1, 189-190. (Nelson L. Max) **80m:55003** 55M30
- Moras, Gadil** Some coefficients in the center of the group algebra of the symmetric group. *Discrete Math.* 21 (1978), no. 1, 75-81. (William H. Gustafson) **80n:20010** 20C05
- Moraw, P. A. P.** A curious finite sum. *Bull. Inst. Math. Appl.* 14 (1978), no. 7, 177-178. (From the introduction) **80a:05022** 05A20  
The closest pair of  $N$  random points on the surface of a sphere. *Biometrika* 66 (1979), no. 1, 158-162. (Franz Streit) **80k:60018** 60D05  
Asymptotic analysis and local lattice central limit theorems. *J. Appl. Probab.* 16 (1979), no. 3, 541-553. (H. A. Guess) **80j:60034** 60F05 (62E30, 65D30, 92A10)
- Moras, William** The global dimension of  $C(X)$ . *J. London Math. Soc.* (2) 17 (1978), no. 2, 321-329. (B. E. Johnson) **80a:46042** 46M20 (54C40)  
(with Brown, Gavin) Analytic discs in the maximal ideal space of  $M(G)$ . *Pacific J. Math.* 75 (1978), no. 1, 45-57. (Colin C. Graham) **80b:43002a** 43A10  
The individual symbolic calculus for measures. II. *Proc. London Math. Soc.* (3) 38 (1979), no. 3, 481-496. (R. Kaufman) **80e:43008** 43A25
- bellini-Morante, A.** See Bellini-Morante, A.
- Morari, Manfred** (with Stephanopoulos, George) Comments on finding the generic rank of a structural matrix. With a reply by R. W. Shields and J. B. Pearson. *IEEE Trans. Automat. Control* 23 (1978), no. 3, 509-510. (Editors) **80n:93040** 93B05
- Morato, L. M.** (with Cobelli, C.) On the identification by filtering techniques of a biological  $n$ -compartment model in which the transport rate parameters are assumed to be stochastic processes. *Bull. Math. Biol.* 40 (1978), no. 5, 651-660. (G. S. Ladde) **80a:92012** 92A05 (73P05)
- Moraw, Jack** Completions of complex cobordism. *Geometric applications of homotopy theory* (Proc. Conf., Evanston, Ill., 1977), II, pp. 349-361, *Lecture Notes in Math.*, 658, Springer, Berlin, 1978. (David C. Johnson) **80i:57026** 57R90 (55N20)  
The  $E_2$ -term of Novikov's spectral sequence. *Geometric applications of homotopy theory* (Proc. Conf., Evanston, Ill., 1977), II, pp. 362-382, *Lecture Notes in Math.*, 658, Springer, Berlin, 1978. (J. F. Adams) **80k:55018** 55N22 (55T15)  
Hypercohomology of topological categories. *Geometric applications of homotopy theory* (Proc. Conf., Evanston, Ill., 1977), II, pp. 383-403, *Lecture Notes in Math.*, 658, Springer, Berlin, 1978. (J. Stasheff) **80e:55040** 55U99 (14F99, 55N99)  
A product for the odd-primary bordism of manifolds with singularities. *Topology* 18 (1979), no. 3, 177-186. (P. S. Landweber) **80k:57063** 57R90
- Moravec, A.** The base of control flow graphs. *Scripta Fac. Sci. Natur. UJEP Brunensis—Math.* 8 (1978), no. 10, 27-39. (Juris Borzovs) **80k:68021** 68B10  
New method of measurement points. *Scripta Fac. Sci. Natur. UJEP Brunensis—Math.* 9 (1979), no. 1, 35-44. (From the introduction) **80k:68008** 68B10
- Moravský, Ladislav** Über die nichtlineare Differentialgleichung in der Form  $y''' + p(x)y'' + q(x)y' + r(x)y = 0$ . (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenianae. Math.* 32 (1975), 91-104. (Author's summary) **80f:34033** 34C11 (34C10)
- Morawetz, Cathleen S.** A regularization for a simple model of transonic flow. *Comm. Partial Differential Equations* 4 (1979), no. 1, 79-111. (Nima Geffen) **80b:35119** 35Q10 (76H05)  
See also Kolata, Gina Bari, **80j:01031**
- Morčalo, Jaroslav** On the existence and uniqueness of solutions of differential-integral equations with a deviated argument. *Fasc. Math. No. 10* (1978), 85-96. (D. Băinov) **80a:34093** 34K05 (45J05)
- Morčalo, G.** (with Fröhlich, Jürg; Strocchi, F.) Charged sectors and scattering states in quantum electrodynamics. *Ann. Physics* 119 (1979), no. 2, 241-284. (K. Wódkiewicz) **80g:81091** 81L05 (47A40, 81E05)
- Morchoine, Yves** Résolution des équations de Navier-Stokes par une méthode pseudo-spectrale en espace-temps. (English summary) *Rech. Aérospat.* 1979, no. 5, 293-306. (Author's summary) **80b:65103** 65P05
- Mordeson, John N.** (with Deveney, James K.) On Galois theory using pencils of higher derivations. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 233-238. (P. Abellanas) **80g:12018** 12F15  
(with Deveney, James K.) Pencils of higher derivations of arbitrary field extensions. *Proc. Amer. Math. Soc.* 74 (1979), no. 2, 205-211. (Surender K. Gupta) **80f:12022** 12F15  
(with Deveney, James K.) Invariance in inseparable Galois theory. *Rocky Mountain J. Math.* 9 (1979), no. 3, 395-403. (Surender K. Gupta) **80f:12023** 12F15
- Mordukhovich, B. S.** (with Sasonkin, A. M.) On the theory of duality in control systems. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 8, 1371-1380, 1529. (L. von Wolfersdorf) **80a:49005** 49A10 (49E30, 93B05)  
(with Dubov, M. A.) On the control theory of linear stochastic systems. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 12, 2265-2268, 2303. (From the text) **80b:93162** 93E20  
(with Kruger, A. Ja.) Minimization of nonsmooth functionals in optimal control problems. *Izv. Akad. Nauk SSSR Tekhn. Kibernet.* 1978, no. 4, 176-183 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 4, 126-133 (1979). (J. Warga) **80d:49028** 49B27
- Morf, Jorge J.** (with Cosnard, Michel Y.) Numerical solution of nonlinear equations. *ACM Trans. Math. Software* 5 (1979), no. 1, 64-85. (Authors' summary) **80c:65110** 65H05  
(with Sorensen, Danny C.) On the use of directions of negative curvature in a modified Newton method. *Math. Programming* 16 (1979), no. 1, 1-20. (Jochem Zowe) **80b:90119** 90C30
- More, S. V.** The symmetrical free vibrations of a thin elastic plate with initial condition as a generalized function. *Indian J. Pure Appl. Math.* 10 (1979), no. 4, 431-436. (Author's summary) **80c:73049** 73K10
- Moreau, J. J.** Raffle par un convexe à courbure minorée: questions asymptotiques. *Travaux Sémin. Anal. Convexe* 8 (1978), no. 1, Exp. No. 2, 10 pp. (Pierre Lorian) **80a:49012** 49A50  
Le calcul des variations horizontales et l'hydrodynamique. *Travaux Sémin. Anal. Convexe* 9 (1979), no. 1, Exp. No. 4, 31 pp. (M. M. Schiffer) **80h:76010** 76B99 (49A99)  
Mathematical comparison of three alternative laws for linear viscosity. *Travaux Sémin. Anal. Convexe* 9 (1979), no. 1, Exp. No. 8, 19 pp. (Jacques Mauss) **80k:76002** 76A02
- Moreau, M.** Note on the entropy production in a discrete Markov system. *J. Math. Phys.* 19 (1978), no. 12, 2494-2498. (Author's summary) **80c:82025** 82A30 (94A17)
- Moreau, R.** (with Alemany, A.) Écoulement MHD en présence d'un champ magnétique transversal à plusieurs paires de pôles. (English summary) *J. Mécanique* 18 (1979), no. 1, 103-128. (E. G. Broadbent) **80d:76097** 76W05 (35J25)
- Moreau, W. R.** A vector perturbation series based upon a representation in a finite Banach space. *J. Comput. Phys.* 31 (1979), no. 2, 240-264. (Author's summary) **80d:81116** 81G10 (49H05, 65J05)
- Morefield, C. L.** Author's reply to: "Comments on: 'Applications of 0-1 integer programming to multitarget tracking problems'" [IEEE Trans. Automat. Control 24 (1979), no. 1, 142-143; MR 80d:90054] by F. N. Bailey. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 670-671. (Editors) **80i:90102** 90C50  
See also Bailey, F. N., **80d:90054**
- Moreira, I. C.** Propagators for the Caldirola-Kanai-Schrödinger equation. *Lett. Nuovo Cimento* (2) 23 (1978), no. 8, 294-298. (From the text) **80g:81013** 81C05
- Moreira, Mannel Ricardo Falcão** Primitives of  $BP_*(BP)$  modulo an invariant prime ideal. *Amer. J. Math.* 100 (1978), no. 6, 1247-1273. (P. S. Landweber) **80n:55004** 55N20 (55N22)
- Moré, Anne C.** Locally cyclic semigroups. *Algebra Universalis* 9 (1979), no. 3, 391-394. (Mohan S. Putcha) **80k:20040** 20M10
- Moré, E.** (with Rennoise, C.) Global optimization by suppression of partial redundancies. *Comm. ACM* 22 (1979), no. 2, 96-103. (Authors' summary) **80b:68016** 68B05
- Moré, J. P.** (with Thorne, C. J.) Solving linear systems of equations. *Information linkage between applied mathematics and industry* (Proc. First Annual Workshop, Naval Postgraduate School, Monterey, Calif., 1978), pp. 483-499, Academic Press, New York, 1979. (From the text) **80g:65036** 65F10
- Moré, Jean-Michel** (with Bahri, Abbas) Image de la somme de deux opérateurs. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 9, A719-A722. (Authors' summary) **80b:47094** 47H99
- Morrell, Andreina** The theorem of Lerch for the interval  $(-\infty, \infty)$ . (Italian. English summary) *Rend. Mat.* (6) 11 (1978), no. 1, 109-113. (Author's summary) **80g:44014** 44A99 (42A70)
- Moreno, Carlos Julio** The Petersson inner product and the residue of an Euler product. *Pacific J. Math.* 78 (1978), no. 1, 149-155. (O. M. Fomenko) **80k:10032** 10D12  
(with Bermudez, A.) Sur l'optimalité et la mise en oeuvre de certaines commandes à retour du type "plus ou moins". (English summary) With a comment by F. Leveau. *RAIRO Automat.* 12 (1978), no. 3, 291-298, iv. (Authors' summary) **80b:93073** 93C15
- martinez Moreno, J.** See Martinez Moreno, J.
- Moresco, Roberto** Ordered groups and fields. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* 58 (1977), 175-190 (1978). (F. Šik) **80m:06020** 06F20 (10M10)
- Moret, Gino** The  $\lambda$ -scheme. *Comput. & Fluids* 7 (1979), no. 3, 191-205. (C. Wayne Mastin) **80j:76045** 76N15 (65M05)
- Moretini, Pedro Alberto** Introduction to spectral analysis of time series. (Portuguese) *Proceedings of the Ninth Brazilian Mathematical Colloquium (Poços de Caldas, 1973), Vol. II (Portuguese)*, pp. 355-367, *Inst. Mat. Pura Apl., São Paulo*, 1977. (Editors) **80c:62065** 62M15  
A unified viewpoint of some techniques of multivariate analysis. (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977), Vol. I (Portuguese)*, pp. 399-417, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Editors) **80d:62043** 62H20
- On homogeneous stochastic processes on compact abelian groups. *Ann. Int. Statist. Math.* 30 (1978), no. 3, 465-472. (Roch Roy) **80c:60048** 60G10 (62M15)  
Estimation of the spectrum and of the covariance function of a dyadic-stationary series. *Bol. Soc. Brasil. Mat.* 9 (1978), no. 2, 83-88. (E. J. Hannan) **80k:62100** 62M15
- Morf, Martin** (with Vieira, Augusto C.; Lee, Daniel T. L.; Kailath, Thomas) Recursive multichannel maximum entropy spectral estimation. *IEEE Trans. Geosci. Electron.* 16 (1978), no. 2, 85-94. (L. L. Campbell) **80c:62066** 62M15 (93E99, 94A99)  
(with Dobbins, J. R.; Friedlander, B.; Kailath, Thomas) Square-root algorithms for parallel processing in optimal estimation. *Automatica—J. IFAC* 15 (1979), no. 3, 299-306. (A. P. Roberts) **80g:93080** 93E11 (68B20)  
(with Kailath, Thomas; Kung, Sun Yuan) Displacement ranks of a matrix. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 5, 769-773. (L. Rodman) **80f:15008** 15A09 (15A15, 47A65)  
(with Kailath, Thomas; Kung, Sun Yuan) Displacement ranks of matrices and linear equations. *J. Math. Anal. Appl.* 68 (1979), no. 2, 395-407. (S. F. McCormick) **80k:65029** 65F05 (68C25)  
(with Friedlander, B.; Kailath, Thomas; Ljung, Lennart) New inversion formulas for matrices classified in terms of their distance from Toeplitz matrices. *Linear Algebra Appl.* 27 (1979), 31-60. (M. Lotkin) **80i:15006** 15A09 (15A57)
- Morf, Rudolf H.** (with Orszag, Steven A.; Frisch, Uriel) Spontaneous singularity in three-dimensional, inviscid, incompressible flow. *Phys. Rev. Lett.* 44 (1980), no. 9, 572-575. (Authors' summary) **80k:76028** 76C05
- Morgan, A. P.** On the construction of nonautonomous stable systems with applications to



- adaptive identification and control. *SIAM J. Control Optim.* 17 (1979), no. 3, 400-431. (Author's summary) **80f:93043** 93C40
- de Morgan, Augustus. See De Morgan, Augustus
- Morgan, Byron J. T. Four approaches to solving the linear birth-and-death (and similar) processes. *Internat. J. Math. Ed. Sci. Tech.* 10 (1979), no. 1, 51-64. (I. W. Saunders) **80j:60111** 60J80
- Morgan, C. Universal vector bundles. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 4, 183-185. (L. S. Husch) **80k:55050** 55R25 (55R15)
- Morgan, C. L. On relations for representations of finite groups. *Pacific J. Math.* 78 (1978), no. 1, 157-159. (B. Fein) **80d:20011** 20C15
- On counting types of symmetries in finite unitary reflection groups. *Canad. J. Math.* 31 (1979), no. 2, 252-254. (R. H. Dye) **80e:20061** 20H15
- Morgan, Charles G. Note on a strong liberated modal logic and its relevance to possible world skepticism. *Notre Dame J. Formal Logic* 20 (1979), no. 4, 718-722. (Jerzy Kotas) **80m:03039** 03B45
- Morgan, F. W. (with Gray, H. L.; Houston, A. G.) On G-spectral estimation. *Applied time series analysis* (Proc. First Sympos., Tulsa, Okla., 1976), 39-138, Academic Press, New York, 1978. (From the introduction) **80e:62063** 62M15
- Morgan, J. D. (with Rawlins, A. D.) Monotonic properties of analytic functions. *SIAM J. Math. Anal.* 9 (1978), no. 6, 1172-1178. (M. Ohtsuka) **80k:30002** 30A05
- Morgan, John C., II. On the absolute Baire property. *Pacific J. Math.* 78 (1978), no. 2, 415-431. (J. C. Oxtoby) **80f:54022** 54E50 (34C50, 54E65)
- Morgan, John W. Hodge theory for the algebraic topology of smooth algebraic varieties. *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 2, pp. 119-127, *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (K.-T. Chen) **80g:32013** 32C10 (14C30, 55P62, 58A14)
- The algebraic topology of smooth algebraic varieties. *Inst. Hautes Études Sci. Publ. Math.* No. 48 (1978), 137-204. (Jean-Michel Lemaire) **80e:55020** 55P62 (14F40)
- Nonsingular Morse-Smale flows on 3-dimensional manifolds. *Topology* 18 (1979), no. 1, 41-53. (M. I. Brin) **80j:58043** 58F09 (57N10, 58F10)
- Morgan, Michael E. (with Mei, Kenneth K.; Chang, Shu Kong) Finite methods in electromagnetic scattering. *Electromagnetic scattering*, pp. 359-392, Academic Press, New York, 1978. (Authors' summary) **80k:78025** 78A45 (65N30)
- Morgenstern, Carl F. The measure quantifier. *J. Symbolic Logic* 44 (1979), no. 1, 103-108. (M. Yasuhara) **80f:03041** 03C80
- On amalgamations of languages with Magidor-Malitz quantifiers. *J. Symbolic Logic* 44 (1979), no. 4, 549-558. (G. Fuhrken) **80k:03035** 03C80
- On the ordering of certain large cardinals. *J. Symbolic Logic* 44 (1979), no. 4, 563-565. (A. Kanamori) **80k:03061** 03E55 (03E35)
- Morgenstern, D. Erwartungswerte, Varianzen und Kovarianzen mehrerer Maxima der Abstände unabhängiger rechteckverteilter Zufallsvariablen. (English summary) *Metrika* 25 (1978), no. 3, 143-148. (H. L. Hartner) **80m:62043** 62G30
- Morgenstern, Jacques. Une extension du théorème de Winograd. *Theoret. Comput. Sci.* 8 (1979), no. 2, 255-259. (Author's summary) **80g:68061** 68C25
- Mori, Hajimu (with Ohtsuka, Tatsuo; Kuh, Ernest S.; Kashiwabara, Toshinobu; Fujiwara, Toshio) One-dimensional logic gate assignment and interval graphs. *IEEE Trans. Circuits and Systems* 26 (1979), no. 9, 675-684. (Authors' summary) **80j:94050** 94C15
- Mori, Hazime (with Karasudani, Takashi; Nagano, Katsuhiko; Okamoto, Hisao) A new continued-fraction representation of the time-correlation functions of transport fluxes. *Progr. Theoret. Phys.* 61 (1979), no. 3, 850-863. (Authors' summary) **80c:82048** 82A70
- (with Fujisaka, Hirokazu) A maximum principle for determining the intermittency exponent  $\mu$  of fully developed steady turbulence. *Progr. Theoret. Phys.* 62 (1979), no. 1, 54-60. (Authors' summary) **80g:82007** 82A05 (76F99)
- Mori, Masamitsu A vanishing theorem for the mod  $p$  Massey-Peterson spectral sequence. *Pacific J. Math.* 77 (1978), no. 2, 473-481. (Harvey Margolis) **80e:55027** 55Q22 (55S10)
- The Steenrod operations in the Eilenberg-Moore spectral sequence. *Hiroshima Math. J.* 9 (1979), no. 1, 17-34. (Tetsuya Aikawa) **80e:55038** 55T20 (55R40)
- Mori, Seiki Holomorphic curves with maximal deficiency sum. *Kodai Math. J.* 2 (1979), no. 1, 116-122. (A. L. Vitter, III) **80j:32006** 32A22 (32H25)
- The deficiencies and the order of holomorphic mappings of  $C^n$  into a compact complex manifold. *Tôhoku Math. J. (2)* 31 (1979), no. 3, 285-291. (Hirotaka Fujimoto) **80m:32030** 32H30 (32A22)
- Mori, Shigefumi The endomorphism rings of some abelian varieties. II. *Japan. J. Math.* (N.S.) 3 (1977), no. 1, 105-109. (William C. Waterhouse) **80e:14009** 14H20 (14K15)
- (with Sumihiro, Hideyasu) On Hartshorne's conjecture. *J. Math. Kyoto Univ.* 18 (1978), no. 3, 523-533. (P. E. Newstead) **80j:14033** 14J30 (14F10, 14J40)
- Mori, Shinaku (with Furuse, Yoshikazu) Topological formulation of general linear network functions. *J. Franklin Inst.* 307 (1979), no. 5, 305-312. (Zdeněk Ertinger) **80g:94100** 94C15
- Mori, Tôru On Boolean algebras whose Stone spaces have at most one nonisolated point. *Rep. Fac. Sci. Engng. Saga Univ. Math.* No. 7 (1979), 1-12. (J. L. Zemmer) **80h:06011** 06D05
- Mori, Toshio (with Hatori, Hirohisa; Maejima, Makoto) Convergence rates in the law of large numbers when extreme terms are excluded. *Z. Wahrsch. Verw. Gebiete* 47 (1979), no. 1, 1-12. (H. H. Stratton) **80i:60036** 60F15
- Moricé, F. See Moricz, Ferenc
- Moricé, Franco (with Rizzi, Bruno) Dystropy in the dichotomic trees. (Italian summary) *Boll. Un. Mat. Ital. A (5)* 15 (1978), no. 1, 180-186. (Authors' summary) **80a:94014** 94A17 (05C05)
- Moricé, Ferenc Asymptotic behavior of series in weakly multiplicative systems. (Russian) *The theory of the approximation of functions* (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 261-267, "Nauka", Moscow, 1977. (Editors) **80c:42013** 42C99
- On the maximum of the partial sums for double orthogonal series. *Fourier analysis and approximation theory* (Proc. Colloq., Budapest, 1976), Vol. II, pp. 543-558, Colloq. Math. Soc. János Bolyai, 19, North-Holland, Amsterdam, 1978. (F. Moricz) **80k:42031** 42C15 (42C10)
- (with Varga, A.; Ecsedi-Tóth, P.) A method for minimizing partially defined Boolean functions. *Acta Cybernet.* 4 (1978/79), no. 3, 283-290. (Authors' summary) **80j:94041** 94C10 (03G05, 68E99)
- Exponential estimates for the maximum of partial sums. I. Sequences of  $r.v.s$ . Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 1-2, 159-167. (R. J. Tomkins) **80d:60023** 60E15 (60F15)
- Morihira, Michio (with Kawahara, Mutsuto; Kataoka, Shinji; Hasegawa, Ken'ichi) Periodic finite elements in two layer tidal flow. *Bull. Fac. Sci. Engng. Chuo Univ.* 21 (1978), 151-175. (From the introduction) **80g:86003** 86A05 (65N30)
- Morikawa, Hisasi Spaces of moduli of submodules of certain unipotent polynomial representations of nilpotent groups. *Math. Rep. Toyama Univ.* 2 (1979), 101-123. (H. H. Andersen) **80k:14023** 14D20 (20G05)
- Morikawa, Kichiro (with Kawashimo, Kensuke) Lagrangian and Hamiltonian forms and their applications to the analysis of heat conduction. *Bull. JSME* 23 (1980), no. 176, 231-237. (Authors' summary) **80m:80004** 80A20
- Morikawa, Ryozo On units of real quadratic number fields. *J. Math. Soc. Japan* 31 (1979), no. 2, 245-250. (Charles J. Parry) **80i:12008** 12A45 (10B05, 12A25)
- Morimoto, Hiroaki On the absolute continuity of measures relative to a Poisson measure. *Tôhoku Math. J. (2)* 31 (1979), no. 1, 57-62. (Jean Mémoin) **80e:60057** 60G30
- Morimoto, Mitsuo Analytic functionals with non-compact carrier. *Tokyo J. Math.* 1 (1978), no. 1, 77-103. (Carlos A. Berenstein) **80k:46074** 46F15 (30H05)
- Morimoto, Shoji (with Kurata, Yoshiki) A note on quasicrational extensions. *Osaka J. Math.* 15 (1978), no. 3, 683-692. (L. Bican) **80g:16026** 16A50
- Morimoto, Tôru La géométrie des équations de Monge-Ampère. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 1, A25-A28. (Author's summary) **80f:58004** 58A15 (58H10)
- Morimoto, Yoshinori Fundamental solution for a hyperbolic equation with involutive characteristics of variable multiplicity. *Comm. Partial Differential Equations* 4 (1979), no. 6, 609-643. (C. Bardos) **80k:35116** 35L40
- Morimune, Kimio Improving the limited information maximum likelihood estimator when the disturbances are small. *J. Amer. Statist. Assoc.* 73 (1978), no. 364, 867-871. (A. L. Nagar) **80k:62096** 62P25
- Comparisons of normal and logistic models in the bivariate dichotomous analysis. *Econometrica* 47 (1979), no. 4, 957-975. (Author's summary) **80k:62108** 62P10
- Morin, Bernard (with Petit, Jean-Pierre) Problématique du retournement de la sphère. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 10, A767-A770. (Authors' summary) **80b:57005** 57N05
- Morin, Hervé G. (with Lord, Graham) Degeneracy of transformed complete sequences. *Fibonacci Quart.* 17 (1979), no. 4, 358-361. (Ian Anderson) **80m:10006** 10A40 (10L10)
- Morin, Thomas L. Computational advances in dynamic programming. *Dynamic programming and its applications* (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977), pp. 53-90, Academic Press, New York, 1978. (From the text) **80e:90115** 90C39
- Morin-Strom, Karl A. A Witt theorem for non-defective lattices. *Canad. J. Math.* 30 (1978), no. 3, 499-511. (Joel Cunningham) **80i:13029** 13K05 (10C03)
- Morisset, S. (with Benza, V.; Reina, Cesare) Weyl and Papapetrou axisymmetric space-times as geodesics of the hyperbolic complex plane. (Italian and Russian summaries) *Nuovo Cimento B (11)* 50 (1979), no. 1, 1-6. (Michael P. Ryan, Jr.) **80g:83025** 83C99 (53B50)
- Morishima, Tamotsu (with Kawata, Tutomu; Inoue, Hiroshi) Inverse scattering method for the two-dimensional massive Thirring model. *J. Phys. Soc. Japan* 47 (1979), no. 4, 1327-1334. (David J. Kaup) **80j:81014** 81C05 (35Q20)
- Morishige, Kaoru (with Imaoka, Mitsuori) A note on characteristic numbers of  $MSp_n$ . *J. Math. Kyoto Univ.* 19 (1979), no. 1, 19-31. (R. E. Stong) **80e:57022** 57R90
- Morita, Akio An exact treatment for nonlinear relaxation processes governed by the rotational Smoluchowski equation. *J. Phys. A* 12 (1979), no. 7, 991-998. (Author's summary) **80k:82079** 82A70
- Morita, Kenichi (with Sugata, Kazuhiro; Umeo, Hiroshi) The language accepted by an  $n$ -bounded multicounter automaton and its computing ability. *Systems-Comput.-Controls* 8 (1977), no. 2, 71-79 (1978). (Ronald E. Prather) **80k:68077** 68D35
- (with Sugata, Kazuhiro; Umeo, Hiroshi) Computation complexity of  $n$ -bounded counter automaton and multidimensional rebound automaton. *Systems-Comput.-Controls* 8 (1977), no. 2, 80-87 (1978). (A. L. Selman) **80g:68068** 68D05
- (with Umeo, Hiroshi; Sugata, Kazuhiro) Some notes concerning the shape of two-dimensional input tapes. *Systems-Comput.-Controls* 8 (1977), no. 4, 61-67 (1979). (Authors' summary) **80g:68070** 68D05
- (with Umeo, Hiroshi; Sugata, Kazuhiro) Computational complexity of  $L(m, n)$  tape-bounded two-dimensional Turing machines. *Systems-Comput.-Controls* 8 (1977), no. 6, 17-24 (1979). (Authors' summary) **80f:68060** 68C40 (03D15, 68C25)
- (with Umeo, Hiroshi; Sugata, Kazuhiro) Language recognition abilities of several two-dimensional tape automata and their relation to tape complexities. *Systems-Comput.-Controls* 8 (1977), no. 6, 58-65 (1979). (Authors' summary) **80f:68093** 68F10 (68C40, 68D20)
- Morita, Kili (with Hoshina, Takao) On rectangular products of topological spaces. *Topology Appl.* 11 (1980), no. 1, 47-57. (Teodor Przymusiński) **80a:54006** 54B10 (54F45)
- Morita, Shigeyuki Invariants of almost complex structures and their applications. (Japanese) *Sûgaku* 29 (1977), no. 4, 299-308 (1978). (Koichi Ogino) **80c:32009** 32C10 (57R15)
- $L$ -equivalence classes of submanifolds in complex projective spaces. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 1, 31-35. (John W. Wood) **80k:32036** 32C10 (57R15)
- Morita, T. (with Horiguchi, T.) Phase transition in a random Ising model on a Cayley tree. *J. Phys. A* 13 (1980), no. 3, L71-L75. (Authors' summary) **80m:82054** 82A67
- Morita, Yasuo Krazer's analytic functions and rigid analytic spaces. *Proceedings of the Conference on  $p$ -adic Analysis (Nijmegen, 1978)*, pp. 134-142, Report, 7806, Katholieke Univ., Nijmegen, 1978. (Daniel Barsky) **80c:12032** 12J27 (14G20, 32E27)
- A  $p$ -adic integral representation of the  $p$ -adic  $L$ -function. *J. Reine Angew. Math.*

- 302 (1978), 71-95. (Lawrence Washington) **80a:12020** 12B30
- Moriya, Ryuji (with Kuribayashi, Akikazu) On the automorphisms of Riemann surfaces defined by the equation  $Y^2 = X(X-1)(X-t_1)(X-t_2)$ . *Bull. Fac. Sci. Engrg. Chuo Univ.* 21 (1978), 1-11. (R. F. Lax) **80g:14030a** 14H35 (14H05)
- Muriyán, Roberto Regularity of the Dirichlet problem for the complex Monge-Ampère equation. *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 3, 1022-1023. (Thomas Bloom) **80a:32051** 32F20 (35J60)
- Mørkellén, A. Decision making in uncertainty without quantitative estimates of outcomes. (Russian. Lithuanian and English summaries) *Mat. Metody v Social. Nauk. — Trudy Sem. Protsessy Optimal. Upravleniya II Sekcija No. 11* (1978), 79-97, 125. (From the summary) **80c:90155** 90D35 (90A05)
- Mørkellén, R. On an invariance principle for dependent summands. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 18 (1978), no. 4, 83-85, 200. (G. K. Eagleson) **80b:60050** 60F17
- A characterization of multiparameter quasimartingales. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 1, 155-159, 231. (Ju. S. Mikura) **80a:60067** 60G48 (60G60)
- Murley, L. S. D. Note on a finite element stiffness formulation in shell theory. *Energy methods in finite element analysis*, pp. 127-151, Wiley, Chichester, 1979. (From the introduction) **80h:73053** 73L99 (65N30)
- Murley, P. D. (with Kissinger, M. B.) Relativistic many-body theory, quantum chromodynamics and neutron stars/supernova. *Phys. Rep.* 51 (1979), no. 2, 63-110. (Authors' summary) **80c:82018** 82A15 (47A55, 85A15)
- Murley, T. D. (with Duffin, Richard J.) Wang algebra and matroids. Special issue on the mathematical foundations of system theory. *IEEE Trans. Circuits and Systems* 25 (1978), no. 9, 755-762. (András Récski) **80a:94067** 94C15 (05B35)
- (with Anderson, William N., Jr.; Trapp, George E.) Fenchel duality of nonlinear networks. Special issue on the mathematical foundations of system theory. *IEEE Trans. Circuits and Systems* 25 (1978), no. 9, 762-765. (Ernest S. Kuh) **80a:94042** 94C05
- Several applications of the shortest operator. *Constructive approaches to mathematical models (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978)*, pp. 439-446, Academic Press, New York, 1979. (Author's summary) **80m:94077** 94C05 (47D99)
- Parallel summation, Maxwell's principle and the infimum of projections. *J. Math. Anal. Appl.* 70 (1979), no. 1, 33-41. (T. Andó) **80g:94075** 94C05 (47B15)
- A Gauss-Markov theorem for infinite dimensional regression models with possibly singular covariance. *SIAM J. Appl. Math.* 37 (1979), no. 2, 257-260. (Hilmar Drygas) **80m:62069** 62J05
- Murnov, V. M. (with Mel'nikova, I. V.) The Cauchy problem and the method of quasireversibility for second-order equations in a Banach space. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 4, 614-618, 763. (P. Talpalaru) **80a:34096** 34G10
- Muro, A. (with Ferroni, A.; Goodman, Gerald S.) Pathwise construction of random variables and function space integrals. *Stochastic control theory and stochastic differential systems (Proc. Workshop, Deutsch. Forschungsgemeinschaft, Univ. Bonn, Bad Honnef, 1979)*, pp. 362-372, *Lecture Notes in Control and Information Sci.*, 16, Springer, Berlin, 1979. (Jean-Yves Ouyard) **80i:93147** 93E99
- Murakami, Takeshi A characterization of fundamental domains of discontinuous groups acting on real hyperbolic spaces. *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* 25 (1978), no. 2, 157-183. (Jane Gilman) **80d:32027** 32G15 (32N05)
- Murugan, George Asymptotic behaviour of solutions of differential equations associated to monotone operators. *Nonlinear Anal.* 3 (1979), no. 6, 873-883. (A. Pazy) **80m:34064** 34G99 (47H05)
- Second-order difference equations of monotone type. *Numer. Funct. Anal. Optim.* 1 (1979), no. 4, 441-450. (Pierre-Louis Lions) **80a:47060** 47H05 (39A10)
- Murru, L. M. (with Gibbon, John; James, I. N.) An example of soliton behaviour in a rotating baroclinic fluid. *Proc. Roy. Soc. London Ser. A* 367 (1979), no. 1729, 219-237. (Authors' summary) **80a:86002** 86A10 (35Q20, 76B25)
- Murru, P. A. (with Korostelev, A. P.) The theory of large deviations for random processes and stochastic recursion processes of optimization. (Russian) *Problemy Shcheln. Poiska No. 6 Zadachi Optimizatsii* (1978), 168-201, 333. (Authors' summary) **80a:93194** 93E20
- Murru, T. Stochastic stability and control for discrete-time systems with jump Markov disturbances. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 1, 111-127. (Author's summary) **80b:93168** 93E20
- Murru, A. M. Differentiation and integration of logic functions. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 6, 33-39. (Korolian Gilezan) **80g:94087** 94C10
- (with Kurtilvili, A. G.; Sudakov, D. M.) A system of tests for checking the probabilistic characteristics of uniformly distributed random numbers. (Russian) *Sakharth. SSR Mecn. Akad. Gamotol. Centr. Šrom.* 18 (1978), no. 2 *Voprosy Vyčisl. Tehn. i Upravleniya*, 150-174. **80c:65021** 65C10
- (with Sudakov, D. M.) The variance of an estimate of the mean value of a stationary random process. (Russian) *Sakharth. SSR Mecn. Akad. Gamotol. Centr. Šrom.* 18 (1978), no. 2 *Voprosy Vyčisl. Tehn. i Upravleniya*, 182-191. (I. M. Stojanov) **80d:62078** 62M09
- Murru, Ž. N. A remark on the existence of vector-valued Čebyšev systems. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 4(191), 117-118. (E. O. Zeel') **80a:41026** 41A50
- Murru, Ju. I. Taking account of the effects of gravitation, noninertial nature of the motion of the medium and the radiation spectrum in equations of relativistic radiation hydrodynamics. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 142* (1978), 35 pp. (Author's summary) **80i:76049** 76Y05
- Murru, Ju. V. The analytic solution of a stationary matrix Riccati equation. (Russian) *Complex control systems (Russian)*, pp. 64-73, *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (From the text) **80i:93005** 93A99
- Murru, N. F. ★Избранные лагранжевы задачи теории упругости. (Russian) [Selected two-dimensional problems of elasticity theory] *Leningrad. Univ., Leningrad*, 1978, 182 pp. (Vadim Komkov) **80g:73063** 73-02
- (with Maz'ja, V. G.; Plamenevskii, B. A.) The stressed-strained state in the neighborhood of a crack apex at nonlinear bending of a plate. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 4, 889-892. (R. Kodnár) **80g:35121** 35Q99 (73M05)
- Murru, S. F. (with Sumin, V. I.) A nonlinear system of junction transfer in statistical nerve ensembles. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 9, 1661-1666, 1726. (V. P. Kalashnikov) **80a:35163** 35Q20 (92A09)
- (with Sumin, V. I.) Optimization of nonlinear transport processes. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 4, 794-798. (D. A. Šulaja) **80m:49026** 49B99 (82A70)
- (with Sumin, V. I.) Optimization of nonlinear systems of transport theory. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 1, 99-111, 268. (Authors' summary) **80c:82040** 82A70 (49B99)
- Murru, V. A. Regular methods for the solution of nonlinear operator equations. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 11(198), 74-86. (A. Ramn) **80b:47091** 47H17
- Regular method for solving nonlinear problems. *Inverse and improperly posed problems in differential equations (Proc. Conf., Math. Numer. Methods, Halle, 1979)*, pp. 289-296, *Math. Research*, 1, Akademie-Verlag, Berlin, 1979. (From the summary) **80m:65047** 65J15
- Solution of operator equations of the first kind by the method of finite-rank approximations. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 6, 1317-1320. (C. Illo) **80a:47014** 47A50 (65J10)
- Murru, V. V. Mixed strategies in a game with vector payoffs. (Russian) *Vestnik Mavsk. Univ. Ser. XV Vyčisl. Mat. Kibernet.* 1978, no. 4, 44-49. (M. Mañás) **80b:90146** 90D05
- Murru, V. D. (with Šaharin, B. I.) Approximate study of piecewise linear system. (Russian. English summary) With a loose English translation. *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* 8 (1979), no. 5-6, 453-465. (Authors' summary) **80j:93054** 93C10
- Murru, Rosamaria (with Ghezzi, Carlo) Learning translations. *Progress in cybernetics and systems research*, Vol. V, pp. 518-525, Hemisphere, Washington, D.C., 1979. (From the text) **80c:68185** 68F05
- Murru, Bernard B. (with Conway, John B.) Operators that are points of spectral continuity. *Integral Equations Operator Theory* 2 (1979), no. 2, 174-198. (R. G. Douglas) **80h:47004** 47A10
- Murru, Judith H. (with Clark, Douglas N.) On Toeplitz operators and similarity. *Amer. J. Math.* 100 (1978), no. 5, 973-986. (Nicholas P. Jewell) **80d:47041** 47B35
- Murru, Hedley C. Backlund transformations and the sine-Gordon equation. The 1976 Ames Research Center (NASA) Conference on the Geometric Theory of Non-linear Waves (Moffett Field, Calif., 1976), pp. 105-124, *Lie Groups: History, Frontiers and Applications*, VI, *Math. Sci. Press, Brookline, Mass.*, 1977. (Ngô Van Quê) **80g:35116** 35Q20 (58A15)
- Prolongation structures and nonlinear evolution equations in two spatial dimensions: a general class of equations. *J. Phys. A* 12 (1979), no. 3, 261-267. (J. Wiesner) **80e:81092** 81F99 (35Q20, 58A17)
- (with Dodd, R. K.) The two-component derivative nonlinear Schrödinger equation. Special issue on solitons in physics. *Phys. Scripta* 20 (1979), no. 3-4, 505-508. (Bris Defacio) **80j:81018** 81C05 (35Q20)
- Murru, J. L. (with Gourlay, A. R.) Locally one-dimensional hopscotch methods. *J. Comput. Appl. Math.* 4 (1978), no. 4, 269-273. (Authors' summary) **80a:65252** 65B05
- (with Lawson, J. Douglas) The extrapolation of first order methods for parabolic partial differential equations. I. *SIAM J. Numer. Anal.* 15 (1978), no. 6, 1212-1224. (M. K. Kadalbajoo) **80a:65256** 65P05
- (with Wait, R.) Crack-tip elements with curved boundaries and variable nodes. *Appl. Math. Modelling* 3 (1979), no. 4, 259-262. **80d:65119** 65N30
- (with Alexander, M. E.) Galerkin methods applied to some model equations for non-linear dispersive waves. *J. Comput. Phys.* 30 (1979), no. 3, 428-451. (Authors' summary) **80c:76006** 76B25 (65N30)
- Murru, Peter A. (with Oren, Shmuel S.) Multi-attribute decision making by sequential resource allocation. *Oper. Res.* 28 (1980), no. 1, 233-252. (Authors' summary) **80j:90008** 90A05
- Murru, Robert The dilogarithm function of a real argument. *Math. Comp.* 33 (1979), no. 146, 778-787. (Author's summary) **80c:65025** 65D20 (33A70)
- Murru, Robert J. T. Optimal constrained selection of a measurable subset. *J. Math. Anal. Appl.* 70 (1979), no. 2, 546-562. (Stefan Mica) **80b:49013** 49B27 (65K10, 90C48)
- Murru, S. Brest (with Valliere, Arthur, III; Wisniewski, Richard A.) Processes for random and sequential accessing in dynamic memories. *IEEE Trans. Comput.* 28 (1979), no. 3, 225-237. (K. H. V. Booth) **80b:68009** 68A05 (68H05)
- Murru, Sidney A. (with Bicknell, Kevin) Norms on free topological groups. *Bull. London Math. Soc.* 10 (1978), no. 3, 280-284. (Ronald Brown) **80b:22007** 22A99 (22E05)
- Murru, T. F. Classical theory of Klein-Gordon equations with logarithmic nonlinearities. (French summary) *Canad. J. Phys.* 56 (1978), no. 11, 1405-1411. (V. N. Sukko) **80c:81019** 81C05 (35Q20)
- Electrodynamics of charged scalar solitons. (French summary) *Canad. J. Phys.* 57 (1979), no. 12, 2171-2177. (Author's summary) **80m:81096** 81G10
- Murru, Donald G. On linearly increasing mean residual lifetimes. *J. Appl. Probab.* 15 (1978), no. 3, 617-620. (Henry W. Block) **80i:62086** 62N05
- An individual differences pure extinction process. *J. Math. Psych.* 19 (1979), no. 3, 307-315. (Author's summary) **80c:92032** 92A15
- Murru, J. A. (with Massey, W. A.) Calculation of steady-state probabilities for content of buffer with correlated inputs. *Bell System Tech. J.* 57 (1978), no. 9, 3097-3117. (Authors' summary) **80m:94093** 94C10
- Integral equations for electromagnetic scattering by perfect conductors with two-dimensional geometry. *Bell System Tech. J.* 58 (1979), no. 2, 409-425. (Author's summary) **80b:78007** 78A45 (45C05)
- Murru, John F. Approximation of  $p$ -adic numbers by algebraic numbers of bounded degree. *J. Number Theory* 10 (1978), no. 3, 334-350. (P. Bundschuh) **80a:10053** 10F45
- Murru, Angelo (with Massa, Enrico) A dynamical approach to relativistic continuum thermodynamics. (French summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* 29 (1978), no. 4, 423-454 (1979). (Gérard A. Maugin) **80c:80001** 80A05



- Interaction of shock waves with acoustic waves. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **64** (1978), no. 2, 177-185. (E. G. Broadbent) **80b:76056** 76L05
- Interaction of acoustic waves with shock waves in elastic solids. (French summary) *Z. Angew. Math. Phys.* **29** (1978), no. 5, 822-827. (V. M. Babič) **80g:73029** 73D99 (76Q05)
- Thermoviscoelasticity and invariance of the entropy production under time-reversal. (Italian summary) *Ann. Mat. Pura Appl.* (4) **119** (1979), 115-137. (M. Carrisi) **80b:73076** 76U05
- (with Bampi, Franco) Korteweg-de Vries equation and nonlinear waves. *Leti. Nuovo Cimento* (2) **26** (1979), no. 2, 61-63. (Editors) **80b:76020** 76B25 (35Q20)
- Morrow, C. R. (with Patterson, T. N. L.) Construction of algebraic cubature rules using polynomial ideal theory. *SIAM J. Numer. Anal.* **15** (1978), no. 5, 953-976. (Authors' summary) **80a:65048** 65D30
- Morrow, J. (with Brenton, L.) Compacifications of  $C^*$ . *Trans. Amer. Math. Soc.* **246** (1978), 139-153. (Andrew J. Sommese) **80d:32029** 32J10 (32C40)
- Morrow, J. R. On perfectly homogeneous bases in  $F$ -spaces. *Israel J. Math.* **29** (1978), no. 2-3, 199-204. (N. J. Kalton) **80d:46009** 46A35
- Morscher, Edgar See *Ontologie und Logik/Ontology and logic*, **80f:03007**
- Morse, A. Stephen (with Potter, John M.; Anderson, Brian D. O.) Single-channel control of a two-channel system. *IEEE Trans. Automat. Control* **24** (1979), no. 3, 491-492. (Authors' summary) **80c:93053** 93B99
- Morse, H. Stephen Destructible and indestructible Blaschke products. *Trans. Amer. Math. Soc.* **257** (1980), no. 1, 247-253. (C. N. Linden) **80k:30034** 30D50
- Morse, Marston The Fréchet numbers of the differentiable product of two compact, connected, smooth manifolds. Edited and completed by Stewart S. Cairns. Memorial issue for Marston Morse. *Bull. Inst. Math. Acad. Sinica* (6) (1978), no. 2, part 1, 215-246. (U. D'Ambrosio) **80g:58019** 58E05
- Lacunary type number sequences in global analysis. *J. Math. Pures Appl.* (9) **57** (1978), no. 1, 87-98. (H. B. Griffiths) **80k:58035** 58E05 (34C35)
- See also Cairns, Stewart S., **80d:01011** and Cairns, Stewart S., **80d:01020**
- Morshad, A. M. (with Ahmadi, Goodarz) On the stability of stochastic chemical systems. *J. Franklin Inst.* **306** (1978), no. 1, 77-86. (Authors' summary) **80a:93116** 93D05
- Mortell, M. P. (with Seymour, B. R.) Nonlinear forced oscillations in a closed tube: continuous solutions of a functional equation. *Proc. Roy. Soc. London Ser. A* **367** (1979), no. 1729, 253-270. (C. Rogers) **80b:76035** 76N15 (39B99)
- Mortensen, Chris A theorem on verisimilitude. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **7** (1978), no. 1, 34-43. (A. Tauts) **80d:03026** 03B60
- Mortola, S. (with Arosio, Alberto) A characterization of compact sets in functional spaces. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **15** (1978), no. 1, 119-131. (H. Hogbe-Nlend) **80b:46001** 46A05 (46E10)
- Morton, K. W. (with Miller, J. V.; Baines, M. J.) A finite element moving boundary computation with an adaptive mesh. *J. Inst. Math. Appl.* **22** (1978), no. 4, 467-477. (Authors' summary) **80a:65229** 65N30
- Morton, Patrick (with Lewis, D. J.) On normal closures related to elliptic curves. *J. Austral. Math. Soc. Ser. A* **26** (1978), no. 4, 385-409. (Andrew Bremner) **80b:12017** 12F10
- (with Bremner, Andrew) Polynomial relations in characteristic  $p$ . *Quart. J. Math. Oxf. Ser. (2)* **29** (1978), no. 115, 335-347. (J.-P. Lafon) **80a:12025** 12E05 (10M05)
- A generalization of Zolotarev's theorem. *Amer. Math. Monthly* **86** (1979), no. 5, 374-375. (A. Peluso) **80d:10005** 10A15 (20D99)
- Murino, R. A model for light-scattering by algae in water. *Math. Biosci.* **40** (1978), no. 3-4, 195-204. (Nicole El Karoui) **80g:78013** 78A45 (92A05)
- Murton, Thomas E. (with Dharan, Bala Ganga) Algorithms for single-machine sequencing with precedence constraints. *Management Sci.* **24** (1977/78), no. 10, 1011-1020. (B. S. Mittal) **80b:90083** 90B35
- The nonstationary infinite horizon inventory problem. *Management Sci.* **24** (1977/78), no. 14, 1474-1482. (Steven Nahmias) **80c:90052** 90B05
- Universal planning horizons for generalized convex production scheduling. *Oper. Res.* **26** (1978), no. 6, 1047-1058. (John C. Gittins) **80b:90081** 90B30
- Infinite-horizon dynamic programming models—a planning-horizon formulation. *Oper. Res.* **27** (1979), no. 4, 730-742. (From the summary) **80j:90110** 90C39 (90C50)
- Murugesu, Ioan (with Coțiu, Aurel; Potra, Teodor) Mathematical modeling by complex spline functions of filtration phenomena in porous media. (Romanian) *Stud. Cerc. Mec. Apl.* **37** (1978), no. 1, 23-32. (Authors' summary) **80c:76049** 76S05 (65D07)
- Murvan, Jean-Marie (with Roșca, Radu) Structures presque cosymplectiques à couple de champs quasi-récurrents réciproques. (Italian summary) *Rend. Sem. Mat. Univ. Politec. Torino* **36** (1977/78), 225-234 (1979). (J. D. Zund) **80f:53040** 53C55
- Murzikov, V. V. (with Braičev, G. G.) Applicability of operators of infinite order in partial differential equations. (Russian) *Mat. Zametki* **24** (1978), no. 6, 771-777, 892. (Wolfgang Tutschke) **80c:35105** 35R99 (46E99, 47F05)
- Mosca, Edoardo Weaker conditions for innovations informational equivalence in the independent Gaussian case. *IEEE Trans. Automat. Control* **24** (1979), no. 1, 63-69. (A. M. Zaharin) **80b:93079** 93E20 (94A15)
- Moscattelli, V. B. On the existence of universal  $\lambda$ -nuclear Fréchet spaces. *J. Reine Angew. Math.* **301** (1978), 1-26. (Bernd Rosenberger) **80g:46005** 46A12 (46A45)
- Moschovakis, Yiannis N. See *Seminar: Cabal*, **80c:03004**
- Mosco, Umberto Sur l'existence de la solution régulière de l'inéquation quasi-variationnelle non linéaire du contrôle optimal impulsif et continu. *Journées d'Analyse Non Linéaire* (Proc. Conf., Besançon, 1977), pp. 140-159. *Lecture Notes in Math.*, **665**, Springer, Berlin, 1978. (Bension Kurtaran) **80b:93169** 93E20 (49C05)
- Nonlinear quasivariational inequalities and stochastic impulse control theory. *Equadiff IV* (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977), pp. 271-285. *Lecture Notes in Math.*, **703**, Springer, Berlin, 1979. (Giovanni M. Troianiello) **80g:49013** 49A29
- (with Frehse, Jens) Sur la régularité des solutions faibles de certaines inéquations variationnelles et quasi variationnelles non linéaires du contrôle stochastique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 12, A627-A630. (Authors' summary) **80c:49022** 49C10 (35K99)
- (with Frehse, Jens) Variational inequalities with one-sided irregular obstacles. *Manuscripta Math.* **28** (1979), no. 1-3, 219-233. (A. Averna) **80i:49010** 49A29
- See also *Proceedings: International Meeting on Recent Methods in Nonlinear Analysis*, **80c:49001**
- Moscovici, Henri (with Verona, Andrei) Coherent states and square integrable representations. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **29** (1978), no. 2, 139-156. (J. Niederle) **80d:22016** 22E45 (81C40)
- (with Verona, Andrei) Holomorphically induced representations of solvable Lie groups. (French summary) *Bull. Sci. Math.* (2) **102** (1978), no. 3, 273-286. (A. Kleppner) **80i:22025** 22E27
- (with Verona, Andrei) Harmonically induced representations of nilpotent Lie groups. *Invent. Math.* **48** (1978), no. 1, 61-73. (A. Kleppner) **80a:22011** 22E27
- (with Verona, Andrei) Quantization and projective representations of solvable Lie groups. *Trans. Amer. Math. Soc.* **246** (1978), 173-192. (A. Kleppner) **80i:22026** 22E27
- (with Connes, Alain) The  $L^2$ -index theorem for homogeneous spaces. *Bull. Amer. Math. Soc. (N.S.)* **1** (1979), no. 4, 688-690. (A. Verona) **80g:58046** 58G10 (22E45)
- Mosičnikov, V. B. Quasiperiodic solutions of nonlinear hyperbolic equations with damping. (Russian) *Differentsial'nye Uravnenija* **15** (1979), no. 4, 695-703, 765. (J. Kopáček) **80f:35008** 35B15 (35L35)
- Moser, J. (with Joly, J. R.) Ordre de grandeur de  $L(1, \chi)$  et de  $L(1, \chi)$ . (English summary) *Ann. Inst. Fourier (Grenoble)* **29** (1979), no. 1, xiv, 125-135. (Matti Jutila) **80d:10060** 10H08 (12A70)
- Moser, Ján See Moser, Ján
- Moser, Jürgen Nearly integrable and integrable systems. *Topics in nonlinear dynamics* (Proc. Workshop, La Jolla Inst., La Jolla, Calif., 1977), pp. 1-15. *AIP Conf. Proc.*, **46**, Amer. Inst. Physics, New York, 1978. (D. L. Rod) **80d:70029** 70H05 (58F05)
- Fields medals. III. A broad attack on analysis problems. *Science* **202** (1978), no. 4368, 612-613. (Editors) **80a:01037** 01A70 (32-03, 42-03)
- Moser, L. E. (with Allenby, R. B. J. T.; Boler, J.; Evans, B.; Tang, C. Y.) Frattini subgroups of 3-manifold groups. *Trans. Amer. Math. Soc.* **247** (1979), 275-300. (L. Neuwirth) **80b:57001** 57M05 (20F34)
- (with Allenby, R. B. J. T.; Tang, C. Y.) The residual finiteness of certain one-relator groups. *Proc. Amer. Math. Soc.* **78** (1980), no. 1, 8-10. (A. H. Rhemtulla) **80d:20032** 20E26 (20F05)
- Moser, Nicole Sur les unités d'une extension galoisienne non abélienne de degré  $pq$  du corps des rationnels,  $p$  et  $q$  nombres premiers impairs. (English summary) *Ann. Inst. Fourier (Grenoble)* **29** (1979), no. 1, xv, 137-158. (Pierre Damey) **80c:12010** 12A45 (12A35)
- Moses, Harry E. (with Kanal, Madhoo) Direct-inverse problems in transport theory, the inverse albedo problem for a finite medium. *J. Math. Phys.* **19** (1978), no. 12, 2641-2645. (R. G. Newton) **80b:82044** 82A45 (45K05)
- Just solutions and Green's functions for the three-dimensional Schrödinger equation. *J. Math. Phys.* **20** (1979), no. 6, 1151-1156. (R. G. Newton) **80b:81067** 81F05 (47A40)
- An example of the effect of rescaling of the reflection coefficient on the scattering potential for the one-dimensional Schrödinger equation. *Stud. Appl. Math.* **60** (1979), no. 2, 177-181. (Editors) **80b:34025** 34B25 (81C05)
- Moshe, Moshe Recent developments in Reggeon field theory. *Phys. Rep.* **37** (1978), no. 3, 255-345. (H. Ezawa) **80f:81119** 81G99
- Moshinsky, Marcos (with Seligman, T. H.) Ambiguities in canonical transformations of classical systems and the spectra of quantum observables. *Differential geometrical methods in mathematical physics, II* (Proc. Conf., Univ. Bonn, Bonn, 1977), pp. 435-457. *Lecture Notes in Math.*, **676**, Springer, Berlin, 1978. (Virendra Singh) **80d:81057** 81D99
- ★Groups in physics. Collective model of the nucleus. Canonical transformations in quantum mechanics. Séminaire de Mathématiques Supérieures, 67. *Prezies de l'Université de Montréal, Montréal, Que.*, 1979, 99 pp. ISBN 2-7606-0458-6 (William H. Klink) **80b:81078** 81G40 (22E70, 70H15)
- (with Seligman, T. H.) Canonical transformations to action and angle variables and their representation in quantum mechanics. II. The Coulomb problem. *Ann. Physics* **120** (1979), no. 2, 402-422. (Virendra Singh) **80j:81028** 81C40
- (with Castaños, O.; Chacón, E.; Frank, A.) Group theory of the interacting boson model of the nucleus. *J. Math. Phys.* **20** (1979), no. 1, 35-44. (S. N. Biswas) **80c:81123** 81G30 (22E70)
- (with Seligman, T. H.) Canonical transformations to action and angle variables and their representations. *J. Phys. A* **12** (1979), no. 6, L135-L139. (Authors' summary) **80c:81044** 81C99 (22E70, 58F06)
- Moskalkin, A. V. Construction of the Green function of the Helmholtz equation for a semi-infinite rectangular domain with the aid of Bessel functions. (Russian) *Differentsial'nye Uravnenija* **14** (1978), no. 12, 2282-2284, 2304. (Author's summary) **80b:35034** 35C99 (35J05)
- (with Bondarenko, V. F.; Ivanov, E. A.) The calculation of series close to the Schlömilch series with the aid of Kummer's method. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **22** (1978), no. 7, 581-583, 667. (Authors' summary) **80d:33003** 33A40
- (with Bondarenko, V. F.; Ivanov, E. A.) On the question of calculating series that are close to the Schlömilch series. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1978**, no. 6, 42-48, 140. (From the summary) **80c:65010** 65B10
- Construction of a scalar Green function for a rectangular waveguide by means of Mathieu functions. (Russian) *Differentsial'nye Uravnenija* **15** (1979), no. 9, 1667-1675, 1726. (Author's summary) **80b:78012** 78A50 (35C10)
- Mosjagin, V. V. Generalized solutions of differential equations in a locally convex space. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazakh SSR Ser. Fiz.-Mat.* **1978**, no. 1, 26-29, 91. (Hans Kaper) **80a:34088** 34G20 (34K30)
- Moskalenko, A. I. Sufficient conditions for the continuity and boundedness of the solutions to a system of ordinary differential equations. (Russian) *Differentsial and integral equations*, No. 4 (Russian), pp. 57-64, 313. *Irkutsk. Gos. Univ., Irkutsk*, 1976. (From the text) **80m:34035** 34C11
- Splitting lengths of an abelian group. (Russian) *Mat. Zametki* **24** (1978), no. 6,

- 749-762, 892. (L. Procházka) **80i:20058** 20K21
- Moskalenko, Z. I.** The existence of compact totally disconnected groups with a locally compact but noncompact group of topological automorphisms. (Russian) *Ukrain. Mat. Ž.* **31** (1978), no. 2, 196-201, 223. (K. A. Ross) **80i:22009** 22D45
- Moskova, B. P.** (with Marčenko, V. M.; Simeonova, Ju. S.) Pointwise controllability of systems with after effect. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 7, 1324-1327, 1343-1344. (A. A. Martinjuk) **80i:93046** 93C05
- Moskowitz, Martin** Some remarks on automorphisms of bounded displacement and bounded cocycles. *Monatsh. Math.* **85** (1978), no. 4, 323-336. (S. G. Dani) **80i:22020** 22D45
- Moskvin, D. A.** (with Postnikov, A. G.) A local limit theorem for the distribution of fractional parts of an exponential function. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **23** (1978), no. 3, 540-547. (J. Galambos) **80i:10074** 10K10 (with Dubrovin, V. T.) A central limit theorem for sums of functions of mixing sequences. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 3, 553-564. (M. M. Leonenko) **80i:60032** 60F05 (60G10)
- Mosolova, M. V.** A new formula for  $\ln(e^{A_n})$  in terms of the commutators of the elements  $A$  and  $B$ . (Russian) *Mat. Zametki* **23** (1978), no. 6, 817-824. (J. S. Joel) **80i:46058** 46H30 (17B65, 22E65, 47A60, 58D99, 58G15)
- (with Kurdjumov, I. V.; Nazaikinskii, V. E.) A computational algorithm for a quadratic programming problem of large dimension. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **18** (1978), no. 5, 1119-1128, 1354-1355. (V. F. Dem'janov) **80i:90065** 90C20
- Simóni Mócsolygó, Nóra** See *Simóni Mócsolygó, Nóra*
- Mom, Barbara** Beppo Levi and the axiom of choice. *Historia Math.* **6** (1979), no. 1, 54-56. (H. C. Kennedy) **80i:01024** 01A60 (04-03, 04A25)
- Moss, R.** (with Praestgaard, E.; Heilmann, O. J.) Correlation functions for a topological cell model in two dimensions. *Statistical physics—"STATPHYS 13"* (Proc. Thirteenth IUPAP Conf. Statist. Phys., Technion-Israel Inst. Tech., Haifa, 1977), Part 2, pp. 645-648, *Ann. Israel Phys. Soc.*, **2**, Hilger, Bristol, 1978. (Ernest R. Davidson) **80i:82035** 82A50 (60K35)
- Moss, William F.** (with Piepenbrink, John) Positive solutions of elliptic equations. *Pacific J. Math.* **75** (1978), no. 1, 219-226. (V. Allegrito) **80i:35008** 35B05 (35J15)
- Mossabeh, S.** Boundedness properties of nonlinear multivariable systems. *Electron. Lett.* **15** (1979), no. 24, 803. (K. B. Datta) **80i:93039** 93C35
- Stability of certain time-varying nonlinear systems. *Electron. Lett.* **16** (1980), no. 5, 190-191. (Author's summary) **80i:93063** 93D15
- Mossabeh, Shakkar** A note on Fourier transforms. *Bull. London Math. Soc.* **11** (1979), no. 1, 5. (Françoise Lust) **80i:43018** 43A46
- Mossino, Jacqueline** Application des inéquations quasi-variationnelles à quelques problèmes non linéaires de la physique des plasmas. (English summary) *Israel J. Math.* **30** (1978), no. 1-2, 14-50. (Lucio Boccardo) **80i:49014** 49A29 (82A45)
- Estimations a priori et réarrangement dans un problème de la physique des plasmas. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 4, A263-A266. (From the text) **80i:35134** 35Q99
- Motteler, Frederick** See *Kolsta, Gina Bari*, **80i:01025**
- Mostepanenko, V. M.** (with Grib, A. A.; Mamaev, S. G.) Creation of pairs of particles in an expanding isotropic universe. (Russian) *Problemy Teor. Gravitatsii i Element. Častic* **No. 9** (1978), 7-27. (V. Wünsch) **80i:83036** 83C99 (58D30)
- (with Grib, A. A.; Frolov, V. M.) Spontaneous breakdown of CP-symmetry in a nonstationary isotropic metric. (Russian. English summary) *Teoret. Mat. Fiz.* **37** (1978), no. 2, 212-223. (Authors' summary) **80i:81043** 81D20 (81M05)
- (with Grib, A. A.; Frolov, V. M.) Conformal symmetry breaking and quantization in curved space-time. (Russian. English summary) *Teoret. Mat. Fiz.* **37** (1978), no. 3, 347-354. (Authors' summary) **80i:81136** 81M05
- Mostow, G. D.** Discrete subgroups of Lie groups. *Lie theories and their applications* (Proc. Ann. Sem. Canad. Math. Congr., Queen's Univ., Kingston, Ont., 1977), pp. 65-153, *Queen's Papers in Pure and Appl. Math.*, **48**, Queen's Univ., Kingston, Ont., 1978. (Gopal Prasad) **80i:22013** 22E40 (10E20, 20H10)
- Existence of a nonarithmetic lattice in  $SU(2, 1)$ . *Proc. Nat. Acad. Sci. U.S.A.* **75** (1978), no. 7, 3029-3033. (Gopal Prasad) **80i:22007** 22E40
- Mostowski, A. Włodzimierz** (with Kuratowski, Kazimierz) *Teoria mnogości*. (Polish) [Set theory] With an introduction to descriptive set theory. Third revised edition. *Monografie Matematyczne [Mathematical Monographs]*, **27**, Państwowe Wydawnictwo Naukowe (PWN), Warsaw, 1978. 470 pp. (Editors) **80i:04001** 04-01 (04A15)
- (with Doner, John E.; Tarski, Alfred) The elementary theory of well-ordering—a metamathematical study. *Logic Colloquium '77* (Proc. Conf., Wrocław, 1977), pp. 1-54, *Studies in Logic and Foundations of Math.*, **96**, North-Holland, Amsterdam, 1978. (A. B. Slomson) **80i:03027a** 03C10 (03B25, 03C65, 06A10)
- A note concerning the complexity of a decision problem for positive formulas in SAS. *Les arbres en algèbre et en programmation (4ème Colloq., Lille, 1979)*, pp. 173-180, *Univ. Lille I, Lille*, 1979. (I. Peák) **80i:03028** 03B25 (03B15, 68D30, 68E10)
- Mosznar, Zenon** Sur l'inégalité de translation. *Demonstratio Math.* **11** (1978), no. 4, 1095-1100 (1979). (A. A. Iskander) **80i:20074** 20M35 (08A99)
- (with Waśko, Maria) Sur les solutions d'une équation fonctionnelle. III. *Aequationes Math.* **19** (1979), no. 1, 79-88. (I. M. Sheffer) **80i:39004** 39B10 (39B40, 39B70)
- (with Waśko, Maria) L'équation de translation sur le produit simple des groupes avec zéro. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* **No. 20** (1979), 101-109. (Józef Tabór) **80i:39009** 39B40 (39B50)
- Moszyński, Krzysztof** (with Pokrzywa, Andrzej) Some remarks on spectral approximation for compact operators. (Polish) *Mat. Stos.* (3) **12** (1978), 5-16. (M. V. Fokin) **80i:47030** 47B05 (47A50, 65J10)
- See also *Mathematical models and numerical methods*, **80i:65012**
- Motohashi, Nobuyoshi** A remark on H. Africk's paper on Scott's interpolation theorem for  $L_{\omega_1}$ . *J. Symbolic Logic* **39** (1974), 124-126. *J. Symbolic Logic* **44** (1979), no. 1, 32. (Editors) **80i:03040** 03C75 (03C40)
- Motohashi, Yoichi** On Vinogradov's zero-free region for the Riemann zeta-function. *Proc. Japan Acad. Ser. A Math. Sci.* **54** (1978), no. 9, 300-302. (A. I. Vinogradov) **80i:10056** 10H05
- On the zero-free region of Dirichlet's  $L$ -functions. *Proc. Japan Acad. Ser. A Math. Sci.* **54** (1978), no. 10, 332-334. (Matti Jutila) **80i:10058** 10H08
- ★Goldbach conjecture. (Japanese) *Seminario Notae [Seminar Notes]*, **2**, Rikyū University, Naha, 1979. iii + 112 pp. (S. Ikehara) **80i:10055** 10J15 (10H30)
- A note on Siegel's zeros. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 5, 190-191. (Matti Jutila) **80i:10061** 10H08
- de Mottoni, Piero** (with Tesi, A.) Asymptotic stability results for a system of quasilinear parabolic equations. *Applicable Anal.* **9** (1979), no. 1, 7-21. (Lu-San Chen) **80i:35014** 35B35 (35K55)
- Bifurcation for a class of elementary Neumann problems. *Boll. Un. Mat. Ital. B* (5) **16** (1979), no. 2, 711-721. (A. Vanderbauwhede) **80i:34025** 34B15 (58F14)
- Motylev, L. Ju.** Transformation of the system of Maxwell equations in an inhomogeneous medium to an equation on the rotation group. (Russian. English summary) *Teoret. Mat. Fiz.* **38** (1979), no. 3, 364-369. (Peter Holod) **80i:78012** 78A25 (22E05, 35A30, 58G15, 58H05)
- Mougeot, Michel** (with Auray, Jean-Paul; Duru, Gérard) ★D'une analyse topologique à l'autre. Document de Travail, **23**, Université de Franche-Comté, Département de Sciences Économiques, Besançon, 1978. 18 pp. (Yves Balasko) **80i:05052** 05C10 (90A99)
- (with Auray, Jean-Paul; Duru, Gérard) Some pretopological properties of input-output models and graph theory. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978), Section 4*, pp. 5-21, *Operations Research Verfahren*, **34**, Hain, Meisenheim, 1979. (From the text) **80i:90107** 90C35 (05C10, 90B10)
- (with Auray, Jean-Paul; Duru, Gérard) A pre-topological analysis of the input-output model. *Econom. Lett.* **2** (1979), no. 4, 343-347. (Authors' summary) **80i:90024** 90A16
- Moulin, Hervé** (with Vial, J.-P.) Strategically zero-sum games: the class of games whose completely mixed equilibria cannot be improved upon. *Internat. J. Game Theory* **7** (1978), no. 3-4, 201-221. (C. B. Millham) **80i:90158** 90D05
- (with Gerard-Varet, L. A.) Correlation and duopoly. *J. Econom. Theory* **19** (1978), no. 1, 123-149. (Norbert Schmitz) **80i:90163** 90D05 (90A14)
- Dominance solvable voting schemes. *Econometrica* **47** (1979), no. 6, 1337-1351. (Rubin Saposnik) **80i:90013** 90A08
- Moulin, Thibaut** (with Vallet, Claude; Lafrenière, Lise; Le Guyader, Hervé) Arithmetic models for complex systems. (Russian summary) *Systems Sci.* **4** (1978), no. 4, 265-279. (From the summary) **80i:93015** 93A15
- Moulines, C. Ulises** Theory-nets and the evolution of theories: the example of Newtonian mechanics. *Synthese* **41** (1979), no. 3, 417-439. (From the introduction) **80i:03014** 03A05
- Moulin-Ollagnier, Jean** (with Pinchon, Didier) Une nouvelle démonstration du théorème de E. Folner. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 7, A557-A560. (Authors' summary) **80i:43004** 43A07 (28D15)
- (with Pinchon, Didier) Groupes pavables et principe variationnel. *Z. Wahrsch. Verw. Gebiete* **48** (1979), no. 1, 71-79. (Manfred Denker) **80i:28019** 28D20 (22D40, 58F99)
- desnoeux-Moulin, Nicole** See *Desnoeux-Moulin, Nicole*
- Moulton, F. R.** See *Brush, Stephen G.*, **80i:01016a** and *Brush, Stephen G.*, **80i:01016b**
- Mount-Campbell, Clark A.** (with Neuhardt, John B.) Selection of cost-optimal  $2^{n-p}$  fractional factorials. Optimization in statistics. *Comm. Statist. B—Simulation Comput.* **7** (1978), no. 4, 369-383. (U. B. Paik) **80i:62114** 62K05 (62K15)
- Moura, Carlos A.** (with Feijóo, Raul A.; Taroco, Edgardo; Raupp, Marco A.) Approximate solutions of the problem of thin shells by the finite element method. (Spanish) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poço de Caldas, 1977), Vol. II (Portuguese)*, pp. 873-891, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Authors' summary) **80i:73067** 73L20 (65N30)
- (with Raupp, Marco A.; Feijóo, Raul A.) A nonlinear problem in dynamic visco-elasticity with friction. *Bol. Soc. Brasil. Mat.* **9** (1978), no. 1, 61-82. (Author's summary) **80i:73036** 73F15 (35Q99)
- Mouradi, M.** Stabilisation d'un système linéaire en présence de contraintes sur la commande. (English summary) *RAIRO Automat.* **13** (1979), no. 2, 127-147. (Author's summary) **80i:93089** 93E20
- Mousouris, Nick** (with Porter, A. Duane) The Hermitian matrix equation  $U_1^* \dots U_n^* A U_1 \dots U_n = B$ . (French summary) *Rend. Mat.* (6) **11** (1978), no. 3, 387-392 (1979). (John H. Hodges) **80i:15008** 15A33 (15A24)
- (with Porter, A. Duane) Ranked solutions of  $AXC = B$  and  $AX = B$ . *Linear Algebra Appl.* **24** (1979), 217-224. (John H. Hodges) **80i:15011** 15A33 (15A24)
- Moussaïx, A.** (with Ronveaux, André) Electrostatic capacity of two unequal adhering spheres. *J. Phys. A* **12** (1979), no. 3, 423-428. (Authors' summary) **80i:78004** 78A30 (35C05)
- Moussa, Robert** Existence d'intégrales premières pour un germe de forme de Pfaff  $C^\infty$ , non dégénéré. *Bol. Soc. Brasil. Mat.* **7** (1976), no. 2, 111-120. (J. S. Joel) **80i:58006** 58A15 (34C05, 58C27)
- (with Mattei, Jean-François) Intégrales premières d'une forme de Pfaff analytique. (English summary) *Ann. Inst. Fourier (Grenoble)* **28** (1978), no. 4, 229-237, xi. (Antoinette Sec) **80i:58003** 58A10 (32C25, 32L99, 57R30)
- (with Mattei, Jean-François) Existence d'intégrales premières faibles d'un germe de forme intégrable, holomorphe. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 6, A383-A385. (Authors' summary) **80i:58044** 58F14 (34A20, 58A15)
- Moylan, Peter J.** (with Hill, David J.) Tests for stability and instability of interconnected systems. *IEEE Trans. Automat. Control* **24** (1979), no. 4, 574-575. (I. Randvee) **80i:93064** 93D25
- Moylnhan, Richard** Infinite  $\tau_f$  products of distribution functions. *J. Austral. Math. Soc. Ser. A* **26** (1978), no. 2, 227-240. (B. Schweizer) **80i:60030** 60F99 (60B99)
- (with Schweizer, B.) Betweenness relations in probabilistic metric spaces. *Pacific J. Math.* **81** (1979), no. 1, 175-196. (Gheorghe Bocsan) **80i:54045** 54E99
- Mozarova, L. S.** Finite supersolvable groups with  $c$ -complemented subgroups. (Russian) *Group-theoretical studies (Russian)*, pp. 87-94, 158, "Naukova Dumka", Kiev, 1978. (B. K. Durakov) **80i:20017** 20D10
- Some properties of finite supersolvable groups. (Russian) *Structures of groups and properties of their subgroups (Russian)*, pp. 100-113, 153, *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (V. D. Mazurov) **80i:20047** 20F16 (20D10)
- Möller Zerrar, A.** One-dimensional nonlinear motion in relativistic elasticity. (Russian)



- Dokl. Akad. Nauk SSSR 243 (1978), no. 2, 295-298. (A. K. Guc) **80d:73025** 73B99 (85A15)
- Moser, Jan On a constant of Littlewood in the theory of the Riemann zeta function. (Russian. English and Slovak summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* 32 (1975), 1-11. (Author's summary) **80f:10049** 10H05
- Motzkin, J. (with Ablamowicz, R.; Oziewicz, Z.; Rzewuski, Jan) Spinor space. *Rep. Math. Phys.* 14 (1978), no. 1, 89-100. (Guido Karrer) **80d:81031** 81C40 (15A66, 22E70)
- Morozoch, C. J. (with Balasubramanian, R.) Analytic sufficiency conditions for Goldbach's conjecture. *Kyungpook Math. J.* 19 (1979), no. 1, 85-105. (H. Halberstam) **80m:10036** 10J10 (10J15)
- Morse, Arnold Untere Schranken für die Reichweiten von Extremalbasen fester Ordnung. *Abh. Math. Sem. Univ. Hamburg* 48 (1979), 118-124. (Friedrich Roessler) **80g:10058** 10L05
- (with Ripka, W.) Die Intervalleigenschaft der Ober- und Untersummenmengen einer beschränkten Funktion. *Elem. Math.* 34 (1979), no. 2, 34-37. (H. Burkil) **80d:26012** 26A42
- Mörtz, Z. (with Szegő, D.) Optimal design of elastic beams with unspecified support conditions. (German and Russian summaries) *Z. Angew. Math. Mech.* 58 (1978), no. 11, 501-510. (From the summary) **80a:73056** 73K99 (00A89)
- (with Masur, E. F.) Nonstationary optimality conditions in structural design. *Internat. J. Solids and Structures* 15 (1979), no. 6, 503-512. (Authors' summary) **80e:73053** 73K99
- Morzek, M. Inverse limits of torus-groups and minimal sets of some almost periodic continuous flows. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* No. 21 (1979), 29-50. (J. D. Baum) **80g:54049** 54H20 (22D40, 58F27)
- Murli, Hasan  $n$ -absolutes of regular spaces. (Russian) *Dokl. Akad. Nauk UzSSR* No. 1 (1979), 11-14. (Stojan Nedev) **80g:54042** 54G05 (54B30)
- Muhammad, G. G. On the calculation of shallow shells of double curvature on an elastic foundation. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* 92 (1978), no. 3, 661-664. (Editors) **80g:73061** 73L99 (53C45)
- Murphy, S. K. Are nonrenormalizable theories really unrenormalizable? (Italian and Russian summaries) *Nuovo Cimento A* (11) 46 (1978), no. 4, 605-621. **80e:81078** 81E15
- Convergence and analytic properties of manifestly finite perturbation theory. (Italian and Russian summaries) *Nuovo Cimento A* (11) 51 (1979), no. 4, 453-472. (Author's summary) **80e:81030** 81C12
- Mueel, A. G. Existence and explicit determination of optimal stopping times. *Stochastic Process. Appl.* 8 (1978/79), no. 1, 33-58. (Adhir K. Basu) **80k:60055** 60G40 (60J25, 62L15)
- Muchotzsch, B. (with Calvani, M.; de Felice, F.; Salmistraro, Franco) Errata: "Time machine and geodesic motion in Kerr metric" [General Relativity and Gravitation 9 (1978), no. 2, 155-163; MR 58 #9053]. *Gen. Relativity Gravitation* 10 (1979), no. 10, 881. (Editors) **80k:83010** 83C20
- Mucik, Andrzej Algebraic model of dimensional analysis. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 26 (1978), no. 12, 1009-1014. (Vadim Komkov) **80i:93001** 93A10 (15A03)
- Muckenhoupt, Benjamin (with Wheeden, Richard L.) On the dual of weighted  $H^1$  of the half-space. *Studia Math.* 63 (1978), no. 1, 57-79. (D. Sarason) **80k:42024** 42B30
- Weighted norm inequalities for classical operators. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 1, pp. 69-83. *Proc. Sympos. Pure Math., XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979*. (Alberto Torchinsky) **80k:42015** 42B25 (42B20, 42B30)
- Muckstadt, John A. Some approximations in multi-item multi-echelon inventory systems for recoverable items. *Nacal Res. Logist. Quart.* 25 (1978), no. 3, 377-394. (From the summary) **80c:90053** 90B05
- Muehaja, M. I. Calculation of the flow of a viscous gas in a supersonic nozzle with account taken of oscillatory disequilibrium. (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1979, no. 1, 165-168. (From the summary) **80g:76029** 76J99
- Mudholkar, Govind S. (with Subbaiah, Perla) Inferences concerning a mean vector when the variables are grouped into subsets. *Biometrical J.* 20 (1978), no. 1, 15-24. (Donald R. Jensen) **80d:62041** 62H15 (62J15)
- (with Subbaiah, Perla) A comparison of two tests for the significance of a mean vector. *J. Amer. Statist. Assoc.* 73 (1978), no. 362, 414-421. (N. Giri) **80e:62076** 62H15
- Mueller, Gerald S. (with Adeniyi, Victor O.) Optimal output feedback by gradient methods with optimal stepsize adjustment. *Proc. Inst. Electr. Engrs.* 126 (1979), no. 10, 1005-1007. (Authors' summary) **80j:93096** 93D15
- Mueller, Ian The completeness of Stoic propositional logic. *Notre Dame J. Formal Logic* 20 (1979), no. 1, 201-215. (Charles F. Kielkopf) **80k:03011** 03B20 (01A20, 03-03)
- Mueller, Julia H. (with Gallagher, P. X.) Primes and zeros in short intervals. *J. Reine Angew. Math.* 303/304 (1978), 205-220. (Matti Jutila) **80k:10060** 10H15 (10H05)
- Muenzenberger, T. B. (with Smithson, R. E.) Semilattice structures on dendritic spaces. Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977). *I. Topology Proc.* 2 (1977), no. 1, 243-260 (1978). (Terence P. Speed) **80k:54069** 54F50
- Mues, Erwin Zur Wertverteilung von Differentialpolynomen. *Arch. Math. (Basel)* 32 (1979), no. 1, 55-67. (Carl Prather) **80j:30039** 30D35
- (with Steinmetz, Norbert) Meromorphe Funktionen, die mit ihrer Ableitung Werte teilen. (English summary) *Manuscripta Math.* 29 (1979), no. 2-4, 195-206. (D. Drasin) **80k:30025** 30D30 (30D35)
- Über ein Problem von Hayman. *Math. Z.* 164 (1979), no. 3, 239-259. (W. K. Hayman) **80d:30026** 30D35
- Mugler, Dale H. Completely convex functions and convergence. *SIAM J. Math. Anal.* 10 (1979), no. 2, 292-296. (A. Clausen) **80d:26015** 26A51
- Mugnai, C. (with Lodi, E.; Luccio, Fabrizio; Pagli, Linda) On two-dimensional data organization. *I. Fund. Inform.* (4) 2 (1978/79), no. 2, 211-226. (Authors' summary) **80k:68088** 68H05
- Murphy, Larry R. (with Hsiung, Chuan Chih) Euclidean and conformal invariants of submanifolds. *Geom. Dedicata* 8 (1979), no. 1, 31-38. (Y. Katsurada) **80k:53027** 53C40 (53C42)
- Mugur-Schächter, Mioara The quantum mechanical one-system formalism, joint probabilities and locality. *Quantum mechanics, a half century later (Colloq., Univ. Louis Pasteur, Strasbourg, 1974)*, pp. 107-146. *Episteme*, 5, Reidel, Dordrecht, 1977. (Author's introduction) **80e:81006** 81B05
- (with Hadjisavvas, N.) Unbounded measures on the closed subspaces of a Hilbert space. *Lett. Nuovo Cimento* (2) 23 (1978), no. 12, 439-443. (S. Newberger) **80f:81012** 81B10 (47B10)
- La relation entre l'entropie informationnelle et l'entropie statistique décrite par le concept probabiliste nouveau de fonctionnelle d'opacité d'une statistique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 16, A771-A774. (Author's summary) **80e:94015** 94A17
- Study of Wigner's theorem on joint probabilities. *Found. Phys.* 9 (1979), no. 5-6, 389-404. (From the introduction) **80f:81034** 81C20
- Muhammadiev, E. (with Krasnosel'skii, M. A.; Bobylev, N. A.) The topological index of extremals of the functionals of the calculus of variations. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* 21 (1978), no. 8, 8-12. (Constantin Vărsan) **80b:49012** 49B10 (58Exx)
- Bounded solutions of systems of differential equations with power nonlinearities. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* 22 (1979), no. 3, 155-158. (B. V. Loginov) **80k:34054** 34C11 (34A34)
- Muhammadiev, B. M. (with Ivanilov, Ju. P.) Determination of all equilibrium situations for a class of finite noncooperative  $n$ -person games. *Automat. i Telemekh.* 1978, no. 6, 94-98. (Russian); translated as *Automat. Remote Control* 39 (1978), no. 6, part 1, 856-859. (J. J. Buckley) **80e:90133** 90D10
- Solution of the bilinear programming problem and the determination of all equilibrium situations in bimatrix games. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 2, 351-359, 524. (Author's summary) **80g:90119** 90C20 (90D05)
- Muhammedov, V. G. The behavior of the Krull dimension of a commutative algebra in the case of extension of the base field. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 6(204), 227-228. (Jiri Močkoř) **80k:13006** 13C15
- Muhametina, S. A. (with Fink, L. M.) Pseudostochastic coding for error detection. *Problemy Peredači Informacii* 15 (1979), no. 2, 36-39. (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 2, 108-110. (Authors' summary) **80j:94015** 94A24
- Muhammed, Ibrahim et Taher Muhammad Pure bending of an infinite strip with an elliptic aperture. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 5, 8-11. (Author's summary) **80k:73011** 73C05 (30E99)
- Muharlamov, R. G. Application of differential equations to the calculation of an inverse matrix. (Russian) *Differencial'nye Uravnenija* 15 (1979), no. 5, 795-804, 955. (K. P. Hadeler) **80b:65052** 65L05
- Muhidinov, N. M. ★Газогидродинамическое исследование нелинейной фильтрации жидкости и газа. (Russian) [Gas and hydrodynamical study of the nonlinear filtration of fluid and gas] "Fan", Tashkent, 1977. 152 pp. (errata insert). (Simona Popp) **80c:76051** 76S05 (35Qxx)
- Some analytic solutions of linear and quasilinear filtration equations. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 50 (1978), 65-87, 161. (Author's summary) **80k:35088** 35K99 (76S05)
- Muhin, Ju. N. (with Staruhina, E. N.) Two conditions for discreteness in topological groups. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 9(196), 76-83. (H. Salzmann) **80m:22004** 22D05
- (with Protasov, I. V.) Projections of topological abelian groups. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 4, 551-556, 573. (Helmut Bockse) **80k:22006** 22B99 (20K45)
- Subgroup lattices of connected groups. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 4, 826-834, 927. (Helmut Bockse) **80k:22015** 22D05 (22A05)
- Muhin, V. V. (with Mirošin, A. R.) Invariant measures that extend from a semigroup to the group of its quotients. (Russian) *Mat. Zametki* 24 (1978), no. 6, 819-828, 894. (Z. Lipecki) **80k:28013** 28C10 (43A05)
- Quasi-invariant measures on stable subsets of locally compact groups. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 7, 581-584, 668. (M. M. Day) **80g:28012a** 28C10 (43A05)
- Left-invariant measures on open stable subsets of locally compact metrizable groups. (Russian) *Funkcional. Anal. i Priložen.* 13 (1979), no. 2, 87-88. (M. M. Day) **80g:28012b** 28C10 (43A05)
- (with Mizgailov, V. N.; Romanov, V. A.) Optimal statistical regularization of operator equations with restriction on the norm of the solution. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 1036-1040, 1084. (Authors' summary) **80e:65064** 65J10 (47A50)
- Muhidinova, N. M. Standby with preventive maintenance and repair. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 8, 8-11. (B. Dimitrov) **80e:60101** 60K15 (62N05)
- Mühlbacher, Günter The general Neville-Aitken-algorithm and some applications. *Numer. Math.* 31 (1978/79), no. 1, 97-110. (Marc Duc-Jacquet) **80a:65025** 65D05
- Estimates of Čebyšev-moduli and of generalized divided differences with applications to Lebesgue-functions of extrapolation operators. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 10, 1533-1543. (C. Dierckx) **80f:65033** 65D99
- The general recurrence relation for divided differences and the general Newton-interpolation-algorithm with applications to trigonometric interpolation. *Numer. Math.* 32 (1979), no. 4, 393-408. (David R. Hill) **80k:65012** 65D05
- A remark on calculating with  $B$ -splines. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 10, 1449-1450. (Charles K. Chui) **80k:41005** 41A15
- Mühlbacher, Jörg  $F$ -factors of graphs: a generalized matching problem. *Inform. Process. Lett.* 8 (1979), no. 4, 207-214. (O. D'Antona) **80d:68078** 68E10 (05C99)
- Mühlig, Helmer Ein Interpolationsverfahren zur gebrochen rationalen Tschebyscheff-Approximation differenzierbarer Funktionen. *Wis. Z. Tech. Univ. Dresden* 27 (1978), no. 2, 345-347. (T. J. Rivlin) **80k:65018** 65D15
- Muhlisov, F. G. The existence and uniqueness of the solution of certain partial differential equations with the Bessel differential operator. I. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 1(188), 66-74. (N. Cristescu) **80k:35042a** 35G05
- The existence and uniqueness of the solution of certain partial differential equations with the Bessel differential operator. II. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 4(191), 58-63. (N. Cristescu) **80k:35042b** 35G05

- Muhlschlegel, Bernhard Path integral associated with the Fokker-Planck equation. *Path integrals and their applications in quantum, statistical and solid state physics* (Proc. NATO Advanced Study Inst., State Univ. Antwerp, Antwerp, 1977), pp. 39–60, NATO Adv. Study Inst. Ser., Ser. B: Physics, 34, Plenum, New York, 1978. (K. S. Viswanathan) **80c:82007** 82A05 (35Q20, 81C35)
- Functional integral approach to some models of solid state physics. *Path integrals and their applications in quantum, statistical and solid state physics* (Proc. NATO Advanced Study Inst., State Univ. Antwerp, Antwerp, 1977), pp. 383–418, NATO Adv. Study Inst. Ser., Ser. B: Physics, 34, Plenum, New York, 1978. (M. Hongoh) **80c:82033** 82A55
- Muhly, Paul S. (with McAssey, Michael; Saito, Kichi-Suke) Nonselfadjoint crossed products. *Hilbert space operators* (Proc. Conf., Calif. State Univ., Long Beach, Calif., 1977), pp. 121–124, *Lecture Notes in Math.*, 693, Springer, Berlin, 1978. (William Paschke) **80j:46101a** 46L10
- Ergodic Hardy spaces and duality. *Michigan Math. J.* **25** (1978), no. 3, 317–323. (Nicholas P. Jewell) **80b:46081** 46J15 (30H05, 43A17)
- (with Fall, Thomas; Arveson, William) Perturbations of nest algebras. *J. Operator Theory* **1** (1979), no. 1, 137–150. (Thomas Hoover) **80f:47035** 47D25
- (with McAssey, Michael; Saito, Kichi-Suke) Nonselfadjoint crossed products (invariant subspaces and maximality). *Trans. Amer. Math. Soc.* **248** (1979), no. 2, 381–409. (William Paschke) **80j:46101b** 46L10
- Mukhometov, R. G. A problem of integral geometry on the plane. (Russian) *Methods of functional analysis in problems of mathematical physics* (Russian), pp. 30–37, 180, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (V. T. Fomenko) **80b:53073** 53C65
- Mukholnov, M. A. Fullness of measure of a set of Lebesgue points. (Russian) *Tajiki summary* *Dokl. Akad. Nauk Tadzhik. SSR* **21** (1978), no. 12, 8–10. (V. M. Klimkin) **80c:28013** 28A20
- Invariant sets of differential inclusions. (Russian) *Tajiki summary* *Dokl. Akad. Nauk Tadzhik. SSR* **22** (1979), no. 1, 16–19. (D. Bobrowski) **80b:34013** 34A60
- Mukhtarov, G. L. (with Dzafarov, Arif S.; Bulakbaev, H. M.) The constructive description of generalized Hölder classes. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidzhan. SSR Dokl.* **34** (1978), no. 9, 12–16. (M. Z. Berkolaiko) **80g:46033** 46E99
- Mukhtarov, S. N. (with Babadzanov, P. B.; Džurav, A. D.; Izrailova, M. M.; Krainova, I. I.) Magalim Akramović Subhankulov. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 2(200), 175–178. (Editors) **80a:01027** 01A70
- Mukhtarov, M. I. (with Efros, V. D.) Orthonormal basis of hyperspherical harmonics for three identical particles. (Russian. English summary) *Teoret. Mat. Fiz.* **38** (1979), no. 1, 84–93. (V. E. Kuzmichev) **80g:81033** 81C99 (22E70, 33A75)
- Muirhead, Robb J. (with Glynn, William J.) Inference in canonical correlation analysis. *J. Multivariate Anal.* **8** (1978), no. 3, 468–478. (Nariaki Sugiura) **80c:62033** 62H10
- (with Chou, Roub-Jane) On some distribution problems in MANOVA and discriminant analysis. *J. Multivariate Anal.* **9** (1979), no. 3, 410–419. (Edward M. Carter) **80c:62069** 62H10 (62E20)
- Mujica, Jorge Ideals of holomorphic functions on Fréchet spaces. *Advances in holomorphy* (Proc. Sem. Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977), pp. 563–576, North-Holland Math. Studies, 34, North-Holland, Amsterdam, 1979. (Richard M. Aron) **80c:32026** 32B05 (46G20, 46J15, 58C10)
- Complex homomorphisms of the algebras of holomorphic functions on Fréchet spaces. *Math. Ann.* **241** (1979), no. 1, 73–82. (Winfried Kahllo) **80j:46074** 46G20 (32D15, 32E20, 46J15)
- Mukai, H. (with Polak, Elijah) A second-order method for unconstrained optimization. *J. Optim. Theory Appl.* **26** (1978), no. 4, 501–513. (C. A. Botisaria) **80c:90120** 90C30 (65K05)
- (with Polak, Elijah) A second-order method for the general nonlinear programming problem. *J. Optim. Theory Appl.* **26** (1978), no. 4, 515–532. (John J. Dinkel) **80c:90136** 90C30
- (with Polak, Elijah) On the use of approximations in algorithms for optimization problems with equality and inequality constraints. *SIAM J. Numer. Anal.* **15** (1978), no. 4, 674–693. (Peter Deufhard) **80c:65131** 65K05 (49D99, 90C99)
- Readily implementable conjugate gradient methods. *Math. Programming* **17** (1979), no. 3, 298–319. (C. A. Botisaria) **80m:65053** 65K10 (90C30)
- Mukai, Juno A note on homotopy groups of a space of similarity mappings of spheres. *Sci. Rep. College Gen. Ed. Osaka Univ.* **27** (1978), no. 1, 49–53. (Richard Holzinger) **80g:55028** 55Q50 (55R65)
- Mukai, Kanji (with Haneda, Hiromasa) Periodic behavior of linear time-invariant dynamical systems. (Japanese. English summary) *Systems and Control* **22** (1978), no. 5, 303–311. (Masao Ikeda) **80a:93070** 93C05
- Mukhamediev, B. M. See Mukhamediev, B. M.
- Mukhametshina, S. A. See Mukhametshina, S. A.
- Mukherjee, Arunava (with Hofmann, Karl Heinrich) On the density of the image of the exponential function. *Math. Ann.* **234** (1978), no. 3, 263–273. (M. I. Kabenzuk) **80c:22006** 22D05 (22E15)
- (with Sun, T. C.) Convergence of products of independent random variables with values in a discrete semigroup. *Z. Wahrsch. Verw. Gebiete* **46** (1978/79), no. 2, 227–236. (V. M. Maksimov) **80b:60017** 60B15
- Some remarks on limits of iterates of probability measures on groups and semigroups. *Probability measures on groups* (Proc. Fifth Conf., Oberwolfach, 1978), 239–251, *Lecture Notes in Math.*, 706, Springer, Berlin, 1979. (V. M. Maksimov) **80g:60010** 60B15
- (with Center, Barbara) More on limit theorems for iterates of probability measures on semigroups and groups. *Z. Wahrsch. Verw. Gebiete* **46** (1979), no. 3, 259–275. (H. Heyer) **80b:60016** 60B15 (43A05)
- Mukherjee, Kalyan K. (with Bhatia, Rajendra) On the rate of change of spectra of operators. *Linear Algebra Appl.* **27** (1979), 147–157. (M. Z. Nashed) **80b:15008** 15A42 (47A10)
- Mukherjee, Deepankar Some uniqueness theorems in the theory of elasticity. *Bull. Calcutta Math. Soc.* **69** (1977), no. 2, 65–73. (Author's summary) **80c:73013** 73C15 (35G99)
- Mukherjee, Rashindra Nath (with Bose, Ramendra Krishna) Common fixed points of some multi-valued mappings. *Tamkang J. Math.* **8** (1977), no. 2, 245–249. (Authors' summary) **80a:54078** 54H25
- A Hille-Yosida-Phillips type of theorem for semi-groups in a locally convex space. *Indian J. Pure Appl. Math.* **9** (1978), no. 7, 718–721. (Thomas G. Kurtz) **80d:47066** 47D05
- On operators quasisimilar to spectral operators. *Tamkang J. Math.* **9** (1978), no. 1, 99–101. (John B. Conway) **80g:47039** 47B40 (47Axx)
- Mukherjee, Samir Kumar Knowledge beyond limit. *Math. Student* **45** (1977), no. 1, 13–19 (1978). (L. L. Campbell) **80a:94015** 94A17
- Some parametric entropies of generalised probability distributions. *Math. Student* **45** (1977), no. 1, 20–27 (1978). (L. L. Campbell) **80a:94016** 94A17
- Information functions and effects of parameters and boundary conditions on hexaparametric generalised inaccuracy. *Math. Ed. (Siwan)* **13** (1979), no. 1, A1–A11. (Author's summary) **80g:94031** 94A17
- Mukherjee, Sulekha (with Sen, Rabindranath) Solution by iteration of bounded linear operator equations in a supermetric linear space. *Bull. Calcutta Math. Soc.* **70** (1978), no. 2, 73–87. (T. I. Seidman) **80f:65066** 65J10 (47A50)
- Mukherjee, T. K. (with Sarkar, H. S.; Sarkar, Mira) On sum theorems. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sec. I a Mat. (N.S.)* **24** (1978), no. 1, 47–50. (R. Hodel) **80d:54008** 54B99
- Mukhopadhyay, A. C. Some infinite classes of Hadamard matrices. *J. Combin. Theory Ser. A* **25** (1978), no. 2, 128–141. (N. Ito) **80c:05046** 05B20
- Incomplete block designs through orthogonal and incomplete orthogonal arrays. *J. Statist. Plann. Inference* **2** (1978), no. 2, 189–195. (Damaraju Raghavarao) **80a:62119** 62K10 (05B05)
- Mukhopadhyay, D. K. (with Bhaktia, P. C.) On approximate strong and approximate uniform differentiability. *J. Indian Inst. Sci.* **61** (1979), no. 6, 103–118. (B. Bongiorno) **80g:26009** 26A24
- Mukhopadhyay, Nitis Some comments on two-stage selection procedures. *Comm. Statist. A—Theory Methods* **8** (1979), no. 7, 671–683. (Thomas J. Santner) **80m:62027** 62F07 (62L10)
- Mukhopadhyay, P. Estimating the variance of a finite population under a superpopulation model. *Metrika* **25** (1978), no. 2, 115–122. (Ib Thomsen) **80b:62016** 62D05
- Mukhopadhyay, S. N. Summable trigonometric series. *J. Math. Anal. Appl.* **66** (1978), no. 2, 427–432. (G. Sunouchi) **80d:42004** 42A16
- Mukku, C. (with Sayed, W. A.) Torsion without torsion. *Phys. Lett. B* **82** (1979), no. 3–4, 382–386. (Authors' summary) **80f:81071** 81E10
- Mukuanda, N. Aspects of the Hamilton-Jacobi form of dynamics. *Proceedings of the Sixteenth Anniversary Symposium on New Particles—Do They Imply New Physics?* (Int. Math. Sci., Madras, 1978), Paper No. 5, 8 pp., Matscience Rep., 92, Int. Math. Sci., Madras, 1978. (From the introduction) **80d:70030** 70H05 (49C05, 58F05)
- (with Sudarshan, E. C. G.) Structure and representation of correlation functions and the density matrix for a statistical wave field in optics. *J. Math. Phys.* **20** (1979), no. 8, 1801–1810. (G. S. Agarwal) **80i:81062** 81K05
- Descriptions of operators in quantum mechanics. *Proc. Indian Acad. Sci. Set. A Math. Sci.* **88** (1979), no. 1, 69–92. (Lawrence P. Horwitz) **80j:81029** 81CA0 (20C35, 22E70)
- Mulane, Motchico Poles of instantons and jumping lines of algebraic vector bundles on  $P^2$ . *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 5, 185–189. (P. E. Newstead) **80f:14008** 14F05 (32L10, 53C05)
- Mulder, Martyn The structure of median graphs. *Discrete Math.* **24** (1978), no. 2, 197–204. (A. K. Dewdney) **80c:05085** 05C99 (68E10)
- (with Schrijver, Alexander) Median graphs and Helly hypergraphs. *Discrete Math.* **25** (1979), no. 1, 41–50. (A. K. Dewdney) **80c:05044** 05C65
- Muldoon, M. E. On the zeros of a cross-product of Bessel functions of different orders. *Z. Angew. Math. Mech.* **59** (1979), no. 6, 272–273. (F. W. J. Olver) **80c:33008** 33A40
- Muldowney, James S. Comparison criteria for discontinuity. *Optimal control and differential equations* (Proc. Conf., Univ. Oklahoma, Norman, Okla., 1977), 317–329, Academic Press, New York, 1978. (G. J. Butler) **80c:34037** 34C11
- A necessary and sufficient condition for diffeomorphism. *Proc. Amer. Math. Soc.* **74** (1979), no. 1, 49–55. (V. B. Headley) **80c:34030** 34C10
- Muley, D. B. (with Bhonsle, B. R.) An integral equation involving classical orthogonal polynomials. *J. Indian Acad. Math.* **1** (1979), no. 1, 5–9. (B. Wood) **80f:45015** 45H05
- Mulholland, Robert J. (with Hart, Carolyn M.) Structural identifiability of compartmental systems based upon measurements of accumulated tracer in closed pools. *Math. Biosci.* **47** (1979), no. 3–4, 239–253. (Authors' summary) **80j:92002** 92A07 (93B30)
- Mulla, F. S. A class of graphs for which the Ulam conjecture holds. *Discrete Math.* **22** (1978), no. 2, 197–198. (B. Manvel) **80c:05103** 05C60
- Mullen, Gary L. Weak equivalence of functions over a finite field. *Acta Arith.* **35** (1979), no. 3, 259–272. (S. D. Cohen) **80c:12028** 12C05
- Equivalence classes of matrices over finite fields. *Linear Algebra Appl.* **27** (1979), 61–68. (R. A. Brualdi) **80g:15016** 15A33 (05A15)
- Müller, A. M. K. (with Sölter, G.-U.; Gerlich, Gerhard) Ein Variationsprinzip zur Einschachtelung von Eigenwerten. (English summary) *J. Phys. A* **12** (1979), no. 3, 325–328. (C. S. Sharma) **80c:49034** 49G05
- Müller, Bernd  $\mathbb{Q}$ - und  $\mathbb{C}$ -einstellige Limesräume. *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* **5** (1978), no. 3, 509–526. (K. Kutler) **80c:46003** 46A15 (46E99, 54E99)
- Müller, Bruno J. Twosided quotient rings for Noetherian p-rings. *C. R. Math. Rep. Acad. Sci. Canada* **1** (1978/79), no. 1, 53–56. (J. D. Fabelberth) **80b:16005** 16A08 (18E40)
- (with Mohamed, Saad) Decomposition of dual-continuous modules. *Module theory* (Proc. Special Session, Amer. Math. Soc., Univ. Washington, Seattle, Wash., 1977), pp. 87–94, *Lecture Notes in Math.*, 700, Springer, Berlin, 1979. (K. A. Byrd) **80c:16033** 16A51 (16A50)
- Ideal invariance and localization. *Comm. Algebra* **7** (1979), no. 4, 415–441. (Beth Barnwell) **80i:16007** 16A08 (16A34, 16A63)
- Müller, Claus See Herglotz, Gustav. **80c:01040**
- Müller, D. E. (with Preparata, Franco P.) Finding the intersection of two convex polyhedra. *Theoret. Comput. Sci.* **7** (1978), no. 2, 217–236. (D. T. Lee) **80c:68043** 68C05 (52–04)



- (with Preparata, Franco P.) Finding the intersection of  $n$  half-spaces in time  $O(n \log n)$ . *Theoret. Comput. Sci.* 8 (1979), no. 1, 45–55. (From the summary) **80e:68120** 68C25 (90C99)
- Müller, Eltan (with Benninga, Simon) Majority choice and the objective function of the firm under uncertainty. *Bell J. Econom.* 10 (1979), no. 2, 670–682. (Rubin Sapoznik) **80i:90002** 90A05
- Müller, G. O. Zum asymptotischen Verhalten von Volterra- und Fredholmintegralgleichungen. *Arch. Math. (Basel)* 32 (1979), no. 2, 200–208. (Klaus Deimling) **80e:45016** 45M05 (45B05, 45D05)
- Müller, Gert H. See Higher set theory, **80a:03005**
- Müller, Günter See Zaharov, V. N.; et al., **80d:93019**
- Müller, Hans-Otfrid Herleitung eines stochastischen Maximumprinzips mit Variationsmethoden. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 2, 243–255. (Author's summary) **80h:49009** 49B10 (65K10, 93C15)
- Behandlung eines stochastischen Steuerproblems mit Hilfe eines abstrakten Maximumprinzips von Spremann. (English and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 1, 27–35. (P. Brunovsky) **80i:93097** 93E20
- Müller, Hans Robert Verallgemeinerung einer Formel von Steiner. *Abh. Braunschweig. Wiss. Ges.* 29 (1978), 107–113. (J. Hoschek) **80b:53003** 53A17
- Über Trägheitsmomente bei Steinerscher Massenbelegung. *Abh. Braunschweig. Wiss. Ges.* 29 (1978), 115–119. (J. Hoschek) **80b:53004** 53A17
- Müller, Heinz (with Schweizer, Urs) Temporary equilibrium in a money economy. *J. Econom. Theory* 19 (1978), no. 2, 267–286. (John Roberts) **80e:90031** 90A14 (90A16)
- Groupes et paires de groupes à dualité de Poincaré de dimension 2. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 6, A373–A374. (Author's summary) **80i:20017** 20F32 (20J05, 57M05)
- Müller, Helmut A calculation of class-numbers of imaginary quadratic numberfields. *Tamkang J. Math.* 9 (1978), no. 1, 121–128. (T. Metsänkylä) **80i:12001** 12–04 (12A25, 12A50)
- Berichtigung zu der Arbeit: "Zur Gleichverteilung von Beurlingschen Zahlen" [Abh. Math. Sem. Univ. Hamburg 43 (1975), 186–191; MR 51 #12754]. *Abh. Math. Sem. Univ. Hamburg* 49 (1979), 254. (H. G. Diamond) **80i:10063** 10H40
- Müller, Horst Selbstreproduktion in Zellulären Netzen. *Jahrbuch Überblicke Mathematik*, 1978, pp. 67–86. Bibliographisches Inst., Mannheim, 1978. (Hidenosuke Nishio) **80j:68042** 68D20
- Automata catching labyrinths with at most three components. (German and Russian summaries) *Elektron. Informatsionverarb. Kybernet.* 15 (1979), no. 1–2, 3–9. (Masaharu Mizumoto) **80k:68038** 68D27
- Müller, Jürgen Topologische Operatorenideale auf einem separablen Hilbertraum. (Russian and English summaries) *Wiss. Z. Pädagog. Hochsch. "Karl Liebknecht" Potsdam* 23 (1979), no. 1, 35–46. (M. S. Ramanujan) **80k:47046** 47D25 (46H10)
- Müller, Manfred W. Approximation unbeschränkter Funktionen bezüglich einer Korovkin-Metrik. *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 269–272, "Nauka", Moscow, 1977. (G. Mühlbach) **80j:41035** 41A36
- (with Naumann, Joachim) On evolution inequalities of a modified Navier-Stokes type. II. (Czech summary) *Apl. Mat.* 23 (1978), no. 6, 397–407. (V.-V. Olariu) **80e:35103** 35Q10 (47H15, 76D05)
- $L_p$ -approximation by the method of integral Meyer-König and Zeller operators. *Studia Math.* 63 (1978), no. 1, 81–88. (B. Sendov) **80a:41021** 41A35
- (with Naumann, Joachim) On evolution inequalities of a modified Navier-Stokes type. III. (Russian and Czech summaries) *Apl. Mat.* 24 (1979), no. 2, 81–92. (V.-V. Olariu) **80f:35062** 35K22 (35Q10)
- Müller, Ottmar On  $p$ -automorphisms of finite  $p$ -groups. *Arch. Math. (Basel)* 32 (1979), no. 6, 533–538. (Martin R. Pette) **80k:20019** 20D15 (20D45)
- Müller, P. Heinz (with Grecksch, Wilfried) Zur näherungsweise Ermittlung optimaler stochastischer Steuerungen durch Diskretisierung. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 9 (1978), no. 3, 383–393. (Ivar Petersen) **80e:93191** 93E20
- Müller, Peter C. ★Stabilität und Matrizen. Matrizenverfahren in der Stabilitätstheorie linearer dynamischer Systeme. Ingenieurwissenschaftliche Bibliothek/Engineering Science Library. Springer-Verlag, Berlin-New York, 1977. vii + 220 pp. ISBN 3-540-07981-5 (Wolfgang Müller) **80d:34068** 34D20 (70J25)
- Neuere Beiträge zur Ljapunovschen Stabilitätstheorie. VII. Internationale Konferenz über Nichtlineare Schwingungen (Berlin, 1975), Band 1, Teil 2, pp. 125–131. *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977, 4, Akademie-Verlag, Berlin, 1977. (E. K. H. Hoehn) **80j:34061** 34D20
- (with Popp, K.) On the stability of interactive multibody systems with an application to Maglev-vehicle-guideway control systems. *Dynamics of multibody systems (Proc. IUTAM Symp., Munich, 1977)*, pp. 260–273. Springer, Berlin, 1978. (Authors' summary) **80d:70016** 70E99 (93C99)
- Oscillatory damped linear systems. *Mech. Res. Comm.* 6 (1979), no. 2, 81–85. (Author's introduction) **80e:49026** 49G05 (70D99)
- Kovarianzanalyse von stationären nichtlinearen Zufallschwingungen. *Z. Angew. Math. Mech.* 59 (1979), no. 5, T142–T143. (From the text) **80k:70031** 70L05 (93Exx)
- Müller, U. (with Hame, W.) Freie Konvektion in Schmelzen mit inneren Wärmequellen und verfestigten Rändern. (English summary) *Acta Mech.* 35 (1980), no. 1–2, 83–107. (Authors' summary) **80m:76042** 76E15 (80A20)
- Müller, Vladimir On Jordan models of  $C_0$ -contractions. *Acta Sci. Math. (Szeged)* 40 (1978), no. 3–4, 309–313. (S. Suljagić) **80d:47016** 47A45
- On colorings of graphs without short cycles. *Discrete Math.* 26 (1979), no. 2, 165–176. (P. Erdős) **80h:05025** 05C15
- Müller, Werner Analytic torsion of Riemannian manifolds. *Contributions to the School on Global Analysis (Ludwigfelde, 1976)*, Part 2, pp. 130–155. *Akad. Wiss. DDR, Berlin*, 1977. (József Dodziuk) **80j:58064** 58G10
- Analytic torsion and  $R$ -torsion of Riemannian manifolds. *Adv. in Math.* 28 (1978), no. 3, 233–305. (József Dodziuk) **80j:58065** 58G10
- Müller, Winfried B. (with Kautschitsch, Hermann) Über die Kettenregel in  $A[x_1, \dots, x_n]$ ,  $A[x_1, \dots, x_n]$  und  $A[[x_1, \dots, x_n]]$ . *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 131–136. *Heyn, Klagenfurt*, 1979. (J.-P. Lafon) **80f:13014** 13F25
- See also Contributions to general algebra, **80d:00007**
- Müller-Horrig, Volker Fredholmspektren verbundener Operatoren. *Math. Ann.* 243 (1979), no. 2, 171–179. (P. A. Kučment) **80j:47007** 47A10 (47A53)
- Müller-Kirsten, H. J. W. (with Hite, G. E.; Bose, S. K.) Explicit solution of the wave equation for arbitrary power potentials with application to charmonium spectroscopy. *J. Math. Phys.* 20 (1979), no. 9, 1878–1890. (K. Veselić) **80m:81018** 81C05 (35J10)
- (with Bose, S. K.) Solution of the wave equation for the logarithmic potential with application to particle spectroscopy. *J. Math. Phys.* 20 (1979), no. 12, 2471–2480. (K. Veselić) **80m:81019** 81C05 (35J10)
- Müller-Pfeiffer, E. Kriterien für die Oszillation von elliptischen Differentialgleichungen höherer Ordnung. *Math. Nachr.* 90 (1979), 239–247. (K. Kreith) **80j:35005** 35B05 (35J30)
- Müller-Richards, Dieter Regularisierung von verallgemeinerten Pólya Algorithmen. (English summary) *Operations Research Verfahren, XXIV*, pp. 119–136. *Hain, Königstein*, 1977. (Kaj Madsen) **80e:65136** 65K10 (65D15, 90C25)
- Mullin, Albert A. Relations between fixed-point theory and combinatorial geometry. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 1, 21–24. (From the introduction) **80e:54005** 54H25 (52A35)
- Mullin, Ronald C. (with Stinson, D. R.) Near-self-complementary designs and a method of mixed sums. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 59–67. *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (Henry Beker) **80c:05031** 05B05
- A survey of extremal  $(r, \lambda)$ -systems and certain applications. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 106–110. *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (W. D. Wallis) **80c:05056** 05B30
- (with Stanton, Ralph G.) A covering problem in binary spaces of finite dimension. *Graph theory and related topics (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 315–327. *Academic Press, New York*, 1979. (R. A. Melter) **80g:05018** 05B20 (05B25, 15A33)
- (with Stinson, D. R.; Wallis, W. D.) Skew squares of low order. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1978)*, pp. 413–434. *Congress. Numer., XXII, Utilitas Math., Winnipeg, Man.*, 1979. (Judith Q. Longyear) **80i:05021** 05B15 (62K10)
- (with Lindner, Charles C.) Lower bounds for maximal partial parallel classes in Steiner systems. *J. Combin. Theory Ser. A* 26 (1979), no. 3, 314–318. (K. T. Phelps) **80m:05014** 05B05 (05C65)
- See also Proceedings: Southeastern Conference on Combinatorics, Graph Theory and Computing, **80a:05004**
- Mullineux, G. Centralizers of 3-cycles in alternating groups. *Quart. J. Math. Oxford Ser. (2)* 29 (1978), no. 115, 249–261. (John L. Hayden) **80j:20026** 20D99
- Bijections of  $p$ -regular partitions and  $p$ -modular irreducibles of the symmetric groups. *J. London Math. Soc. (2)* 20 (1979), no. 1, 60–66. (H. K. Farahat) **80j:20016** 20C30
- Mullineux, N. (with Reed, J. R.) Uses of integral transforms with nonstandard kernels. *Internat. J. Math. Ed. Sci. Tech.* 10 (1979), no. 4, 509–515. (Y. L. Luke) **80m:44001** 44–01 (35A22)
- Mullis, C. T. (with Roberts, R. A.) On weak equivalence of linear systems and finite state systems. *SIAM J. Math. Anal.* 10 (1979), no. 3, 498–511. (Authors' summary) **80c:93010** 93A10 (68D05)
- Mullock, Philip Logic and liberty. *Philos. Stud.* 35 (1979), no. 3, 217–238. (Author's introduction) **80d:03018** 03B45 (03A05)
- Mullover, S. (with Sanginov, A.) A boundary value problem for a system of equations of composite type with multiple characteristics. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadik. SSR* 21 (1978), no. 3, 11–17. (S. A. Terenov) **80a:35009** 35M05 (30E25)
- (with Sanginov, A.) On the boundary value problem with a derivative for a system of equations of composite type with multiple characteristics. (Russian. Tajiki summary) *Izv. Akad. Nauk Tadik. SSR Otdel. Fiz.-Mat. i Geol.-Him. Nauk* 1978, no. 3(69), 13–19. (M. S. Agranovič) **80g:35007** 35M05
- Mühlhel, Heinrich N. Splinesapproximationen von beliebigem Defekt zur numerischen Lösung gewöhnlicher Differentialgleichungen. I. (English summary) *Numer. Math.* 32 (1979), no. 2, 147–157. (B. I. Kvasov) **80i:65085a** 65L05 (65D07)
- Splinesapproximationen von beliebigem Defekt zur numerischen Lösung gewöhnlicher Differentialgleichungen. II. (English summary) *Numer. Math.* 32 (1979), no. 3, 343–358. (B. I. Kvasov) **80i:65085b** 65L05 (65D07)
- Ein Divergenzatz für Splinesapproximationen bei Anfangswertproblemen gewöhnlicher Differentialgleichungen. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* 59 (1979), no. 3, T68–T69. (Matti Mäkelä) **80m:65051** 65L05
- Mulvey, Christopher J. Compact ringed spaces. *J. Algebra* 52 (1978), no. 2, 411–436. (K. Sieklucki) **80b:54016** 54C40 (58A05)
- Banach spaces over a compact space. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 243–249. *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (J. Wick Pelletier) **80m:18005** 18F20 (46M20, 54B30)
- On a condition for the representability of a topological ring. *Comm. Algebra* 7 (1979), no. 10, 995–998. (V. I. Arnautov) **80i:16047** 16A80
- A generalisation of Gelfand duality. *J. Algebra* 56 (1979), no. 2, 499–505. (Jean Guérindon) **80d:16028** 16A90 (18F20, 46A20)
- See also Applications of sheaves, **80j:18001**
- Mumford, David Some footnotes to the work of C. P. Ramanujam. *C. P. Ramanujam—a tribute*, pp. 247–262. *Tata Inst. Fund. Res. Studies in Math.*, 8, Springer, Berlin, 1978. (G. Horrocks) **80m:14026** 14J99 (14F99)
- (with Tate, John) Fields medals. IV. An instinct for the key idea. *Science* 202 (1978), no. 4369, 737–739. (Editors) **80a:01038** 01A70 (14–03)
- ★Алгебраическая геометрия. I. Комплексные проективные многообразия. (Russian) [Algebraic geometry. I. Complex projective varieties] Translated from the English by Ju. I. Manin. "Mir", Moscow, 1979. 256 pp. (Editors) **80i:14001** 14–01

- (with van Moerbeke, Pierre) The spectrum of difference operators and algebraic curves. *Acta Math.* 143 (1979), no. 1-2, 93-154. (Mark Adler) **80e:58028** 58F07 (14H45, 34C05)
- An algebraic surface with  $K$  ample,  $(K^2)=9$ ,  $p_g=q=0$ . *Amer. J. Math.* 101 (1979), no. 1, 233-244. (Miles Reid) **80j:14032** 14J25
- Mumm, Harald (with Wildenhain, Günther) Zur Darstellung der Lösung allgemeiner elliptischer Randwertprobleme. *Rostock. Math. Kolloq.* No. 8 (1978), 31-46. (G. Albinus) **80b:35054** 35J40
- Mumakata, Toyonori Liquid instability and freezing. II. Multi-mode one dimensional analysis of a nonlinear diffusion equation. *J. Phys. Soc. Japan* 45 (1978), no. 3, 749-757. (Author's summary) **80a:82020** 82A25 (35Q99)
- Hydrodynamic equations from Fokker-Planck equations—multiple time scale method. *J. Phys. Soc. Japan* 46 (1979), no. 3, 748-755. (Author's summary) **80b:82040** 82A40 (35Q99)
- Munaster, Robert G. On generating exact solutions of the Maxwell-Boltzmann equation. *Arch. Rational Mech. Anal.* 70 (1979), no. 1, 79-90. (Reinhard Illner) **80c:76039** 76P05 (82A05, 82A40)
- Munier, A. (with Gutierrez, J.; Burgan, J. R.; Feix, M. R.; Fijalkow, E.) Non-linear transport equations: properties deduced through transformation groups. *Nonlinear problems in theoretical physics (Proc. IX G.I.F.T. Internat. Sem. Theoret. Phys., Univ. Zaragoza, Jaca, 1978)*, pp. 151-204. *Lecture Notes in Phys.*, 98, Springer, Berlin, 1979. (F. C. Auluck) **80g:82047** 82A70 (58H10)
- Munk, W. H. See Topics in nonlinear dynamics, **80b:70002**
- Munkholm, Hans J. DGA algebras as a Quillen model category. Relations to shm maps. *J. Pure Appl. Algebra* 13 (1978), no. 3, 221-232. (J. Stasheff) **80m:55018** 55P66 (55P99)
- Erratum to: "shm maps of differential graded algebras. I. A characterization up to homotopy" [*J. Pure Appl. Algebra* 9 (1976), no. 1, 39-46; MR 55 #11247a]. *J. Pure Appl. Algebra* 13 (1978), no. 3, 335. (J. Stasheff) **80m:55008** 55P10
- Munkia, H. Z. Prognosis of the states of a plant by the completeness of their parameters and the agreement of experts on the basis of the method of maximum possibility according to data of expert estimates. (Russian) *Theoretical and applied problems in mathematics and mechanics (Russian)*, pp. 241-252, 315, "Nauka" Kazah. SSR, Alma-Ata, 1977. (Author's summary) **80c:94007** 94A15
- Munksgaard, Niels New factorization codes for sparse, symmetric and positive definite matrices. *BIT* 19 (1979), no. 1, 43-52. (Author's summary) **80c:65096** 65F30
- (with Axelsson, Owe) A class of preconditioned conjugate gradient methods for the solution of a mixed finite element discretization of the biharmonic operator. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 7, 1001-1019. (Authors' summary) **80i:65111** 65N30 (73C99)
- (with Duff, I. S.; Reid, J. K.; Nielsen, Hans Bruun) Direct solution of sets of linear equations whose matrix is sparse, symmetric and indefinite. *J. Inst. Math. Appl.* 23 (1979), no. 2, 235-250. (Authors' summary) **80c:65070** 65F05
- Munn, W. D. (with Hall, T. E.) Semigroups satisfying minimal conditions. II. *Glasgow Math. J.* 20 (1979), no. 2, 133-140. (G. B. Preston) **80b:20009** 20M10
- Muñoz Díaz, Jesús ★Curso de teoría de funciones. I. (Spanish) [A course of function theory. I] Serie de Matemática [Mathematics Series] Editorial Tecnos, Madrid, 1978. iv+389 pp. (loose errata). ISBN 84-309-0782-3 (Joaquín Bustoz) **80d:30001** 30-01
- Muñoz Valcárcel, Fernando Transition time in harmonic-exponential systems. (Spanish) *Gaceta Mat.* (1) (Madrid) 30 (1978), no. 3-4, 86-100. (J. Jarník) **80c:34031** 34C10 (34H05)
- Munro, J. Ian (with Paterson, M. S.) Selection and sorting with limited storage. 19th Annual Symposium on Foundations of Computer Science (Ann Arbor, Mich., 1978), pp. 253-258. *IEEE, Long Beach, Calif.*, 1978. (Authors' summary) **80c:68162** 68E05 (68C25)
- (with Dobkin, David P.) Time and space bounds for selection problems. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978)*, pp. 192-204. *Lecture Notes in Comput. Sci.*, 62, Springer, Berlin, 1978. (Frank K. Hwang) **80d:68076** 68E05 (68C25)
- (with Allen, Brian) Self-organizing binary search trees. *J. Assoc. Comput. Mach.* 25 (1978), no. 4, 526-535. (Stephen Soule) **80c:68034** 68C25 (68H05)
- (with Robertson, Edward) NP-completeness, puzzles and games. *Utilitas Math.* 13 (1978), 99-116. (G. Duru) **80i:90123** 90D42 (05A05)
- (with Gonnert, Gaston H.) Efficient ordering of hash tables. *SIAM J. Comput.* 8 (1979), no. 3, 463-478. (Authors' summary) **80c:68237** 68H05
- Munro, N. (with Novin-Hirbod, S.) Pole assignment using full-rank output-feedback compensators. *Internat. J. Systems Sci.* 10 (1979), no. 3, 285-306. (S. P. Bhattacharyya) **80b:93121** 93D15 (93C05)
- Pole assignment. *Proc. Inst. Electr. Engrs.* 126 (1979), no. 6, 549-554. (Author's summary) **80f:93051** 93C99
- Münster, Michel (with Leonard, Paul) Exemple d'un opérateur de  $\mathcal{Q}$  dans  $C^*$  dont le noyau est séparément dans  $C^*$  sans être continu. (English summary) *Bull. Soc. Roy. Sci. Liège* 47 (1978), no. 3-4, 111-112. (Authors' summary) **80b:26016** 26B05
- On hyperbolic polynomials with constant coefficients. *Rocky Mountain J. Math.* 8 (1978), no. 4, 653-673. (Maria Cinquini-Cibrario) **80c:35062** 35L25
- Münzsmeyer, Hans Peter Leibniz, der Erfinder der Drehschieberpumpe? *Studia Leibnitiana* 10 (1978), no. 2, 247-253. (Eberhard Knobloch) **80j:01011** 01A45
- Münzner, H. F. (with Prätzel-Wolters, D.) Minimal bases of polynomial modules, structural indices and Brunovsky-transformations. *Internat. J. Control* 30 (1979), no. 2, 291-318. (Arthur J. Krener) **80b:93022** 93B25
- Münzová-Demlová, Marie On factorizations onto the bicyclic semigroup. *Semigroup Forum* 15 (1977/78), no. 2, 103-118. (Donald W. Miller) **80c:20002** 20M10
- On groups of units in a special class of monoids. *Semigroup Forum* 16 (1978), no. 4, 443-454. (K. S. S. Nambooripad) **80a:20073** 20M10
- (with Goralčík, P.) Translation constructions for monoids. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 61-72. *Colloq. Math. Soc. János Bolyai*, 20, North-Holland, Amsterdam, 1979. (William R. Nico) **80c:20061** 20M10
- (with Koubek, Václav) Subdirectly irreducible semigroups with minimal left and right ideals. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 73-111. *Colloq. Math. Soc. János Bolyai*, 20, North-Holland, Amsterdam, 1979. (M. K. Sen) **80c:20064** 20M12
- Mur, G. Computation of electromagnetic fields scattered by a cylindrical inhomogeneity in a homogeneous medium of infinite extent. *J. Engrg. Math.* 13 (1979), no. 2, 107-125. (Andrzej Zardecki) **80d:78030** 78A45 (65P05)
- Mur, V. D. (with Popov, V. S.; Voskresenskii, D. N.; Eletskii, V. L.) WKB method at  $Z > 137$  and its applications to the theory of supercritical atoms. *Ž. Eksp. Teoret. Fiz.* 76 (1979), no. 2, 431-459. (Russian); translated as *Soviet Phys. JETP* 49 (1979), no. 2, 218-231. (J. V. Greenman) **80i:81072** 81G45
- Murač, M. M. FC-solvable groups of automorphisms with finiteness condition for the abelian normal subgroups of Mal'cev solvable groups. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 5, 674-680, 718. (J. L. Brenner) **80c:20032** 20D45 (20G15)
- Muradjan, R. M. (with Matveev, V. A.; Tavheližde, A. H.) Method of quark counting for inclusive processes. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 3, 329-339. (Authors' summary) **80i:81055** 81G05
- Murador, R. L. The mixed problem for a singular hyperbolic equation with a small parameter. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1978, no. 6, 3-13. (A. Džuraev) **80j:35061** 35L20
- Murai, Takafumi Une remarque sur la distribution des valeurs des séries de Taylor aléatoires. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 14, A931-A934. (Author's summary) **80b:30024** 30D35
- Murakami, Chikara (with Tomita, Kazuhisa) Giant transitory excitation—a thermokinetic model. *J. Theoret. Biol.* 79 (1979), no. 2, 203-222. (Authors' summary) **80c:92011** 92A09
- Murakami, Haruo (with Yeh, Cheh Chih) Note on asymptotic behavior of solutions of functional differential equations. *Nanta Math.* 10 (1977), no. 2, 131-134. (From the introduction) **80a:34108** 34K15
- (with Yeh, Cheh Chih) Fixed point theorems under generalized contractive mappings. *Indian J. Pure Appl. Math.* 10 (1979), no. 4, 426-430. (J. L. Solomon) **80b:54056** 54H25
- Murakami, Masakatsu On the reduction to a complete class in multiple decision problems. *II. Ann. Inst. Statist. Math.* 30 (1978), no. 1, 27-34. (James Berger) **80c:62011** 62C07
- Murakami, Sumio (with Sawczuk, A.) On description of rate-independent behaviour for prestrained solids. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stat.)* 31 (1979), no. 2, 251-264. (J. Dunwoody) **80j:73001** 73B05
- Murall, V. Locally order-convex spaces. *Kyungpook Math. J.* 18 (1978), no. 1, 37-46. (Kung-fu Ng) **80b:46013** 46A40
- Murarescu, Gh. Connexions de Cartan conjuguées. *Papers from the National Colloquium on Geometry and Topology (Univ. Timișoara, Timișoara, 1977)*, pp. 161-165. *Univ. Timișoara, Timișoara, 1977*. (Jacek Gancarzewicz) **80b:53022** 53C05
- Murari, K. (with Parkash, K.) Servicing of vehicles at an automobile service centre with variable waiting space. *Pure Appl. Math. Sci.* 10 (1979), no. 1-2, 71-80. (Authors' summary) **80m:90054** 90B22
- Murase, C. (with Yuge, Y.) A renormalisation group approach for two-dimensional percolating systems: honeycomb bond lattice and Kagomé lattice. *J. Phys. A* 12 (1979), no. 9, 1541-1546. (R. Piziak) **80c:82042** 82A67
- Murase, Ichiro (with Tomimaga, Hisao) On powers of Artinian rings without identity. *Math. J. Okayama Univ.* 20 (1978), no. 2, 131-140. (V. C. Cateforis) **80a:16029** 16A35
- Murat, François Compacité par compensation. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) 5 (1978), no. 3, 489-507. (Pierre-Louis Lions) **80b:46034** 46E35 (49A99)
- Compacité par compensation. II. *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis (Rome, 1978)*, pp. 245-256. *Pitagora, Bologna*, 1979. (Pierre-Louis Lions) **80b:46043b** 46E35 (49A99, 73Cxx)
- Murata, Minoru (with Shibata, Yoshihiro) Lower bounds at infinity of solutions of partial differential equations in the exterior of a proper cone. *Israel J. Math.* 31 (1978), no. 2, 193-203. (J. Christina) **80b:35037** 35E20
- Scattering solutions decay at least logarithmically. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 2, 42-45. (S. T. Kuroda) **80c:35144** 35P25 (35J10)
- Rate of decay of local energy and wave operators for symmetric systems. *J. Math. Soc. Japan* 31 (1979), no. 3, 451-480. (Joseph J. Roseman) **80c:35105** 35P25 (47A40)
- Murata, Yasuo ★Mathematics for stability and optimization of economic systems. *Economic Theory and Mathematical Economics. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London*, 1977. xix+418 pp. ISBN 0-12-511250-5 (Anjan Mukherji) **80d:90027** 90A16 (90-02, 90A14)
- Fundamental Marxian theorem in case of multiple activities. *Metroeconomica* 29 (1977), no. 1-3, 137-148. (Author's summary) **80c:90042** 90A16
- Murathudžajev, S. (with Beljavskaia, G. B.) About admissibility of  $N$ -ary quasigroups. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. I, pp. 101-119. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (D. A. Robinson) **80c:20087** 20N15 (05B30)
- Muratori, L. M. Improvement of the convergence of series. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 4(191), 53-57. (H.-H. Körle) **80c:40001** 40A05
- Murator, M. A. Noncommutative Orlicz spaces. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 6, 11-13. (J. Benkó) **80c:46074** 46L50 (46E30)
- Convergences in a ring of measurable operators. (Russian) *Taškent. Gos. Univ. Sb. Naučn. Trudov No. 573 Funkcional. Anal.* (1978), 51-58, 110. (Author's summary) **80c:47040** 47C15 (46L10)
- The Luxemburg norm in an Orlicz space of measurable operators. (Russian) *Dokl. Akad. Nauk UzSSR* No. 1 (1979), 5-6. (R. R. Ahmerov) **80c:47061** 47D15 (46L50)
- Muratori, R. Z. (with Efimov, S. P.) Scattering theory interference theorems in vector problems of low-frequency diffraction. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 6, 1315-1318. (V. M. Babič) **80c:78021** 78A45 (35Q99)
- Muratsaeva, E. D. A quadrature process for a singular integral along an interval of a straight line. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1978, no. 5, 31-38. (J. Segethová) **80c:65027** 65D32
- Muravai, L. A. Asymptotic behavior, for large time values, of the solutions of exterior boundary value problems for a wave equation with two space variables. (Russian) *Mat. Sb. (N.S.)* 107(149) (1978), no. 1, 84-133, 160. (P. A. Mišnevskii) **80i:35021** 35B40 (35L05)
- Muravleva, G. A. (with Petrov, B. N.; Aleksandrov, A. D.; Andreev, V. P.; Bulekov, V.



- P., Viktorov, B. V.; Izvol'skii, E. G.; Kudryavtsev, P. S.; Kuzin, V. P.; Mahan'ko, A. V.; Mihallov, F. A.; Nikolaev, Ju. P.; Pobedonosev, G. V.; Pohvalenskiĭ, V. L.; Sadykov, F. R.; Serpionov, G. V.; Salikova, I. M.; Ul'jaščenko, A. E.; Frolov, P. A.; Čerjakov, V. P.; Caturjan, K. T. ★Многомерные и нестационарные системы автоматического управления. (Russian) [Multistate and nonstationary automatic control systems] "Maliostroenie", Moscow, 1978. 240 pp. (Publisher's summary) 80c:93073 93C40
- Murayama, Mitutaka (with Araki, Shōrō)  $\tau$ -cohomology theories. *Japan. J. Math. (N.S.)* 4 (1978), no. 2, 363–416. (Tetsuya Aikawa) 80d:55022a 55T15 (55N20)
- Muras, Gilbert Opérateurs subordonnés à une mesure spectrale. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 4, A271–A273. (Author's summary) 80i:47036 47B15
- Murdenhwar, M. G. (with Anantharaman, R.) Invariance under optimally continuous functions. *Math. Japon.* 22 (1977/78), no. 4, 501–505. (Authors' summary) 80a:54047 54D99
- Alexander's subbasis theorem. 14th Dutch Mathematical Congress (Vrije Univ., Amsterdam, 1978). *Nieuw Arch. Wisk.* (3) 27 (1979), no. 1, 116–117. (F. J. Papp) 80c:54009 54B99
- Murdoch, A. Ian Symmetry considerations for materials of second grade. *J. Elasticity* 9 (1979), no. 1, 43–50. (C.-C. Wang) 80c:73005 73B25 (73B05)
- Murdoch, John E. Propositional analysis in fourteenth-century natural philosophy: a case study. *Synthese* 40 (1979), no. 1, 117–146. (From the introduction) 80f:03005 03–03 (01A35)
- Murdoch, J. A. Some mathematical aspects of spin-orbit resonance. *Celestial Mech.* 18 (1978), no. 3, 237–253. (Author's summary) 80b:83001 83A05 (34C05, 58F05)
- Qualitative dynamics from asymptotic explosions. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 669–673, Academic Press, New York, 1979. (Richard Cushman) 80c:58041 58F15 (34C29)
- On the well-posed two-body problem in electrodynamics and special relativity. II. *Ann. Physics* 119 (1979), no. 1, 90–96. (R. D. Driver) 80c:78004 78A35 (58F99)
- domínguez Murillo, Eladio See Domínguez Murillo, Eladio
- Murli, A. (with Patruno, V.) A method for the numerical inversion of the Laplace transform. (Italian. English summary) *Calcolo* 15 (1978), no. 1, 51–58. (Authors' summary) 80c:65243 65R10
- Muro, Shojiro (with Ibaraki, Toshihide; Hasegawa, Toshiharu) Representation theorems of finite automata having additive cost functions. *Systems-Comput.-Controls* 8 (1977), no. 6, 33–40 (1979). (Authors' summary) 80c:68082 68D35 (68D45)
- Murumets, Yu. L. Determination of bounds for reliability indices of complex systems. *Automat. i Telemekh.* 1977, no. 9, 177–190 (Russian. English summary); translated as *Automat. Remote Control* 38 (1977), no. 9, part 2, 1417–1428 (1978). (Author's summary) 80c:93009 93A10
- Muroya, Yoshiaki (with Kohno, Yoshiharu) A practical Chebyshev series approximation with some a priori error estimates to the solutions of singular perturbation problems. *Mem. School Sci. Engrg. Waseda Univ.* No. 42 (1978), 75–98 (1979). (Authors' summary) 80c:65021 65D15
- Murphy, F. H. (with Soyster, A. L.) Multiproduct lot-size scheduling with proportional product demands. *Naval Res. Logist. Quart.* 26 (1979), no. 1, 97–108. (John C. Gittins) 80h:90088 90B35
- Murphy, George L. On the strength of Einstein's unified field equations. *Internat. J. Theoret. Phys.* 18 (1979), no. 5, 323–327. (M. Sachs) 80c:83050 83E99
- Murphy, Gerard J. Commutative non-Archimedean  $C^*$ -algebras. *Pacific J. Math.* 78 (1978), no. 2, 433–446. (George Bachman) 80i:46063 46P05 (46J99)
- Murphy, J. A. (with O'Donoghue, M. R.) A two-variable generalization of the Stieltjes-type continued fraction. *J. Comput. Appl. Math.* 4 (1978), no. 3, 181–190. (Wyman Fair) 80k:40001 40A15 (41A21)
- Murphy, Joseph E. Spectral domain formulation for acoustic scattering. *J. Acoust. Soc. Amer.* 66 (1979), no. 4, 1195–1198. (I. M. Longman) 80c:76041 76Q05 (35J05)
- Murphy, Lea F. (with Gurtin, Morton E.; MacCamy, Richard C.) On optimal strain paths in linear viscoelasticity. *Quart. Appl. Math.* 37 (1979/80), no. 2, 151–156. (R. R. Huilgol) 80g:73038 73F99 (49A99)
- Murphy, Paul E. (with Paull, Marvin C.) Minimum comparison merging of sets of approximately equal size. *Inform. and Control* 42 (1979), no. 1, 87–96. (Authors' summary) 80c:68163 68E05 (90D99)
- Murphy, R. V. Maximum range problems in a resisting medium. *Math. Gaz.* 63 (1979), no. 423, 10–16. (Vadim Komkov) 80c:70004 70E10
- Murphy, Thomas N. A criterion for the existence of  $P$ -points. (French summary) *Bull. Sci. Math.* (2) 102 (1978), no. 3, 241–255. (Brian M. Scott) 80a:54066 54G05 (54D99)
- Murray, Francis J. ★Applied mathematics: an intellectual orientation. Mathematical Concepts and Methods in Science and Engineering, 12. Plenum Press, New York-London, 1978. xiv + 225 pp. ISBN 0-306-39252-6 (L. G. Chambers) 80f:00010 00A69
- Murray, J. C. Curvilinear coordinate systems suitable for the numerical solution of boundary-value problems. *J. Inst. Math. Appl.* 22 (1978), no. 4, 411–421. (Author's summary) 80a:65245 65N99
- Murray, James Dickson Biological and chemical oscillatory phenomena and their mathematical models. *Bull. Inst. Math. Appl.* 14 (1978), no. 7, 162–169. (Richard J. Field) 80a:92027 92A09 (80A30)
- (with Kernevez, Jean-Pierre; Joly, Ghyslaine; Duban, Marie-Claude; Thomas, Daniel) Propagation d'onde dans un système à enzyme immobilisée. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 14, A961–A964. (Authors' summary) 80c:92012 92A09
- (with Mimura, Masayasu) On a diffusive prey-predator model which exhibits patchiness. *J. Theoret. Biol.* 75 (1978), no. 3, 249–262. (Frank J. S. Wang) 80c:92036 92A15 (35K99)
- (with Britton, N. F.) Threshold, wave and cell-cell avalanche behaviour in a class of substrate inhibition oscillators. *J. Theoret. Biol.* 77 (1979), no. 3, 317–332. (Authors' summary) 80c:92006 92A09
- Murray, John J. (with Hunt, L. R.)  $q$ -plurisubharmonic functions and a generalized Dirichlet problem. *Michigan Math. J.* 25 (1978), no. 3, 299–316. (S. I. Pinčuk) 80b:32018 32F05
- Murray, W. O. (with Treybig, L. B.) Triangulations with the free cell property. *Pacific J. Math.* 75 (1978), no. 2, 487–496. (I. Ivancić) 80g:57022 57Q05 (57Q15)
- Murray, Walter (with Gill, Philip E.) Algorithms for the solution of the nonlinear least-squares problem. *SIAM J. Numer. Anal.* 15 (1978), no. 5, 977–992. (Authors' summary) 80a:65039 65D20 (65F30)
- (with Gill, Philip E.) The computation of Lagrange-multiplier estimates for constrained minimization. *Math. Programming* 17 (1979), no. 1, 32–60. (Michael Minkoff) 80b:90124 90C30 (90C20)
- Murray-Rust, Peter (with Bürgi, Hans-Beat; Dunitz, Jack D.) Description of molecular distortions in terms of symmetry coordinates. *Acta Cryst. Sect. A* 35 (1979), no. 5, 703–713. (Authors' summary) 80i:81074 81G50 (20H15)
- Murre, J. P. (with Conte, A.) The Hodge conjecture for fourfolds admitting a covering by rational curves. *Math. Ann.* 238 (1978), no. 1, 79–88. (Steven Zucker) 80a:14018 14J35 (14C30, 14H35)
- (with Bloch, S.) On the Chow group of certain types of Fano threefolds. *Compositio Math.* 39 (1979), no. 1, 47–105. (G. Horrocks) 80m:14025 14J30 (14C05)
- Mursaleen On infinite matrices and invariant means. *Indian J. Pure Appl. Math.* 10 (1979), no. 4, 457–460. (G. M. Petersen) 80j:40001 40C05
- Murskii, V. L. The number of  $k$ -element algebras with a binary operation which do not have a finite basis of identities. (Russian) *Problemy Kibernet.* No. 35 (1979), 5–27, 208. (Jaroslav Libicher) 80i:08003 08A05
- Murtazaev, D. The Riemann-Hilbert problem for a system of first-order equations of composite type with two double characteristics. (Russian. Tajiki summary) *Izv. Akad. Nauk Tadzhik. SSR Otdel. Fiz.-Mat. i Geol.-Him. Nauk* 1978, no. 4(70), 18–24. (M. O. Balaiešvili) 80f:35084 35M05 (30E25)
- Murtazaev, E. E. The discrete Hille-Yosida-Phillips theorem in locally convex spaces. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 7, 14–15. (W. Timmermann) 80b:47009 47A30
- Equivalent semigroups of linear operators. (Russian) *Taškent. Gos. Univ. Sb. Nauch. Trudov* No. 573 *Funktsional. Anal.* (1978), 60–61, 110. (Author's summary) 80k:47043 47D05
- Bhannu Murthy, B. S. See Bhannu Murthy, B. S.
- Murthy, D. N. P. Solution of linear regulator problem via two-parameter singular perturbation. *Internat. J. Systems Sci.* 9 (1978), no. 10, 1113–1131. (Author's summary) 80b:93099 93C99
- Murthy, Vrudhula K. (with Richardson, John M.; Haywood, L. Julian) Effect of simultaneous random amplitude and frequency modulation on ECG power spectra. *Inform. Sci.* 12 (1977), no. 2, 105–110. (Authors' summary) 80d:92007 92A07
- (with Richardson, John M.; Haywood, L. Julian) Recognition of generalized Markoff processes and application to electrocardiography. *Inform. Sci.* 14 (1978), no. 1, 51–56. (Authors' summary) 80d:92008 92A07
- (with Narasimham, Gorti V. L.) On the asymptotic normality and independence of the sample partial autocorrelations for an autoregressive process. *Appl. Math. Comput.* 5 (1979), no. 4, 281–295. (James E. Gentle) 80m:62091 62M10
- Murty, G. Sri Rama Chandra (with Sitaramachandra Rao, R.) On a theorem of Niven. *Canad. Math. Bull.* 22 (1979), no. 1, 113–115. (Jau-Shyong Shue) 80g:10061 10L10 (10A20)
- Murty, K. N. (with Rao, D. R. K. S.) On transformation of boundary value problems. *Bull. Calcutta Math. Soc.* 69 (1977), no. 5, 303–308. (J. W. Bebernes) 80i:34023 34B05
- Murty, Katta G. On the linear complementarity problem. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 1, pp. 425–439, Operations Research Verfahren, 31, Hain, Meisenheim, 1979. (B. Mond) 80b:90142 90C33
- Murty, U. S. R. (with Simon, Imre) A  $\beta$ -function that is not a sum of rank functions of matroids. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 305–306, Colloques Internat. CNRS, 260, CNRS, Paris, 1978. (Jeremy Dawson) 80c:05044 05B35 (05B25)
- An application of Rado's theorem to disjoint matchings in bipartite graphs. *J. London Math. Soc.* (2) 17 (1978), no. 2, 193–194. (J. E. Graver) 80i:05054 05C35
- A generalization of the Hoffman-Singleton graph. *Ars Combin.* 7 (1979), 191–193. (From the introduction) 80m:05067 05C35
- See also Graph theory and related topics, 80c:05004
- Musa, F. A. (with Bassali, W. A.; Atta, T. I.) Clamped and simply supported rhombic plates uniformly loaded over the entire plate or over a concentric circle. (Arabic summary) *J. Univ. Kuwait Sci.* 5 (1978), 1–28. (Yi-Yuan Yu) 80j:73026 73K10 (65E05)
- (with Delves, L. M.) On weakly asymptotically diagonal systems. *J. Inst. Math. Appl.* 23 (1979), no. 4, 389–403. (T. I. Seidman) 80g:65068 65J10 (65R20)
- Musaev, B. I. (with Guliev, R. D.) The convergence of interpolational quadrature formulas that contain derivatives for singular integrals. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 4, 3–9. (A. Cojia) 80b:41015 41A55 (65D30)
- The order of the approximation of a singular integral taken over a segment of a real straight line. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 10, 3–7. (Editors) 80d:41011 41A35
- The order of approximation of a singular integral over the interval of a real line by quadrature sums. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 11, 3–7. (Anton Hut'a) 80c:65051 65D30 (41A55)
- (with Salaeu, V. V.) Conjugate functions of several variables. I. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1978, no. 4, 5–18. (R. L. Cooke) 80j:42035 42B99
- Musaev, M. M. (with Bekmuratov, T. F.; Nasyrov, M. Š.; Šamsiev, T. G.) ★Гибридные средства моделирования и управления. (Russian) [Hybrid modeling and control devices] *Izdat. "Fan", Uzbek. SSR, Tashkent*, 1978. 138 pp. (Vadim Komkov) 80b:93092 93C99
- (with Doroshenko, O. N.) A method of approximation of power functions by a multiplexed Haar series for constructing nonlinear converters. (Russian) *Voprosy Kibernet. (Tashkent)* No. 102 (1978), 98–105, 160–161. (Authors' summary) 80f:65014 65D15

- Musnev, S. R. (with Alieva, N. G.; Aliev, N. Z.) A way of reducing stochastic synthesis problems to problems of optimal control. (Russian) *Questions of mathematical cybernetics and applied mathematics*, No. 3 (Russian), pp. 26-32, "Elm", Baku, 1978. (From the text) **80a:93082** 93E99
- (with Aliev, N. Z.) A problem of drilling inclined wells. (Russian) *Questions of mathematical cybernetics and applied mathematics*, No. 3 (Russian), pp. 118-122, "Elm", Baku, 1978. (Editors) **80a:93040a** 93C99
- (with Aliev, N. Z.) A problem of optimization of the process of drilling inclined wells. (Russian) *Questions of mathematical cybernetics and applied mathematics*, No. 3 (Russian), pp. 123-125, "Elm", Baku, 1978. (Editors) **80a:93040b** 93C99
- (with Novruzov, A. A.) A problem of optimization of the process of drilling vertical wells. (Russian) *Questions of mathematical cybernetics and applied mathematics*, No. 3 (Russian), pp. 146-152, "Elm", Baku, 1978. (Editors) **80a:93040c** 93C99
- Mushegian, G. M. The coefficients of everywhere convergent series with respect to the Haar system with permuted terms. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* **13** (1978), no. 4, 275-300, 353. (F. Schipp) **80j:42047** 42C20
- Coefficients of everywhere convergent series in certain representations of orthonormal systems. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* **42** (1978), no. 4, 807-832. (S. Aljančić) **80a:42014** 42C20
- Muskhelishvili, I. I. Further concepts and computational applications. *Appl. Math. Comput.* **4** (1978), no. 1, 45-66. (S. A. Basarab) **80a:03007** 03A05 (17B99)
- Hypernumbers and quantum field theory with a summary of physically applicable hypernumber arithmetics and their geometries. *Appl. Math. Comput.* **6** (1980), no. 1, 63-94. (Author's summary) **80a:03031** 83C45 (17D05)
- Musgrave, Gerald (with Dattagupta, Jayahree) An efficient method of determining functional equivalence classes of a network with reconvergent fan-out. *Internat. J. Systems Sci.* **9** (1978), no. 10, 1069-1077. (S. L. Hakimi) **80f:94041** 94C15
- Musgrave, M. J. P. Progressive waves in anisotropic media. *Modern problems in elastic wave propagation* (Proc. IUTAM Symp., Northwestern Univ., Evanston, Ill., 1977), pp. 285-303, Wiley, New York, 1978. (R. L. Richardson) **80f:73032** 73D20
- (with Barry, P. A.) On elliptical conical refraction of elastic waves in tetragonal media. *Quart. J. Mech. Appl. Math.* **32** (1979), no. 3, 205-214. (G. Eason) **80k:73019** 73D15 (45C05, 73C30)
- (with Hayes, M.) On energy flux and group velocity. *Wave Motion* **1** (1979), no. 1, 75-82. (Authors' introduction) **80d:78025** 78A40 (35Q99)
- Temperature compensation and travel times of waves. *Wave Motion* **2** (1980), no. 1, 17-22. (Author's summary) **80m:73030** 73D99
- Muskhelishvili, M. (with Fraenkel, A. S.; Tassa, U.) Determination of  $[n\theta]$  by its sequence of differences. *Canad. Math. Bull.* **21** (1978), no. 4, 441-446. (Maurice Mignotte) **80d:10051** 10F20 (10A30)
- Muskhelishvili, M. The weak Radon-Nikodym property in Banach spaces. *Studia Math.* **64** (1979), no. 2, 151-173. (S. D. Chatterji) **80a:46065** 46G10 (46B22)
- Muskhelishvili, M. On the Cauchy problem for the  $n$ -caloric equation and for the time-plane. *Demonstratio Math.* **11** (1978), no. 4, 1101-1114 (1979). (Mario Primicerio) **80a:35075** 35K30
- On the bialicor problem for the exterior of the ball. *Demonstratio Math.* **12** (1979), no. 1, 141-153. (Antonio Maugeri) **80a:35073** 35K35
- Muskhelishvili, M. On the canonical formalism with the derivatives of higher order. *Publ. Inst. Math. (Beograd) (N.S.)* **23**(37) (1978), 141-153. (L. Martinez Alonso) **80a:70035** 70H15 (49C05, 58E99, 58F05)
- Muskhelishvili, M. Approximation by singular modulars. *Fourier analysis and approximation theory* (Proc. Colloq., Budapest, 1976), Vol. II, pp. 559-564, Colloq. Math. Soc. János Bolyai, 19, North-Holland, Amsterdam, 1978. (W. R. Madych) **80j:40003** 40C99 (41A35)
- An application of modular spaces to approximation. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* **1** (1978), 251-259. (Diethard Pallaschke) **80a:41024** 41A65 (42B20)
- (with Hudzik, Henryk; Urbański, Ryszard) Lattice properties of the space of convex, closed and bounded subsets of a topological vector space. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979), no. 2, 157-162. (N. Adasch) **80j:46027** 46A99
- An application of the modulus of variation to trigonometric gap series. *Funct. Approx. Comment. Math.* **7** (1979), 129-133. (M. E. Noble) **80j:42025** 42A55 (42A28)
- Muskhelishvili, S. S. Construction of approximations for an integro-differential equation. (Russian) *The constructive theory of functions and functional analysis* (Russian), pp. 40-44, Kazan. Univ., Kazan, 1977. (From the text) **80a:45012** 45L05
- Approximate solution of an integro-differential equation. (Russian) *The constructive theory of functions and functional analysis* (Russian), pp. 45-50, Kazan. Univ., Kazan, 1977. (From the text) **80a:45013** 45L05
- Mussa, Michael (with Rosen, Sherwin) Monopoly and product quality. *J. Econom. Theory* **18** (1978), no. 2, 301-317. (Anjan Mukherji) **80a:90024** 90A14
- van Munchingbroek, Petrus See de Pater, C., **80a:01015**
- Musser, David R. (with Guttig, John V.; Horowitz, Ellis) Abstract data types and software validation. *Comm. ACM* **21** (1978), no. 12, 1048-1064. (J. Paredaens) **80b:68030** 68B15
- On the efficiency of a polynomial irreducibility test. *J. Assoc. Comput. Mach.* **25** (1978), no. 2, 271-282. (Author's summary) **80m:68040** 68C25
- Mustafae, B. A. The transformation operator for the Sturm-Liouville equation with increasing potential and the Riemann function. I. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1978**, no. 5, 23-25. (Ju. A. Melencova) **80d:34028** 34B25
- Mustafae, L. G. (with Fečkulajev, R. B.) A semiheap of locally topological mappings. (Russian) *Dokl. Akad. Nauk SSSR* **241** (1978), no. 1, 26-29. (Manfred B. Wischnewsky) **80g:20006** 20N10 (54H99)
- Mutlari, D. H. Some questions of the theory of dual-Radon mappings. (Russian) *The constructive theory of functions and functional analysis* (Russian), pp. 51-53, Kazan. Univ., Kazan, 1977. (Editors) **80a:47019** 47B10 (60B11)
- Lévy type criteria for the weak convergence of probabilities in Fréchet spaces. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 3, 580-585. (W. A. Woyczyński) **80j:60006** 60B10
- Mustafae, B. A. Norm preserving extension of starshaped Lipschitz functions. *Mathematica (Cluj)* **19**(42) (1977), no. 2, 183-187 (1978). (D. E. Wulbert) **80c:46031** 46B99
- A characterization of semi-Chebyshevian sets in a metric space. *Anal. Numer. Theor. Approx.* **7** (1978), no. 2, 169-170. (Editors) **80a:41014** 41A15
- Mutitenko, V. S. (with Martynenko, Mih. D.) A boundary value problem for the Lamé system in a space with a smooth slit. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1978**, no. 4, 121-124, 140. (Authors' summary) **80c:73030** 73C99 (35Q99)
- Fundamental solution of a biharmonic equation in a Riemann space. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* **1978**, no. 1, 67-69. (Author's review) **RZMat** **1978**:B284) **80a:31006** 31B30 (73C99)
- Mustonen, Vesa An elliptic boundary value problem for strongly non-linear equations in unbounded domains. *Proc. Roy. Soc. Edinburgh Sect. A* **77** (1977), no. 3-4, 217-230. (O. John) **80b:35063** 35J65
- A class of strongly nonlinear variational inequalities. *J. London Math. Soc.* (2) **11** (1978), no. 1, 157-165. (Jaures P. Cecconi) **80a:47085** 47H05 (35J60)
- (with Edmunds, D. E.) A priori estimates for positive solutions of strongly nonlinear equations in two variables. *Acta Univ. Oulu. Ser. A. Sci. Rerum Natur. Math. No. 2* (1979), 9 pp. (G. Albinus) **80a:35059** 35J65
- A class of strongly nonlinear variational inequalities in unbounded domains. *J. London Math. Soc.* (2) **19** (1979), no. 2, 319-328. (E. S. Čičkin) **80a:35058** 35J60 (47H15)
- Muszyńska, Agnieszka See Stability and sensitivity in mechanical systems, **80c:93004**
- Muszyński, Jerzy (with Dymitrak, Anna) Damped vibrations of strings connected in a node. *Demonstratio Math.* **12** (1979), no. 2, 501-508. (F. V. Pohle) **80h:73047** 73K39
- Mutafiev, Ljuben R. Cycles of random permutations in subsets of a symmetric group of high order. (Russian) *Math. Balkanica* **6** (1976), 133-148 (1978). (G. I. Ivčenko) **80a:60015** 60C05 (60F05)
- Müther, Alberto M. See Mier Muth, Alberto M.
- Muth, Eginhard J. (with Spremann, K.) A class of stationary EOQ problems and learning effects. *Optimization and operations research* (Proc. Workshop, Univ. Bonn, Bonn, 1977), pp. 209-221, *Lecture Notes in Econom. and Math. Systems*, 157, Springer, Berlin, 1978. (N. U. Prabhu) **80a:90052** 90B05
- The reversibility property of production lines. *Management Sci.* **25** (1979/80), no. 2, 152-158. (Ronald W. Shephard) **80d:90045** 90B30
- Muthén, Bengt Contributions to factor analysis of dichotomous variables. *Psychometrika* **43** (1978), no. 4, 551-560. (Author's summary) **80a:62055** 62H25
- Muti, Yessio Riemannian submersion and the Laplace-Beltrami operator. *Kodai Math. J.* **1** (1978), no. 3, 329-338. (Harold Donnelly) **80a:53064** 53C40 (58G99)
- Index of some Gauss-critical submanifolds. *Tōhoku Math. J. (2)* **30** (1978), no. 4, 561-573. (R. L. Bishop) **80a:58012** 58E05 (53C42)
- Deformability of a submanifold in a Euclidean space whose image by the Gauss map is fixed. *Proc. Amer. Math. Soc.* **76** (1979), no. 1, 140-144. (S. C. Rustogi) **80j:53027** 53B25
- Mutsaers, E. (with Suda, Nobuhide) Invariant zeros and input-output structure of linear, time-invariant systems. *Internat. J. Control* **28** (1978), no. 4, 525-535. (B. P. Molinari) **80g:93020** 93B05 (93B10)
- Mutzbauer, O. Klassifizierung torsionsfreier abelscher Gruppen des Ranges 2 II. *Res. Sem. Mat. Univ. Padova* **58** (1977), 163-174 (1978). (P. Grabe) **80a:20072** 20K15 (20K30)
- le dung Muu See Le Dung Muu
- Muzafarov, L. M. Dispersion relation for the forward scattering amplitude  $\gamma N N \rightarrow \gamma N N$  and a generalized optical theorem. (Russian. English summary) *Teoret. Mat. Fiz.* **38** (1979), no. 1, 36-47. (M. Martinis) **80d:81110** 81F99
- (with Logunov, A. A.; Medvedev, B. V.; Pavlov, V. P.; Polivanov, M. K.; Suhanov, A. D.) Analytical structure of the amplitude of  $3 \rightarrow 3$  forward scattering. (Russian. English summary) *Teoret. Mat. Fiz.* **40** (1979), no. 2, 179-193. (Authors' summary) **80i:81050** 81F15
- Muzens, L. A. See Gibson, W. M.; et al., **80m:81002**
- Muzio, J. C. Classes of universal decision elements using negative substitutions. *Note Dame J. Formal Logic* **20** (1979), no. 2, 314-320. (From the introduction) **80a:03016** 03B05 (94C10)
- Myćielski, Jan Linear dynamic approximation theory. *J. Approx. Theory* **25** (1979), no. 4, 369-383. (Author's summary) **80f:68099** 68G05 (92A05)
- Myćielski, Jerzy (with Białynicki-Birula, Iwo) Gaussons: solitons of the logarithmic Schrödinger equation. Special issue on solitons in physics. *Phys. Scripta* **20** (1979), no. 3-4, 539-544. (Brian DeFazio) **80a:81012** 81C05 (35Q20)
- Myers, David L. (with Wilcox, Howard) ★ An introduction to Lebesgue integration and Fourier series. *Applied Mathematics Series—Mathematics for Engineering and Science*. Robert E. Krieger Publishing Co., Huntington, N.Y., 1978. vii + 159 pp. ISBN 0-88275-614-1 (R. G. Bartle) **80a:28001** 28-01 (42-01)
- Myers, Diane-Claire (with Raymon, Louis) Exact monotone approximation. *J. Approx. Theory* **24** (1978), no. 1, 35-50. (G. G. Lorentz) **80a:41005** 41A10
- Myers, Robert Open book decompositions of 3-manifolds. *Proc. Amer. Math. Soc.* **72** (1978), no. 2, 397-402. (J. S. Birman) **80a:57004** 57M25 (57N10)
- (with Jacob, William) An algebraic determination of closed orientable 3-manifolds. *Trans. Amer. Math. Soc.* **253** (1979), 149-170. (Hugh M. Hilden) **80a:57012** 57N10
- Myerson, Gerald On the numbers of zeros of diagonal cubic forms. *J. Number Theory* **11** (1979), no. 1, 95-99. (M. J. Cowles) **80a:12023** 12C20 (10C10)
- A combinatorial problem in finite fields. I. *Pacific J. Math.* **82** (1979), no. 1, 179-187. (A. L. Whiteman) **80i:05010** 05A15 (12C20)
- Myerson, Roger B. Refinements of the Nash equilibrium concept. *Internat. J. Game Theory* **7** (1978), no. 2, 73-80. (Irinel Dragan) **80a:90165** 90D10
- Threat equilibria and fair settlements in cooperative games. *Math. Oper. Res.* **3** (1978), no. 4, 265-274. (Hans Keiding) **80a:90157** 90D12
- Myhill, J. (with Goodman, N.) Choice implies excluded middle. *Z. Math. Logik Grundlag. Math.* **24** (1978), no. 5, 461. (J. R. Moschovakis) **80a:03068** 03E70 (03F55)



- Myhre, Janet M. (with Rosenfeld, Andrew M.; Saunders, Sam C.) Determining confidence bounds for highly reliable coherent systems based on a paucity of component failures. *Naval Res. Logist. Quart.* 25 (1978), no. 2, 213-227. (Masanori Kodama) 80b:90074 90B25
- Mylin-U, Tyn An alternative method on complete integrals of plane eikonal equations. *Z. Angew. Math. Mech.* 58 (1978), no. 11, 522. (Author's introduction) 80d:70049 70M05 (35C05)
- Myjak, J. (with De Blasi, F. S.) The generic property of existence of solutions for a class of multivalued differential equations in Hilbert spaces. *Funkcial. Ekvac.* 21 (1978), no. 3, 271-278. (Stefan Balint) 80b:34076 34G20 (58D25)
- (with De Blasi, F. S.; Kwapisz, Marian) Generic properties of functional equations. *Nonlinear Anal.* 2 (1978), no. 2, 239-249. (C. Corduneanu) 80b:34077 34G20 (34K05, 35J05)
- (with De Blasi, F. S.) Some generic properties of functional differential equations in Banach spaces. *J. Math. Anal. Appl.* 67 (1979), no. 2, 437-451. (Seppo Heikkilä) 80d:34105 34K30
- (with De Blasi, F. S.) Generic properties of contraction semigroups and fixed points on nonexpansive operators. *Proc. Amer. Math. Soc.* 77 (1979), no. 3, 341-347. (K. Goebel) 80b:47074 47H15 (47H10)
- Mykhardt, C. M. (with Broere, I.) Remarks on the critical graph conjecture. *Discrete Math.* 26 (1979), no. 3, 209-212. (Alan Tucker) 80b:05024 05C15
- Myken, Hajime Structural properties of decentralized dynamic economic systems. 8e Congrès International de Cybernétique (Proc., Namur, 1976), pp. 539-549. *Assoc. Internat. Cybernét., Namur*, 1977. (P. Kischka) 80b:90042 90A16
- Stability in multivariable economic policy models. *Internat. J. Systems Sci.* 10 (1979), no. 4, 373-383. (Author's summary) 80b:90037 90A16 (93D05)
- Mysek, Lawrence A. (with LeBlond, Paul H.) Ocean waves: a survey of some recent results. *SIAM Rev.* 21 (1979), no. 3, 289-328. (Robert Pearson) 80b:86004 86A05 (35Q99, 76C10)
- Myshchenko, V. I. Calculation of the viscous laminar jet flow in a slipstream. (Russian) *Z. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 2, 474-485, 558. (Author's summary) 80d:76023 76D05
- Myšior, Adam A remark on Gehér's theorem. *Acta Sci. Math. (Szeged)* 40 (1978), no. 3-4, 315-316. (H. R. Bennett) 80a:54012 54C05
- Myška, A. D. (with Kamenskii, A. G.; Kamenskii, G. A.) Numerical solution of boundary value problems for linear differential equations with deviating argument. (Russian) *Kvalitative i priblizhnye metody dlya issledovaniya operatorov* equations, No. 2 (Russian), pp. 112-130. *Jaroslav. Gos. Univ., Yaroslavl*, 1977. (E. L. Albasiny) 80b:65028 65L10
- Myška, P. A. The Cauchy problem for parabolic pseudodifferential equations in classes of exponentially increasing functions. (Russian) *Teor. Funkcii Funktsional. Anal. i Prilozhen.* No. 29 (1978), 98-109, iv. (Author's summary) 80b:35062 35K30
- Myškov, S. K. Conditions of solvability for the problem of the mean optimal stabilization of linear control systems with incomplete information. (Russian) *Control of dynamical systems* (Russian), pp. 148-157, 317-318. *Leningrad. Univ., Leningrad*, 1978. (Author's summary) 80c:93148 93E20
- Myśliński, Adam ★ Procesy miniskowskie w fizyce. (Polish) [Minimax processes in physics] With an English summary. *Prace Polskiego Towarzystwa Przyjaciół Nauk, Wydział IV—Nauk Technicznych i Ścisłych* [Papers of the Opolo Society of the Friends of Science, Section IV—Exact Sciences and Technology], *Państwowe Wydawnictwo Naukowe (PWN), Warsaw*, 1979. 62 pp. ISBN 83-01-00299-9 (From the summary) 80b:81052 81C99 (83C99)
- Mysovskii, I. P. Cubature formulas that are invariant with respect to groups of transformations. (Russian) *Metody Vychisl. No. 11* (1978), 3-21, 187. (A. Cojup) 80b:65013 65D32
- A cubature formula for a simplex. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 51 (1978), 74-90, 228. (Author's summary) 80b:65059 65D32
- Myung, Hyo Chul Lie-admissible algebras. *Hadronic J.* 1 (1978), no. 1, 169-193. (M. L. Tomber) 80a:17002 17A30 (17A20)
- On nonflexible Lie-admissible algebras. *Hadronic J.* 1 (1978), no. 3, 1021-1143. (M. L. Tomber) 80a:17003 17A30 (17A25, 81C99)
- Note on the prime radical in nonassociative rings. *J. Korean Math. Soc.* 15 (1978/79), no. 2, 77-80. (R. L. Tangeman) 80d:17003 17A65
- (with Okubo, Susumu) On the classification of simple flexible Lie-admissible algebras. *Hadronic J.* 2 (1979), no. 3, 504-567. (M. L. Tomber) 80b:17002 17A30 (17A20, 17B60, 81C40)
- Na, T. Y. (with Chiu, J. P.) Laminar natural convection over a frustum of a cone. *Appl. Sci. Res.* 35 (1979), no. 5-6, 409-421. (Authors' summary) 80b:76070 76R10
- Nas, Josef (with Tuschke, Wolfgang) Some probabilistic aspects in partial complex differential equations. (Russian summary) *Complex analysis and its applications* (Russian), pp. 409-412, 669, "Nauka", Moscow, 1978. (Jacques Vauthier) 80b:35060 35J60 (32A99, 35B99)
- Nababan, S. Oscillation criteria for a class of nonlinear vector delay-differential equations. *Ann. Mat. Pura Appl.* 4 (117) (1978), 55-66. (Yiannis Sficas) 80a:34109 34K15
- Abdel-Nabi, T. H. See Abdel-Nabi, T. H.
- Nacache, P. H. Connectedness of the set of nondominated outcomes in multicriteria optimization. *J. Optim. Theory Appl.* 25 (1978), no. 3, 459-467. (J. Parida) 80b:90134 90C31
- Stability in multicriteria optimization. *J. Math. Anal. Appl.* 68 (1979), no. 2, 441-453. (Jon W. Tolie) 80b:90129 90C30
- Naccarato, David (with Chien, Y. T.) Recursive methods for matrix inversion in pattern recognition environments. *IEEE Trans. Comput.* 27 (1978), no. 9, 866-869. (Authors' summary) 80c:65082 68F10 (68G10)
- Nachase, D. M. (with Chary, L. R.) Optimal closed-loop control stability and transient behaviour of a class of linear dynamic economic models. *European J. Oper. Res.* 3 (1979), no. 2, 157-162. (Authors' summary) 80b:90038 90A16 (93C05)
- Nachin, Leopoldo Sur la densité des sous-algèbres polynômes d'applications continûment différentiables. *Séminaire Pierre Lelong-Henri Skoda (Analyse)*, Année 1976/77, pp. 196-202. *Lecture Notes in Math.*, 694, Springer, Berlin, 1978. (Richard M. Aron) 80d:46046 46E10 (41A65)
- Nachman, A. (with Walton, J. R.; Schapery, R. A.) The sliding of a rigid indenter over a power-law viscoelastic half-space. *Quart. J. Mech. Appl. Math.* 31 (1978), no. 3, 295-321. (Steen Krenk) 80b:73037 73F15 (45E05)
- (with Lakin, W. D.) Vibration and buckling of rotating flexible rods at transitional parameter values. *J. Engrg. Math.* 13 (1979), no. 4, 339-346. (Authors' summary) 80d:73033 73H05
- (with Taliaferro, Steven) Mass transfer in boundary layers for power law fluids. *Proc. Roy. Soc. London Ser. A* 365 (1979), no. 1722, 313-326. (William H. H. Banks) 80c:76001 76A05 (35Q20)
- Nachman, David C. (with Kertz, Robert P.) Persistently optimal plans for nonstationary dynamic programming: the topology of weak convergence case. *Ann. Probab.* 7 (1979), no. 5, 811-826. (Lester E. Dubins) 80b:49015 49C15 (62C05, 93C55)
- Nachovich, Mauro (with Andreotti, Aldo) On the envelope of regularity for solutions of homogeneous systems of linear partial differential operators. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) 6 (1979), no. 1, 69-141. (L. R. Hunt) 80d:35113 35N10 (32D99, 58G99)
- Nadeev, A. T. Continuous model of quality shaping process. *Avtomat. i Telemekh.* 1979, no. 5, 76-81. (Russian. English summary; translated as *Avtomat. Remote Control* 40 (1979), no. 5, part 1, 690-693. (Author's summary) 80b:90023 90A11 (90B30)
- Nadel, Mark E. Infinitary intuitionistic logic from a classical point of view. *Ann. Math. Logic* 14 (1978), 159-191. (Herman R. Jervell) 80b:03027 03B60 (03C70)
- Nadimathu, G. (with Lee, E. S.) Stochastic maximum principle in the optimal control of water resources systems. *J. Math. Anal. Appl.* 66 (1978), no. 2, 451-469. (Authors' summary) 80b:93199 93E20
- Nadras, N. S. Estimation of the solutions of elliptic equations with analytic coefficients which are bounded on some set. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh. No. 2* (1979), 42-46, 102. (G. Wildenhain) 80b:35049 35J30
- Nadler, Sam B., Jr. (with Grispolakis, Joachim N.; Tymchatyn, Edward D.) Some properties of hyperspaces with applications to continuum theory. *Canad. J. Math.* 31 (1979), no. 1, 197-210. (Józef Krasinkiewicz) 80b:54029 54F20 (54B20, 54C10)
- (with Martin, John R.) Examples and questions in the theory of fixed-point sets. *Canad. J. Math.* 31 (1979), no. 5, 1017-1032. (L. E. Ward, Jr.) 80b:54059 54H25 (54G20)
- The metric confluent images of half-lines and lines. *Fund. Math.* 102 (1979), no. 3, 183-194. (Grattan P. Murphy) 80b:54040 54E35 (54C10)
- A fixed point theorem for hyperspace suspensions. *Houston J. Math.* 5 (1979), no. 1, 125-132. (B. T. Sims) 80d:54006 54B15 (47H10, 54F20, 54H25)
- (with Eberhart, Carl) Hyperspaces of cones and fans. *Proc. Amer. Math. Soc.* 77 (1979), no. 2, 279-288. (Józef Krasinkiewicz) 80b:54009 54B20 (54F20, 54F50)
- Nadiazov, H. M. A boundary value problem for a second-order linear equation of mixed type with discontinuous glueing conditions. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 2, 75-79. (Author's summary) 80b:35107 35M05
- Naeem, Khalid Computation of semidirect products of finite semigroups. *Islamabad J. Sci.* 4 (1977), no. 1-2, 43-46 (1978). (Author's summary) 80b:20096a 20M10
- Computation of direct products of finite semigroups. *Islamabad J. Sci.* 4 (1977), no. 1-2, 56-57 (1978). (Author's summary) 80b:20096b 20M10
- Naeft, Philippe (with Bensoussan, Alain; Bultez, Alain) Leader's dynamic marketing behavior in oligopoly. *Applied optimal control*, pp. 123-145. *Studies in the Management Sci.*, 9, North-Holland, Amsterdam, 1978. (P. Kischka) 80d:90023 90A16 (90A12)
- (with Weverbergh, M.) Cost uncertainty in competitive bidding models. *J. Oper. Res. Soc.* 29 (1978), no. 4, 361-372. (John Roberts) 80b:90087 90A05 (90A12)
- Nag, Tarasankar (with Ghosh, Gautam; Dasgupta, Brahmananda) Coherent-state approach to the Vlasov theory of a magnetized plasma. *Phys. Rev. A* (3) 21 (1980), no. 3, 1025-1028. (Authors' summary) 80b:82043 82A45
- Nagae, Suen Note on the SO(4) symmetry of hydrogen atom. *Phys. Rep. Kumamoto Univ.* 3 (1977/78), no. 2, 91-102. (A. O. Barut) 80b:81037 81C40 (58F35)
- Nagdev, A. V. Renewal theorems in  $R^d$ . (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 3, 565-573. (M. V. Kartasov) 80b:60116 60K05
- Nagdev, S. V. Large deviations of sums of independent random variables. *Ann. Probab.* 7 (1979), no. 5, 745-789. (Werner Wolf) 80b:60032 60F10 (60F05, 60F15, 60G50)
- Nagai, Tsukihiko Estimates for the coincidence sets of solutions of elliptic variational inequalities. *Hiroshima Math. J.* 9 (1979), no. 2, 335-345. (Gianfranco Bottaro) 80b:49015 49A29 (35J67)
- Nagami, Hiroshi (with Kitahashi, Tadahiho) On reverberation cycles of a single neural equation. *Math. Biosci.* 38 (1978), no. 3-4, 203-215. (Authors' summary) 80b:92028 92A09
- Nagami, Keio A glance at the dimension theory of the last quarter century. (Japanese) *Sūgaku* 30 (1978), no. 4, 359-364. (Y. Kodama) 80b:54043 54Fxx
- Nagano, Katsuhiko (with Karasudani, Takashi; Okamoto, Hisao; Mori, Hazime) A new continued-fraction representation of the time-correlation functions of transport fluxes. *Progr. Theoret. Phys.* 61 (1979), no. 3, 850-863. (Authors' summary) 80b:82048 82A70
- Nagano, Yoshitaka (with Ohba, Sachio) Locally convex spaces with the property (Σ). *Yokohama Math. J.* 26 (1978), no. 1, 49-53. (Barbara T. Faires) 80b:46079 46G10 (28B05)
- On locally polynomial rings. (Japanese summary) *Rep. Fac. Engrg. Kanagawa Univ.* No. 17 (1979), 5-7. (Paul M. Eakin) 80b:13003 13B25
- Nagao, Hiroaki A remark on simple symmetric sets. *Osaka J. Math.* 16 (1979), no. 2, 349-352. (Gary L. Walls) 80b:20045 20E99
- Nagata, Shōichi p-adic properties of Siegel modular forms of degree 2. *Nagoya Math. J.* 71 (1978), 43-60. (Hiroshi Saito) 80b:10027 10D20
- Nagar, Anuradha L. (with Sahay, Surendra N.) The bias and mean squared error of forecasts from partially restricted reduced form. *J. Econometrics* 7 (1978), no. 2, 227-243. (Authors' summary) 80b:62107 62P20 (62J05)
- Nagaraj, Muppalaiaha Kerr-Schild transformations. *Proceedings of the International Symposium on Relativity and Unified Field Theory (Calcutta, 1975-1976)*, pp. 71-82. *Base Inst. Phys. Sci., Univ. Calcutta, Calcutta*, 1978. (Author's summary) 80b:83044 83D05

- Nagaraja, H. N. A note on testing for the existence of an outlier. *J. Indian Statist. Assoc.* 15 (1977), 131-139. (Author's summary) **80f:62627** 62F03
- A note on almost sure convergence of sums of order statistics. *J. Indian Statist. Assoc.* 16 (1978), 131-133. (Aart J. Stam) **80d:60040** 60F15
- Nagaraja Rao, I. H. (with Gopala Krishna, J.) Generalized inverse and probability techniques and some fundamental growth theorems in  $C^2$ . *J. Indian Math. Soc. (N.S.)* 41 (1977), no. 3-4, 203-219 (1978). (A. K. Agarwal) **80f:32003** 32A15
- Nagarsenker, B. N. Nonnull distributions of some statistics associated with testing for the equality of two covariance matrices. *J. Multivariate Anal.* 8 (1978), no. 3, 396-404. (Nariaki Sugiura) **80c:62065** 62H10
- Nagasaka, Imao (with Yamamoto, Toshio; Yasuda, Kimihiko) On the internal resonance in a nonlinear two-degree-of-freedom system (when the natural frequencies are in the ratio 2:3). *Bull. JSME* 22 (1979), no. 171, 1274-1283. (Authors' summary) **80i:34057** 34C15
- Nagasaka, Kenji On the Hausdorff dimension of sets missing statistical laws. (Japanese. English summary) *Proc. Inst. Statist. Math.* 25 (1978), no. 1, 1-9. (Motose Osikawa) **80k:10051** 10K25 (10K10)
- Nagasaka, Yukio (with Kuramochi, Zenjiro) On the Dirichlet problem for unbounded boundary functions. *Hokkaido Math. J.* 8 (1979), no. 2, 145-149. (Jang Mei G. Wu) **80j:31014** 31C25
- Notes on extremizations. *Hokkaido Math. J.* 8 (1979), no. 2, 283-287. (Lung Ock Chung) **80j:30067** 30F15
- Nagase, G. (with Banerjee, Kali S.) On the independence between two generalized second degree polynomial statistics and their covariance. *Comm. Statist. A—Theory Methods* 7 (1978), no. 8, 733-738. (C. K. Khatri) **80c:62035** 62H10
- Nagase, Michihiro (with Kumano-go, Hitoshi) Pseudo-differential operators with non-regular symbols and applications. *Funkcial. Ekvac.* 21 (1978), no. 2, 151-192. (Toader Jucan) **80h:47066** 47G05 (35S05)
- Nagashima, Tomomasa (with Shimada, Ipei) A numerical approach to ergodic problem of dissipative dynamical systems. *Progr. Theoret. Phys.* 61 (1979), no. 6, 1605-1616. (Richard C. Churchill) **80i:58077** 58F13 (58F15, 65L99)
- Nagata, Akira See Fahmy, Moustafa M.; et al. **80c:93033**
- Nagata, Manyoshi On Euclid algorithm. C. P. Ramanyam—a tribute, pp. 175-186, *Tata Inst. Fund. Res. Studies in Math.*, 8, Springer, Berlin, 1978. (Daniel Lazard) **80g:13010** 13F07
- A generalization of the notion of a valuation. *Amer. J. Math.* 101 (1979), no. 1, 245-257. (Niel Shell) **80i:12017** 12J20
- Nagata, Yukiyoshi On some geometrical properties in three-dimensional Finsler space. *Mem. Ehime Univ. Natur. Sci. Ser. A* 8 (1978), no. 3, 2 pp. (R. Miron) **80i:53014** 53B40 (49F10)
- (with Khu Quoc Anh) On the curvatures of a vector field on a subspace of a Finsler space. *Tensor (N.S.)* 32 (1978), no. 3, 307-310. (M. Yoshida) **80a:53034** 53B40
- Nagaya, Kouke (with Hirano, Yoshitaro; Okazaki, Katsutoshi) Transverse vibration of a circular plate on an eccentric annular elastic support. *Bull. JSME* 22 (1979), no. 167, 642-647. (From the summary) **80c:73050** 73K10
- Nagel, Alexander Cauchy transforms of measures, and a characterization of smooth peak interpolation sets for the Ball algebra. *Rocky Mountain J. Math.* 9 (1979), no. 2, 299-305. (G. M. Henkin) **80b:32007** 32A40 (32E25, 32E35)
- Nagel, Jürgen (with Maz'ja, V. G.) Über äquivalente Normierung der anisotropen Funktionalräume  $H^p(\mathbb{R}^n)$ . *Beiträge Anal.* No. 12 (1978), 7-17. (Hans G. Feichtinger) **80c:46025** 46E35
- Equivalent normings of the function spaces  $H^{p,q}(\mathbb{R}^n)$ . (Russian) *Math. Nachr.* 86 (1978), 51-66. (J. Musielak) **80c:46026** 46E35
- Über äquivalente Normen in Räumen mit Gewicht. *Demonstratio Math.* 12 (1979), no. 2, 457-461. (Author's summary) **80i:46036** 46E35
- Naghdhi, A. K. Green's function for a semicircular plate. *Internat. J. Solids and Structures* 16 (1980), no. 4, 329-335. (Author's summary) **80c:73052** 73K10
- Naghdhi, P. M. (with Green, A. E.) On thermodynamics and the nature of the second law for mixtures of interacting continua. *Quart. J. Mech. Appl. Math.* 31 (1978), no. 3, 265-293. (From the summary) **80d:80006** 80A15
- (with Caulk, D. A.) The influence of twist on the motion of straight elliptical jets. *Arch. Rational Mech. Anal.* 69 (1979), no. 1, 1-30. (L. M. Hocking) **80c:76004** 76B10
- (with Green, A. E.) On thermal effects in the theory of rods. *Internat. J. Solids and Structures* 15 (1979), no. 11, 829-853. (M. Sokolowski) **80i:73074** 73U05
- (with Green, A. E.) A note on invariance under superposed rigid body motions. *J. Elasticity* 9 (1979), no. 1, 1-8. (R. D. James) **80f:73007** 73B99 (15A72, 53A45)
- (with Green, A. E.) On thermal effects in the theory of shells. *Proc. Roy. Soc. London Ser. A* 365 (1979), no. 1721, 161-190. (Authors' summary) **80f:73070a** 73L99
- (with Green, A. E.) Corrigenda: "On thermal effects in the theory of shells" (Proc. Roy. Soc. London Ser. A 365 (1979), no. 1721, 161-190). *Proc. Roy. Soc. London Ser. A* 367 (1979), no. 1731, 572. (Authors' summary) **80f:73070b** 73L99
- Naghsheh-Ardjmand, Mohsen Generalized argument principle for commutative Banach algebras. *J. London Math. Soc. (2)* 18 (1978), no. 1, 140-146. (E. L. Stout) **80b:46066** 46J20
- Nagl, Manfred See Graphs, data structures, algorithms. **80m:68008**
- Nagshibi, M. I. Some remarks on the general form of linear continuous operators in the space of functions analytic in an annulus. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 11, 972-975, 1053. (D. Sarason) **80a:47041** 47B38
- The roots of the operator of multiple integration in a space of functions analytic in the disc. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 6, 1426-1435, 1440. (V. A. Tkachenko) **80g:47038** 47B38 (30H05)
- Nagshibi, N. I. (with Olinsky, N. P.) Equivalence of some second-order differential operators in a space of entire functions. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 11, 1990-1996, 2107. (Johannes Elschner) **80c:47039** 47E05 (34A20)
- Nagure, C. Sri Hari (with Parvatham, Rajagopal) Characteristic function of a meromorphic function  $f$  and differential monomials in  $f$ . *Indian J. Pure Appl. Math.* 7 (1976), no. 10, 1178-1184. (W. H. J. Fuchs) **80i:30047** 30D35
- (with Manneppalli, V. L.) Generalized commutative semigroups. *Semigroup Forum* 17 (1979), no. 1, 65-73. (K. S. S. Namboripadi) **80b:20078** 20M11 (20M12)
- (with Satyanarayana, M.) Integrally ordered semigroups. *Semigroup Forum* 17 (1979), no. 2, 101-111. (Thérèse Merlier) **80i:06012** 06F05
- (with Satyanarayana, M.) On naturally ordered semigroups. *Semigroup Forum* 17 (1979), no. 2, 95-103. (Frank A. Smith) **80i:06013** 06F05
- Nagornyi, A. M. (with Salakhitdinov, M. S.) A boundary value problem for the equation  $(\partial/\partial x)(\operatorname{sgn} y)|y|^{p-2}u_{xx} + u_y = 0$ . (Russian) *Direct and inverse problems for partial differential equations and their applications* (Russian), pp. 3-20, "Fan", Tashkent, 1978. (M. A. Atahodjaev) **80i:35132** 35M05
- Nagornyi, S. V. Akad. representations of some classical groups over a finite field. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 6, 1391-1393. (A. A. Bondarenko) **80a:20044** 20G05
- Complex representations of classical groups over a finite field. (Russian) Algebraic numbers and finite groups. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 86 (1979), 135-156, 191. (G. Karpilovsky) **80b:20060** 20G05
- Nagorski, R. (with Mazurkiewicz, Z.) On equations of net shells of revolution subjected to rotationally-symmetric loads. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Staps)* 30 (1978), no. 3, 243-257. (T. Bryant Moodie) **80c:73058** 73L99
- Nagraj, Muppinalya See Nagaraj, Muppinalya
- Nagumo, Mitio (with Furuya, Hitoshi) On Cauchy problem for linear partial differential equations with constant coefficients. *Funkcial. Ekvac.* 22 (1979), no. 2, 223-229. (I. Chrastina) **80m:35019** 35E15
- barony-Nagy, A. See Barsony-Nagy, A.
- Nagy, B. On the spectra of prespectral operators. *Glasgow Math. J.* 19 (1978), no. 1, 57-61. (Henry R. Dowson) **80a:47051** 47B40
- Unbounded prespectral operators. *Period. Math. Hungar.* 9 (1978), no. 4, 271-283. (F. H. Vasilescu) **80a:47052** 47B40
- On an operational calculus for meromorphic functions. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 3-4, 379-390. (Chandler Davis) **80h:47019** 47A60
- Characterizations of spectral operators. *Arch. Math. (Basel)* 32 (1979), no. 1, 289-294. (R. G. Bartle) **80m:47031** 47B40 (28B05)
- sz-Nagy, Béla See Sz-Nagy, Béla
- n-Nagy, Frank L. See N-Nagy, Frank L.
- Nagy, Jozsef (with Nováková, Eva) Local determinacy of abstract right pseudoprocesses. (Czech and Russian summaries) *Časopis Pěst. Mat.* 104 (1979), no. 2, 113-133, 200. (Krishna M. Das) **80h:34057** 34C35 (54H20)
- (with Nováková, Eva) Local determinacy of symmetric pseudoprocesses. (Czech and Russian summaries) *Časopis Pěst. Mat.* 104 (1979), no. 3, 223-242, 311. (Jerry Jaron) **80j:93008** 93A10 (68J10)
- lovass-Nagy, Victor See Lovass-Nagy, Victor
- Nagy, Zs. (with Juhász, I.; Weiss, William) On countably compact, locally countable spaces. *Period. Math. Hungar.* 10 (1979), no. 2-3, 193-206. (V. I. Malyhin) **80h:54025** 54D10 (54A25)
- Nahli, N. E. (with Weiss, I. M.) Bounding filter: a simple solution to lack of exact a priori statistics. *Inform. and Control* 39 (1978), no. 2, 212-224. (A. F. Gualtierotti) **80c:93167** 93E11
- Nahmias, Steven On ordering perishable inventory when both demand and lifetime are random. *Management Sci.* 24 (1977/78), no. 1, 82-90. (Izzet Sahin) **80c:90054** 90B05 (90C39)
- (with Wang, Shan Shan) Approximating partial inverse moments for certain normal variates with an application to decaying inventories. *Naval Res. Logist. Quart.* 25 (1978), no. 3, 405-413. (Authors' summary) **80c:90053** 90B05
- Nahusev, A. M. Nonlocal and Goursat problems for a loaded equation of hyperbolic type and their application to the prediction of soil moisture. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 5, 1008-1011. (N. N. Janenko) **80h:35084** 35L35
- Boundary value problems for loaded integro-differential equations of hyperbolic type and some of their applications to the prediction of ground moisture. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 1, 96-105, 188-189. (A. S. Silbergleit) **80f:45020** 45K05 (76S05)
- Naidu, S. Venkata Ratnam (with Sastry, K. P. R.) On a fixed point theorem of Chi Song Wong. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 3, 545-554. (Editors) **80b:47080** 47H10
- (with Sastry, K. P. R.) On best simultaneous approximation in normed linear spaces. *Proc. Nat. Acad. Sci. India Sect. A* 48 (1978), no. 4, 249-250. (O. P. Kapoor) **80i:41033** 41A65
- (with Sastry, K. P. R.) Some fixed point theorems in normed linear spaces. *Indian J. Pure Appl. Math.* 10 (1979), no. 8, 928-937. (Chi-Song Wong) **80j:47074** 47H10
- Nail, K. Vswanatha A note on a theorem of Ray and Singh. *Indian J. Pure Appl. Math.* 10 (1979), no. 4, 508-510. (Krishna M. Das) **80i:47080** 47H10 (54H25)
- (with Das, K. M.) Common fixed-point theorems for commuting maps on a metric space. *Proc. Amer. Math. Soc.* 77 (1979), no. 3, 369-373. (S. K. Kaul) **80h:54062** 54H25 (47H10)
- Nail, N. (with Swamy, B. L. N.; Misra, S. S.) A note on difference sets in Boolean algebras. *Math. Ed. (Siwan)* 12 (1978), no. 2, B35-B37. (Ph. Dwinger) **80d:06011** 06E99
- Nail, Ranjan N. (with Bhat-Nayak, Vasanti N.; Choudum, S. A.) Characterizations of 2-variegated graphs and of 3-variegated graphs. *Discrete Math.* 23 (1978), no. 1, 17-22. (H. Sachs) **80i:05072** 05C99
- (with Rao, Siddani Bhaskara; Bhat-Nayak, Vasanti N.) Characterization of frequency partitions of Eulerian graphs. *Proceedings of the Symposium on Graph Theory (Indian Statist. Inst., Calcutta, 1976)*, pp. 124-137, ISI Lecture Notes, 4, Macmillan of India, New Delhi, 1979. (Authors' summary) **80m:05077** 05C45 (05A17)
- Nail, James B. (with Mitchell, Jerrel R.; McDaniel, Willie L., Jr.) Computation of cofactors of  $[I - A]$  with applications. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 637-638. (Authors' summary) **80h:93005** 93A10 (15A15)
- Naimark, M. A. See Obituary: Naimark, M. A. **80c:01033**
- Naimpally, S. A. (with Ho, S. M. F.) An abstract model for measure and category. *Math. Japon.* 24 (1979/80), no. 1, 123-140. (J. C. Oxtoby) **80i:28003** 28A05 (04A15, 18B99)
- Naimanov, A. Decrease of correlations in one-dimensional spin systems with long-range interaction. (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 1, 94-100.



- (Author's summary) **80c:82034** 82A55
- Naka, R. B. (with Sen, Kanwar) Transition probability matrices for correlated random walks. *J. Appl. Probab.* 17 (1980), no. 1, 253-258. (J. Gillis) **80m:60077** 60J15
- Nair, G. Gopalakrishnan On the convergence of the LJ search method. *J. Optim. Theory Appl.* 28 (1979), no. 3, 429-434. (Author's summary) **80c:90099** 90C30
- Suboptimal control of nonlinear time-delay systems. *J. Optim. Theory Appl.* 29 (1979), no. 1, 87-99. (Author's summary) **80c:93055** 93C99
- Nair, K. P. K. (with Aneja, Y. P.) The constrained shortest path problem. *Naval Res. Logist. Quart.* 25 (1978), no. 3, 549-555. (Authors' summary) **80a:90058** 90B10 (90C50)
- (with Aneja, Y. P.) Bicriteria transportation problem. *Management Sci.* 25 (1979/80), no. 1, 73-78. (Mary W. Cooper) **80c:90112** 90C35
- Nair, M. A note on the equation  $x^3 - y^2 = k$ . *Quart. J. Math. Oxford Ser. (2)* 29 (1978), no. 116, 483-487. (S. P. Mohanty) **80g:10019** 10B10
- Nair, Ravindra Comments on: "An optimal algorithm for testing stuck-at faults in random access memories" [IEEE Trans. Computers C-26 (1977), no. 11, 1141-1144; MR 57 #5459] by J. Knaizuk, Jr. and C. R. P. Hartmann. *IEEE Trans. Comput.* 28 (1979), no. 3, 258-261. (Chantal Robach) **80i:94019** 94C05
- Naito, Manabu (with Kusano, Takaki) On the oscillation of fourth-order nonlinear differential equations with deviating argument. Qualitative research on stability of solutions of functional differential equations (Proc. Sympos. Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976). *Sūrikaisekikenkyūsho Kōkyūroku* No. 288 (1977), 71-79. (From the introduction) **80b:34093** 34K15
- On positive solutions of fourth order nonlinear differential inequalities. *Ann. Mat. Pura Appl. (4)* 117 (1978), 79-113. (Jagdish Chandra) **80d:34013** 34A40
- (with Yoshida, Norio) Oscillation theorems for semilinear elliptic differential operators. *Proc. Roy. Soc. Edinburgh Sect. A* 82 (1978/79), no. 1-2, 135-151. (W. Allegretto) **80i:35007** 35B05
- Naito, Seichi Unitarity and renormalized 't Hooft identities. *J. Math. Phys.* 20 (1979), no. 11, 2319-2326. (Tetz Yoshimura) **80k:81152** 81F15 (81E10)
- Naito, Toshiaki On linear autonomous retarded equations with an abstract phase space for infinite delay. *J. Differential Equations* 33 (1979), no. 1, 74-91. (J. K. Hale) **80c:34106** 34K30
- Naitoh, Hiroo Isotropic submanifolds with parallel second fundamental forms in symmetric spaces. *Osaka J. Math.* 17 (1980), no. 1, 95-110. (Bang-ye Chen) **80m:53043** 53C40 (53B25)
- Najman, N. G. Recognition of paths of  $m$ -arithmetic graphs. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 6, 152-157 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 6, 124-129. (Author's summary) **80j:68027** 68C05 (05C38, 68E10)
- Najman, B. Solution of a differential equation in a scale of spaces. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 14(34) (1979), no. 1, 119-127. (S. Zaidman) **80j:34074** 34G10 (47A50)
- Najmi, Mohamed Résolution d'un problème de Dirichlet fortement non linéaire dans un domaine non régulier. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 16, A1109-A1112. (Author's summary) **80c:35038** 35J65
- Najjar, K. Algorithms for constructing the stiffness matrix in the finite element method. *The use of finite element method and finite difference method in geophysics (Proc. Summer School, Liblice, 1977)*, pp. 241-256. *Česk. Akad. Věd, Prague*, 1978. (Author's summary) **80g:65113** 65N30
- Naka, Sigefumi Canonical approach to spinning particles. *Progr. Theoret. Phys.* 62 (1979), no. 1, 278-292. (P. G. L. Leach) **80b:81024** 81C35 (28A35)
- Nakada, Kiyoto (with Watanabe, Chikara) A note on a polynomial mapping on  $C^n$ . *Ann. Sci. Kanazawa Univ.* 15 (1978), 19-22 (1979). (B. Wong) **80b:32048** 32H99 (32B15)
- Nakada, Masami Dimension of cohomology spaces of infinitesimally deformed Kleinian groups. *Tōhoku Math. J. (2)* 31 (1979), no. 2, 187-194. (I. Kra) **80j:30072** 30F40 (20H10)
- Nakagami, Junichi Perishable inventory problem with two types of warehouses. (Japanese summary) *J. Oper. Res. Soc. Japan* 22 (1979), no. 1, 29-40. (Steven Nahmias) **80c:90055** 90B05
- Nakagawa, Ryosuke A note on  $(E, M)$ -functors. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 250-258. *Lecture Notes in Math.* 719, Springer, Berlin, 1979. (Walter Tholen) **80i:18007** 18A32 (18A35)
- Nakagawa, Tomoyasu (with Ikeda, Tsutomu) On the SHASTA FCT algorithm for the equation  $\partial p / \partial t + (\partial / \partial x)(v(p)p) = 0$ . *Math. Comp.* 33 (1979), no. 148, 1157-1169. (Rolf Rannacher) **80i:65097** 65M05 (35L65, 65M10)
- Nakagawa, Toshio Replacement problem of a parallel system in random environment. *J. Appl. Probab.* 16 (1979), no. 1, 203-205. (Masafumi Sasaki) **80b:90067** 90B25
- Further results of replacement problem of a parallel system in random environment. *J. Appl. Probab.* 16 (1979), no. 4, 923-926. (Author's summary) **80b:90075** 90B25
- Nakagiri, Shin-ichi (with Kitamura, Shinzo) On the path integral and Lyapunov functional for a class of distributed systems. *Control of distributed parameter systems (Proc. Second IFAC Sympos., Coventry, 1977)*, pp. 147-156. *IFAC, Düsseldorf*, 1978. (Authors' summary) **80c:93096** 93D05
- (with Kitamura, Shinzo) Identifiability of internal and boundary parameters in distributed systems of parabolic type. *Control of distributed parameter systems (Proc. Second IFAC Sympos., Coventry, 1977)*, pp. 381-392. *IFAC, Düsseldorf*, 1978. (Authors' summary) **80c:93047** 93B30
- (with Kuroe, Yasuaki; Kitamura, Shinzo) Identifiability of constant parameters in distributed systems of hyperbolic type. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 3, 505-515. (Authors' summary) **80b:93156** 93E12
- Oscillatory property for Volterra integro-differential equations of higher order. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 3, 537-544. (M. Rama Mohana Rao) **80b:45011** 45J05
- Nakagomi, T. (with Hasegawa, Hiroshi) Semiclassical laser theory in the stochastic and thermodynamic frameworks. *J. Statist. Phys.* 21 (1979), no. 2, 191-214. (Authors' summary) **80m:82027** 82A30 (81K05)
- Nakagoshi, Norikata The structure of the multiplicative group of residue classes modulo  $p^{n+1}$ . *Nagoya Math. J.* 73 (1979), 41-60. (K. Masuda) **80c:12010** 12A45 (10A15)
- Nakahara, Toru On real quadratic fields whose ideal class groups have a cyclic  $p$ -subgroup. *Rep. Fac. Sci. Engng. Saga Univ. Math. No. 6* (1978), 15-26. (G. J. Rieger) **80a:12005** 12A25 (12A50)
- Nakai, Mitsuru (with Sario, Leo) A strict inclusion related to biharmonic Green's functions of clamped and simply supported bodies. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 3 (1977), no. 1, 53-57. (Lung Ock Chung) **80c:31005** 31C12
- (with Sario, Leo) Existence of negative quasiharmonic functions. (Russian summary) *Complex analysis and its applications (Russian)*, pp. 413-417, 669, "Nauka", Moscow, 1978. (From the text) **80c:31004** 31C99
- (with Sario, Leo) Banach spaces of harmonic functions in  $L_p$ . *Bull. Inst. Math. Acad. Sinica* 6 (1978), no. 2, part 2, 415-417. (Joel H. Shapiro) **80b:30040** 30F15 (46E15)
- Nakai, Yoshikazu On locally finite iterative higher derivations. *Osaka J. Math.* 15 (1978), no. 3, 655-662. (José L. Vicente) **80b:13006** 13B10 (14M20)
- Nakai, Yoshinobu On the method of I. M. Vinogradov in the evaluation of exponential sums. (Japanese) *Sūgaku* 30 (1978), no. 4, 357-359. (S. Ikehara) **80j:10044** 10G05
- Nakajima, Atsushi The monoid structure of Galois  $H$ -module algebras induced by the smash product. *Math. J. Okayama Univ.* 20 (1978), no. 2, 165-177. (Lindsay N. Childs) **80c:16031** 16A74 (16A24)
- Nakajima, F. A stability criterion of diagonal dominance type. *SIAM J. Math. Anal.* 9 (1978), no. 5, 815-824. (J. O. C. Ezeilo) **80c:34058** 34D20
- Periodic time dependent gross-substitute systems. *SIAM J. Appl. Math.* 36 (1979), no. 3, 421-427. (Bojan Popović) **80c:93045** 93D99 (90A16)
- Nakajima, Haruhisa Invariants of reflection groups in positive characteristics. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 6, 219-221. (V. L. Popov) **80i:14019** 14M05 (13H05, 14D25, 15A72)
- Nakajima, Kazufumi On equivariant holomorphic imbeddings of Siegel domains to compact complex homogeneous spaces. *J. Math. Kyoto Univ.* 19 (1979), no. 3, 471-480. (S. Murakami) **80k:32035** 32M99
- Nakajima, Siro Translational hull of a generalized Brandt semigroup. *Proceedings of the 2nd Symposium on Semigroups (Tokyo Gakugei Univ., Tokyo, 1978)*, pp. 1-6, Tokyo Gakugei Univ., Tokyo, 1978. (H. J. Weinert) **80k:20062** 20M10 (20M20)
- On the kernel of the wreath product of completely simple semigroups. *Semigroup Forum* 18 (1979), no. 1, 21-26. (Mohan S. Putcha) **80c:20097** 20M10
- Nakamae, Elhachiro (with Yamashita, Hideo) A pivot-ordering algorithm for minimizing computation time in transient circuit analysis. *Electron. Comm. Japan* 60 (1977), no. 10, 16-24. (Authors' summary) **80g:94114** 94C30
- (with Yamashita, Hideo) A pivot ordering algorithm aimed at minimizing computation time. *IEEE Trans. Circuits and Systems* 25 (1978), no. 8, 634-637. (Izzet Cem Gökner) **80k:65031** 65F05
- Nakamichi, J. (with Washizu, K.) A direct approach using the finite element method for the solution of the linear optimal control problem with a quadratic criterion. *J. Franklin Inst.* 306 (1978), no. 4, 309-319. (Jifi V. Outrata) **80c:93101** 93C55 (65K05)
- Nakamizo, Takayoshi Identification of time series models. I. Model description and parameter estimation. (Japanese) *Systems and Control* 22 (1978), no. 8, 475-484. **80c:93179a** 93E12 (62M10)
- Identification of time series models. II. On-line estimation and order determination. (Japanese) *Systems and Control* 22 (1978), no. 10, 596-605. **80c:93179b** 93E12 (62M10)
- (with Ohshiro, Masakazu) On zeroing the output of linear stochastic system. (Japanese. English summary) *Systems and Control* 23 (1979), no. 6, 323-329. (Authors' summary) **80c:93149** 93E20
- Nakamori, Seichi (with Sugisaka, Masanori) Design of linear predictor by covariance information. (Japanese. English summary) *Systems and Control* 22 (1978), no. 12, 761-768. (Authors' summary) **80c:93113** 93E10
- (with Sugisaka, Masanori) Derivation of estimation equation by the covariance information in the two-dimensional distributed system. (Japanese. English summary) *Rep. Fac. Engng. Oita Univ.* 1979, no. 5, 55-60. (Authors' summary) **80c:93118** 93E10
- Nakamori, Yoshiteru (with Miyamoto, Sadaaki; Ikeda, Saburo; Sawaragi, Yoshikazu) Sensitivity approach to measurement optimization in distributed parameter systems. (Japanese. English summary) *Systems and Control* 23 (1979), no. 4, 247-255. (Authors' summary) **80c:93087** 93C99
- Nakamura, Akira (with Inoue, Katsushi) Some properties of two-dimensional on-line tessellation acceptors. *Inform. Sci.* 13 (1977), no. 2, 95-121. (Authors' summary) **80c:68143** 68D20
- (with Inoue, Katsushi) Refinements of the powers of two-dimensional on-line tessellation acceptors and their variants. *Systems-Comput.-Controls* 8 (1977), no. 3, 85-93 (1979). (W. Wechler) **80g:68072** 68D20 (68F05)
- (with Inoue, Katsushi) Some properties of two-dimensional nondeterministic finite automata and parallel-sequential array acceptors. *Systems-Comput.-Controls* 8 (1977), no. 6, 25-32 (1979). (Authors' summary) **80i:68065** 68D25 (68F10)
- (with Inoue, Katsushi) Two-dimensional multiplex on-line tessellation acceptors. *Inform. and Control* 41 (1979), no. 3, 305-323. (Authors' summary) **80c:68145** 68D20
- (with Ono, Hiroakira) Undecidability of the first-order arithmetic  $A[P(x), 2x, x+1]$ . *J. Comput. System Sci.* 18 (1979), no. 3, 243-253. (John P. Helm) **80b:03045** 03D35 (03D05, 03F30, 68C30)
- Bäcklund transform and conservation laws of the Benjamin-Ono equation. *J. Phys. Soc. Japan* 47 (1979), no. 4, 1335-1340. (A. Degasperis) **80m:35068** 35Q20 (35A30, 58F07)
- $N$ -periodic wave and  $N$ -soliton solutions of the modified Benjamin-Ono equation. *J. Phys. Soc. Japan* 47 (1979), no. 6, 2045-2046. (Ryogo Hirota) **80m:76028** 76B25
- Nakamura, Gisaku Some applications of combinatorics to the telecommunications field. (Japanese) *Systems and Control* 23 (1979), no. 1, 37-44. (Michtaka Kameyama) **80i:94027** 94C30
- Nakamura, Keijiro Synthesis of gate-minimum multi-output two-level negative gate networks. *IEEE Trans. Comput.* 28 (1979), no. 10, 768-772. (Author's summary) **80b:94055** 94C10
- Nakamura, Kenjiro (with Kaneko, Mamoru) The Nash social welfare function. *Econometrica* 47 (1979), no. 2, 423-435. (Dale K. Osborne) **80b:90005** 90A06 (90A08)
- (with Ishikawa, Shin) The strategy-proof social choice functions. *J. Math. Econom.* 6 (1979), no. 3, 283-295. (Authors' summary) **80m:90014** 90A08

- (with Ishikawa, Shin) On the existence of the core of a characteristic function game with ordinal preferences. (Japanese summary) *J. Oper. Res. Soc. Japan* 22 (1979), no. 3, 225-232. (Authors' summary) **80g:90134** 90D30 (90A08)
- Nakamura, Kiyoyi** Minimum principles in the linear theory of viscoelasticity. *J. Phys. Soc. Japan* 47 (1979), no. 4, 1299-1304. (Author's summary) **80i:73030** 73F99
- Nakamura, Mamoto** A generalization of absolutely summing operators. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 2, 329-340. (S. V. Kisiljakov) **80c:47025** 47B10
- Nakamura, Tadashi** (with Yamasaki, Maresugu) Sufficient conditions for duality theorems in infinite linear programming problems. *Hiroshima Math. J.* 9 (1979), no. 2, 323-334. (From the introduction) **80g:90073** 90C05
- Nakamura, Tetsuo** A note on endomorphism rings of abelian varieties over finite fields. *Kodai Math. J.* 2 (1979), no. 1, 123-129. (Reinhard Bölling) **80g:14036** 14K15 (14G15)
- Nakamura, Yoshikumi** (with Yanagihara, Niro) Composition operators on the class  $N^+$ . *TRU Math.* 14 (1978), no. 2, 9-16. (V. Kabaila) **80f:30024** 30D50 (47B38)
- Nakamura, Yoshimasa** On inverse scattering formula for Ernst equation. *Math. Japon.* 24 (1979/80), no. 4, 469-472. (J. W. Auer) **80m:83007** 83C20 (35P25)
- Nakanishi, Aiko** Classification of SO(3)-actions on five manifolds. *Publ. Res. Inst. Math. Sci.* 14 (1978), no. 3, 685-712. (Soon-Kyu Kim) **80i:57020** 57S25
- Nakanishi, Masakazu** Gentzen type formal system for many-valued propositional logic. *Keio Math. Sem. Rep.* No. 3 (1978), 49-55. (V. V. Gorlov) **80c:03019** 03B50
- Nakanishi, Noboru** A new way of describing the Lie algebras encountered in quantum field theory. *Progr. Theoret. Phys.* 60 (1978), no. 1, 284-294. (Author's summary) **80d:81077** 81E10 (17B70)
- Indefinite-metric quantum field theory of general relativity. III. Poincaré generators. *Progr. Theoret. Phys.* 60 (1978), no. 6, 1890-1899. (J. G. Taylor) **80g:83016a** 83C45 (53C80)
- (with Ojima, Izumi) Proof of the exact masslessness of gravitons. *Phys. Rev. Lett.* 43 (1979), no. 2, 91-92. (Authors' summary) **80c:83026** 83C45 (49H05)
- Indefinite-metric quantum field theory of general relativity. IV. Background curved space-time. *Progr. Theoret. Phys.* 61 (1979), no. 5, 1536-1549. (J. G. Taylor) **80g:83016b** 83C45 (53C80)
- "Free massless scalar field in two-dimensional space-time": revisited [Progr. Theoret. Phys. 57 (1977), no. 1, 269-278; MR 58 #14951]. *Z. Phys. C* 4 (1980), no. 1, 17-25. (From the summary) **80m:81051** 81E10
- Nakanishi, Shizuo** On ranked union spaces. *Math. Japon.* 23 (1978/79), no. 2, 249-257. (I. Namioka) **80i:46006** 46A15 (54E99)
- The method of ranked spaces proposed by Professor Kinjirō Kunugi. Special issue in memory of the late Professor Kinjirō Kunugi. *Math. Japon.* 23 (1978), no. 3 Special issue, 291-323. (R. Anantharaman) **80f:54002** 54A05 (01A60, 46A15)
- Completions of ranked spaces. I. *Math. Japon.* 23 (1978/79), no. 4, 409-422. (James Chew) **80j:54026a** 54E99 (54D15)
- Completions of ranked spaces. II. *Math. Japon.* 23 (1978/79), no. 6, 629-646. (James Chew) **80j:54026b** 54E99
- Nakanishi, Yoshio** (with Nakano, Hideo; Kawano, Tadashi; Yamashita, Haruki) Syndrome analysis in self-diagnosable system. *Systems-Comput.-Controls* 8 (1977), no. 3, 27-34 (1979). (Luigi Fratta) **80g:94076** 94C05 (68G05)
- Nakano, Bumpai** (with Takahara, Yasuhiko; Kijima, Kyoichi) Characterization of the satisfactory decision principle. (Japanese summary) *J. Oper. Res. Soc. Japan* 1978, no. 3, 347-370. (From the summary) **80c:90008** 90A05 (90D35)
- (with Takahara, Yasuhiko; Kijima, Kyoichi) Characterization of the linear weighted sum decision principle. *Inform. Sci.* 19 (1979), no. 3, 199-228. (M. S. Štil'man) **80j:90009** 90A05
- Nakano, Hideo** (with Kawano, Tadashi; Yamashita, Haruki; Nakanishi, Yoshio) Syndrome analysis in self-diagnosable system. *Systems-Comput.-Controls* 8 (1977), no. 3, 27-34 (1979). (Luigi Fratta) **80g:94076** 94C05 (68G05)
- (with Kawase, Tachiko) A brief note on linear junction structures. *Bull. Sci. Engrg. Res. Lab. Waseda Univ.* No. 84 (1979), 1-20. (From the summary) **80c:94042** 94C10
- Nakano, Minoru** Second-order linear ordinary differential equations with turning points and singularities. II. *Kodai Math. J.* 1 (1978), no. 2, 304-312. (W. Wasow) **80f:34051** 34E20
- Nakano, Shigeo** (with Lai, Tung Sheng) An attempt towards the global projective embedding of pseudoconvex manifolds. *Chinese J. Math.* 7 (1979), no. 1, 47-54. (M. Schneider) **80m:32025** 32F30 (32J20)
- Nakano, Yoshisuke** The mathematical descriptions of a moving boundary problem in an elliptic-parabolic system of partial differential equations in the hydrodynamics of porous media. *Transactions of the Twenty-Third Conference of Army Mathematicians (Langley Res. Center, Hampton, Va., 1977)*, pp. 11-20. *ARO Rep.* 78, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1978. (Author's summary) **80d:76093** 76S05 (35J70)
- Nakao, Mitsuhito** Decay of classical solutions of a semilinear wave equation. *Math. Rep. Kyushu Univ.* 11 (1977/78), no. 1, 39-45. (From the introduction) **80m:35055** 35L70
- (with Nanbu, Tokumori) Asymptotic stability of a nonlinear second-order evolution equation with unbounded damping. *Math. Rep. Kyushu Univ.* 11 (1977/78), no. 2, 97-102. (Zvi Artstein) **80g:34081** 34G20
- (with Nanbu, Tokumori) Existence and decay of solutions of a beam equation with a nonlinear damping term. *Math. Rep. Kyushu Univ.* 11 (1977/78), no. 2, 103-116. (Philip W. Schaefer) **80c:35091** 35Q20
- (with Narazaki, Takashi) Existence and decay of solutions of some nonlinear wave equations in noncylindrical domains. *Math. Rep. Kyushu Univ.* 11 (1977/78), no. 2, 117-125. (John M. Chadam) **80c:35091** 35L70 (35B40)
- A difference inequality and its application to nonlinear evolution equations. *J. Math. Soc. Japan* 30 (1978), no. 4, 747-762. (Simeon Reich) **80c:34079** 34G20 (47H15)
- Nakazaka, Minoru** Equivalent point theorems for involutions. *Japan. J. Math. (N.S.)* 4 (1978), no. 2, 263-298. (C. B. Thomas) **80j:53001** 55M20 (57S17)
- Equivalent point theorems. *Tsukuba J. Math.* 2 (1978), 109-126. (G. E. Bredon) **80k:55006** 55M20
- Nakata, Isamu** The limit shock waves in a plasma. *J. Phys. Soc. Japan* 46 (1979), no. 6, 1915-1919. (R. M. Gundersen) **80f:76047** 76X05 (35L65)
- Nakata, Kumiko** On some elliptic curves defined over  $\mathbb{Q}$  of free rank  $> 9$ . *Manuscript Math.* 29 (1979), no. 2-4, 183-194. (Loren D. Olson) **80k:14037** 14G25 (14K07)
- Nakatsani, H.** (with Kitazoe, T.; Ishihara, M.) Dirac equation on a lattice. *Lett. Nuovo Cimento* (2) 21 (1978), no. 2, 59-64. (Christiane Coudray) **80c:81018** 81C05
- Nakatsuka, Toshinao** Regions of autocorrelation coefficients in AR(p) and EX(p) processes. *Ann. Inst. Statist. Math.* 30 (1978), no. 2, 315-319. (P. A. Morettin) **80a:62147** 62M10
- Nakawaki, Yuji** On the Lorentz transformations of operator solutions of the pre-Schwinger model. *Progr. Theoret. Phys.* 62 (1979), no. 6, 1718-1741. (Author's summary) **80c:81132** 81E99
- Nakayama, Hirotsugu** (with Sawaragi, Yoshikazu; Inoue, Koichi) Environmental pollution control and multiplier method. *Applied optimal control*, pp. 185-198. *Studies in the Management Sci.*, 9, North-Holland, Amsterdam, 1978. (W. S. C. Gurney) **80c:49029** 49D37 (93C99)
- Nakazawa, Akira** The theory of sampling inspection by multivariables. I. (Japanese. English summary) *Res. Rep. Nagaoka Tech. College* 14 (1978), no. 3, 69-82. (Author's summary) **80c:62113** 62N10
- Nakazawa, Shobei** On the numerical treatment of convection-diffusion equations. (Japanese. English summary) *Bull. Fac. Sci. Engrg. Chuo Univ.* 21 (1978), 75-98. (Author's summary) **80d:65120** 65N30 (65P05)
- Nakazi, Takahiko** Invariant subspaces and translation invariant cocycles. *Arch. Math. (Basel)* 31 (1978/79), no. 3, 288-297. (K. Yale) **80c:43005** 43A17 (46J15)
- On invariant subspaces of weak- $\ast$  Dirichlet algebras. (Japanese) *Sūgaku* 30 (1978), no. 3, 207-217. (M. Hasumi) **80d:46097** 46J10
- Helson's existence theorem of function algebras. *Arch. Math. (Basel)* 32 (1979), no. 4, 385-390. (D. Sarason) **80h:46079** 46J10
- Nakicenovic, Nebojsa** Annex: numerical calculations. *Comm. Statist. A—Theory Methods* 8 (1979), no. 3, 231-235. (Z. Šidák) **80j:62051b** 62H15
- Näkki, Raimo** (with Palka, Bruce) Boundary regularity and the uniform convergence of quasiconformal mappings. *Comment. Math. Helv.* 54 (1979), no. 3, 458-476. (V. Mišić) **80j:30027** 30C60
- Nakonečnii, O. G.** (with Bublik, B. M.; Kirichenko, M. F.) Regulators and minimax filters for systems with distributed parameters. (Russian) *Akad. Nauk Ukrain. SSR. Inst. Kibernet. Preprint No. 30* (1978), 40 pp. (Authors' summary) **80c:93114** 93E10
- Minimax filters for linear stochastic systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 10 (1978), 923-925, 957. (Author's summary) **80c:93119** 93E10
- (with Kirichenko, N. F.; Navrods'kii, V. O.) Minimax recurrent estimates of the parameters of dynamical systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 11, 1022-1026, 1056. (Authors' summary) **80c:93137** 93E10
- (with Grigorov, A. V.) Minimax filtration for systems with noise in the model. (Russian. English summary) *Vysisl. Prikl. Mat. (Kiev)* No. 38 (1979), 152-159, 168. (Authors' summary) **80c:93114** 93E10
- Nakonečnii, A. G.** A minimax estimate for functionals of the solutions of operator equations. (Russian) *Arch. Math. (Brno)* 14 (1978), no. 1, 55-59. (A. B. Pevnyi) **80b:49020** 49B40 (47Axx)
- Estimates for functionals of the solutions of differential equations. (Russian) *Arch. Math. (Brno)* 14 (1978), no. 3, 155-159. (A. B. Pevnyi) **80b:49021** 49B40 (47Axx)
- Nalpecki, Krzysztof** Deadlock-free resources allocation in an operating system. (Polish. English and Russian summaries) *Podstawy Sterowania* 7 (1977), no. 3, 197-207. (Author's summary) **80g:68034** 68B20 (68A05)
- Nalimov, V. I.** (with Plotnikov, P. I.) Boundary value problems in the theory of the motion of a fluid with free boundaries. (Russian) *Dinamika Splošn. Sredy* No. 38. *Nestacionarnyye Problemy Gidrodinamiki* (1979), 111-142, 176. (Authors' summary) **80c:76026** 76B99
- Namazi, M. A.** (with Storey, D.) Supersymmetric quantization of linearized supergravity. *Nuclear Phys. B* 157 (1979), no. 1, 170-188. (M. Carmeli) **80i:83021** 83C45 (58E20, 81E05)
- (with Babelon, O.) Comment on the ghost problem in a higher derivative Yang-Mills theory. *J. Phys. A* 13 (1980), no. 2, L27-L30. (Authors' summary) **80i:81078** 81E10
- On an  $OSp(1,4)$  renormalisable theory of supergravity with higher derivatives. *J. Phys. A* 13 (1980), no. 2, 713-724. (Author's summary) **80c:83032** 83C45
- Namba, Makoto** Meromorphic functions on compact Riemann surfaces. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 7, 192-193. (C. Earle) **80g:32041** 32G15
- Nambooripad, K. S. S.** (with Rajan, A. R.) Structure of combinatorial regular semigroups. *Quart. J. Math. Oxford Ser. (2)* 29 (1978), no. 116, 489-504. (J. B. Kim) **80g:20074** 20M10
- (with Sitaraman, Y.) Some congruences on regular semigroups. *J. Algebra* 57 (1979), no. 1, 10-25. (S. Sribala) **80h:20098** 20M10
- Nambu, Takao** Asymptotic behavior of solutions of a class of nonlinear differential equations in Banach space. *SIAM J. Math. Anal.* 9 (1978), no. 4, 687-718. (A. Pazy) **80f:34058** 34G20
- Feedback stabilization for distributed parameter systems of parabolic type. *J. Differential Equations* 33 (1979), no. 2, 167-188. (G. N. Mil'shtein) **80i:93051** 93D15 (35B37, 35K10)
- Remarks on approximate boundary controllability for distributed parameter systems of parabolic type: supremum norm problem. *J. Math. Anal. Appl.* 69 (1979), no. 1, 194-204. (H. O. Fattorini) **80c:93037** 93B05
- Nambu, Y.** Topological problems in gauge theories. *Phys. A* 96 (1979), no. 1-2, 89-98. (Author's summary) **80d:81122** 81G20 (58D30)
- Namekata, Tsuneyuki** (with Tabata, Yoshio; Nishida, Toshio) A sequential allocation problem with two kinds of targets. (Japanese summary) *J. Oper. Res. Soc. Japan* 22 (1979), no. 1, 16-28. (Richard F. Serfozo) **80c:90146** 90C39 (90D20)
- Namekawa, Toshihiko** (with Tatebayashi, Makoto; Kasahara, Masao) Error statistics and construction of error correcting codes for differentially encoded CPFSK channels. *IEEE Trans. Inform. Theory* 24 (1978), no. 6, 763-766. (Authors' summary) **80c:94032** 94B70
- Namokata, Isaac** (with Duncan, J.) Amenability of inverse semigroups and their semigroup algebras. *Proc. Roy. Soc. Edinburgh Sect. A* 80 (1978), no. 3-4, 309-321. (Carroll O. Wilde) **80a:43002** 43A07



- (with Saeki, Sadahiro) On lattice isomorphisms of  $C(X)^*$ . *Tokyo J. Math.* 1 (1978), no. 2, 345-368. (Michael J. Canfell) **80d:54011** 54C30
- Nasr, R. V. A method of feasible directions with rejection of constraints. (Russian) *Optimizatsiya* No. 22(39) (1978), 94-97, 156. (Author's summary) **80m:90072** 90C25
- Nasbe, Tokumori (with Ebihara, Yukiyo) A remark on the initial-value problems for some quasilinear parabolic equations. *Math. Rep. Kyushu Univ.* 11 (1977/78), no. 1, 47-51. (Hans Kaper) **80m:35042** 35K55
- The Cauchy problem for quasilinear degenerate parabolic equations. *Math. Rep. Kyushu Univ.* 11 (1977/78), no. 1, 83-96. (Hans Kaper) **80m:35049** 35K65
- (with Nakao, Mitsuhiro) Asymptotic stability of a nonlinear second-order evolution equation with unbounded damping. *Math. Rep. Kyushu Univ.* 11 (1977/78), no. 2, 97-102. (Zvi Artstein) **80h:34081** 34G20
- (with Nakao, Mitsuhiro) Existence and decay of solutions of a beam equation with a nonlinear damping term. *Math. Rep. Kyushu Univ.* 11 (1977/78), no. 2, 103-116. (Philip W. Schaefer) **80c:35091** 35Q20
- Nasce, Richard E. (with Bhat, U. Narayan) An evaluation of CPU efficiency under dynamic quantum allocation. *J. Assoc. Comput. Mach.* 26 (1979), no. 4, 761-778. (Authors' summary) **80c:68021** 68B20
- Nasclares, Jorge H. (with Toranzo, Fausto A.) Inscribing simplices in convex bodies. *Rev. Un. Mat. Argentina* 28 (1977/78), no. 3-4, 215-219. (L. M. Kelly) **80a:52004** 52A20
- Nanda, R. S. (with Goswami, B.) Oscillating radial flow between two parallel rotating disks. (German summary) *Acta Mech.* 31 (1978/79), no. 3-4, 221-230. (Authors' summary) **80c:76022** 76D99
- Nanda, S. Matrix transformations and almost boundedness. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 14(34) (1979), no. 1, 99-107. (K. Chandrasekhara Rao) **80g:46011** 46A45
- Nanda, Srihatsa (with Nanda, Sudarsan) A complex nonlinear complementarity problem. *Bull. Austral. Math. Soc.* 19 (1978), no. 3, 437-444. (S. R. Mohan) **80f:90134** 90C33
- Adams completion and Postnikov systems. *Colloq. Math.* 40 (1978/79), no. 1, 99-110. (P. W. H. Lemmens) **80h:55020** 55U40 (18E35, 55S45)
- On Kan extension of cohomology on the category of  $p$ -local spaces. *Rend. Mat.* (6) 11 (1978), no. 1, 15-24. (Marshall Walker) **80g:55007** 55N20 (55P60)
- (with Nanda, Sudarsan) On stationary points and the complementarity problem. *Bull. Austral. Math. Soc.* 20 (1979), no. 1, 77-86. (Jacques Dubois) **80j:52003** 52A20 (90C25, 90C33)
- Nanda, Sudarsan (with Nanda, Srihatsa) A complex nonlinear complementarity problem. *Bull. Austral. Math. Soc.* 19 (1978), no. 3, 437-444. (S. R. Mohan) **80f:90134** 90C33
- Simultaneous farthest points in normed linear spaces. *Math. Japon.* 23 (1978/79), no. 2, 191-197. (B. N. Sahney) **80d:46030** 46B20 (41A65)
- Matrix transformations in nonarchimedean spaces. *Tamkang J. Math.* 9 (1978), no. 2, 199-207. (K. Chandrasekhara Rao) **80g:46064** 46P05 (40J05)
- (with Nanda, Srihatsa) On stationary points and the complementarity problem. *Bull. Austral. Math. Soc.* 20 (1979), no. 1, 77-86. (Jacques Dubois) **80j:52003** 52A20 (90C25, 90C33)
- Nanda, V. C. (with Bhandari, S. K.) Ideal matrices for relative extensions. *Abh. Math. Sem. Univ. Hamburg* 49 (1979), 3-17. (A. A. Bondarenko) **80m:12003** 12A55 (15A33)
- Nandani, Krishna (with Doherey, Ram Prakash; Srivastava, R. S. L.) Proximate order of an entire function with index pair  $(p, q)$ . *Indian J. Pure Appl. Math.* 11 (1980), no. 1, 33-39. (S. K. Bajpai) **80h:30023** 30D15
- Nandi, Kamal Kanti (with Shankara, T. S.) Revisiting Ramakrishnan's approach to relativity. *J. Math. Anal. Appl.* 67 (1979), no. 2, 421-425. (Authors' summary) **80d:83063** 83C99
- Nandi, Satyanarayan (with Ng, Wing Chiu) Can coupling constants be related? *Phys. Rev. D* (3) 20 (1979), no. 4, 972-984. (Authors' summary) **80h:81058** 81E15
- (with Frampton, Paul) SU(9) grand unification of flavor with three generations. *Phys. Rev. Lett.* 43 (1979), no. 20, 1460-1462. (Authors' summary) **80h:81077** 81G40
- Nandis, J. (with Pulé, J. V.; Verbeure, André) Linear response and relaxation in quantum lattice systems. *J. Statist. Phys.* 21 (1979), no. 3, 279-300. (Francesco Guerra) **80k:82026** 82A15 (47Bxx, 82A67)
- Nandor, V. S. A qualitative analysis and classification of real motions in the problem of four fixed centers. *Astronom. Z.* 56 (1979), no. 1, 173-181. (Russian); translated as *Soviet Astronom.* 23 (1979), no. 1, 95-99. (Ram Krishan Sharma) **80f:70011** 70F15 (34C99)
- Nandoravilli, N. D. (with Nikoladze, N. R.) A logical extremal model in economics. (Russian. English and Georgian summaries) *Sovetsk. Akad. Nauk Gruz. SSR* 92 (1978), no. 1, 65-68. (Authors' summary) **80f:90043** 90A16
- Data compression in assembling monotonic pairs of code sequences. (Russian. Georgian and English summaries) *Sovetsk. Akad. Nauk Gruz. SSR* 93 (1979), no. 2, 313-315. (Authors' summary) **80m:94035** 94A29
- Nanopoulos, Constantin (with Nobelis, Photis) Régularité et propriétés limites des fonctions aléatoires. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 567-690. *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Michel Weber) **80g:60038** 60G17
- Nannaris, N. D. (with Georgantopoulos, G. A.) Effects of mass transfer of the hydromagnetic free convective flow in the Stokes' problem. *Astrophys. and Space Sci.* 67 (1980), no. 1, 229-236. (From the summary) **80m:85003** 85A20 (76R10, 76W05)
- Nanthi, K. Estimation of the criticality parameter of a supercritical branching process with random environments. *J. Appl. Probab.* 16 (1979), no. 4, 890-896. (Warren Esty) **80j:62063** 62M05 (60J80)
- Nasoum, A. G. Quasi invertible ideals and projective ideals. (Arabic summary) *Iraqi J. Sci.* 19 (1978), no. 2, 157-166. (James A. Huckaba) **80d:13003** 13C10
- Napalkov, V. V. Operators that commute with differentiation in spaces of functions of several variables. (Russian) *Mat. Zametki* 24 (1978), no. 6, 829-838, 894. (L. I. Ronkin) **80f:32012** 32E25 (47B38)
- A property of analytic continuation. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 2, 367-372, 480. (Jan Chmielowski) **80i:32041** 32D15
- Convolution equations in multidimensional spaces. (Russian) *Mat. Zametki* 25 (1979), no. 5, 761-774, 800. (L. I. Ronkin) **80m:32003** 32A15 (46F10)
- Napier, John See Hawkins, W. F., **80k:01023** and Hawkins, Bill, **80m:01022**
- Nappellbaum, E. L. (with Emel'janov, S. V.) Methods for the control of complex systems. III. Principles of joint rational choice. (Russian) *Engineering cybernetics*, Vol. 10 (Russian), pp. 120-214, 322. *VINITI, Moscow*, 1978. (Vadim Komkov) **80c:93021** 93A99 (94A15)
- See also Mesarović, M. D.; et al., **80a:93004**
- Nappi, Chiara R. (with Israel, Robert B.) Quark confinement in the two-dimensional lattice Higgs-Villain model. *Comm. Math. Phys.* 64 (1978/79), no. 2, 177-189. (John L. Challifour) **80d:81114** 81G05 (82A67)
- Napoo, A. F. A nonlocal problem for an equation of mixed parabolic type. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 1, 176-177, 191. (Ju. V. Kostarčuk) **80g:35088** 35M05
- Narala, Dhruva (with Sinha, B. B.) Polynomial structure on almost paracontact manifold. *Indian J. Pure Appl. Math.* 9 (1978), no. 8, 753-760. (N. Prakash) **80c:53040** 53C15
- (with Sinha, B. B.) Hypersurfaces of almost paracontact metric manifold. *Indian J. Pure Appl. Math.* 9 (1978), no. 12, 1298-1304. (V. Mihova-Nehmer) **80d:53026** 53C15
- Narala, Shyam (with Roy, S. R.) Some plane symmetric models of perfect fluid distribution in general relativity. *Indian J. Pure Appl. Math.* 10 (1979), no. 6, 763-771. (Authors' summary) **80c:83033** 83C55
- Narang, T. D. Corrigendum: "Existence and unicity of best approximation and different types of continuity of proximity maps" (Bull. Calcutta Math. Soc. 69 (1977), no. 1, 39-43). *Bull. Calcutta Math. Soc.* 70 (1978), no. 2, 125. (Editors) **80d:41015** 41A65
- (with Ahuja, G. C.; Trehan, Swarn) Certain results on best approximation and continuity of metric projections. *Nanta Math.* 11 (1978), no. 1, 103-107. (G. Albinus) **80a:41033** 41A65
- (with Ahuja, G. C.) On best simultaneous approximation. *Nieuw Arch. Wisk.* (3) 27 (1979), no. 2, 255-261. (B. N. Sahney) **80g:41024** 41A65 (41A50)
- Narasimhacharyulu, V. (with Ramacharyulu, N. Ch. Pattabhi) Steady flow in a porous region between two slowly rotating spheres. *J. Indian Inst. Sci.* 60 (1978), no. 10, 247-252. (Jaroslav Jelen) **80h:76044** 76S05 (76C99)
- Narasimhan, Gorti V. L. (with Murthy, Vrduhula K.) On the asymptotic normality and independence of the sample partial autocorrelations for an autoregressive process. *Appl. Math. Comput.* 5 (1979), no. 4, 281-295. (James E. Gentle) **80m:62091** 62M10
- Narasimhan, Carolyn C. (with Franks, John M.) The periodic behavior of Morse-Smale diffeomorphisms. *Invent. Math.* 48 (1978), no. 3, 279-292. (S. Ju. Piliugin) **80a:58028** 58F20 (58F09)
- The periodic behavior of Morse-Smale diffeomorphisms on compact surfaces. *Trans. Amer. Math. Soc.* 248 (1979), no. 1, 145-169. (S. Ju. Piliugin) **80g:58037** 58F09 (58F20)
- Narasimhan, M. A. (with Rao, K. R.; Kuo, John G. K.) Slant-Haar transform. *Internat. J. Comput. Math.* 7 (1979), no. 1, 73-83. (Authors' summary) **80h:94004** 94A11
- Narasimhan, Raghavan The Levi problem and pseudo-convex domains: a survey. *Enseign. Math.* (2) 24 (1978), no. 3-4, 161-172. (Thomas Bloom) **80h:32016** 32F15 (32-02)
- Narasimhan, S. L. (with Gruver, William A.) A dynamic optimization model for integrated production planning: computational aspects. *IEEE Trans. Systems Man Cybernet.* 9 (1979), no. 11, 689-695. (Authors' summary) **80h:90162** 90C50 (90C39)
- Narayana, T. V. Recent progress and unsolved problems in dominance theory. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 68-78. *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (S. G. Mohanty) **80c:05019** 05A15 (62G10)
- Narayana, K. A. (with Padmanabhan, K. S.) A brief introduction to Nevanlinna theory of meromorphic functions. *Hyperbolic complex analysis (Proc. All India Sem., Ramanujan Inst., Univ. Madras, Madras, 1977)*, pp. 1-20. *Publ. Ramanujan Inst., 4, Univ. Madras, Madras, 1979.* (D. Drasin) **80m:30028** 30D30
- Narayana Rao, M. L. (with Kuppaswamy Rao, K.) A translation plane of order 25 and its full collineation group. *Bull. Austral. Math. Soc.* 19 (1978), no. 3, 351-362. (R. H. Dye) **80g:51010** 51E15 (05B25)
- Narayanaswamy, Indira On a theorem of Sharma and Trimbalario. *Proceedings of the Conference on Mathematical Analysis and its Applications (Inst. Engrs., Mysore, 1977)*, pp. M107-M118. *Matheciencia Rep.*, 91, Inst. Math. Sci., Madras, 1978. (Dietrich Braess) **80c:41002** 41A10 (41A29)
- Narazaki, Takashi (with Nakao, Mitsuhiro) Existence and decay of solutions of some nonlinear wave equations in noncylindrical domains. *Math. Rep. Kyushu Univ.* 11 (1977/78), no. 2, 117-125. (John M. Chadam) **80h:35091** 35L70 (35B40)
- Nardoue, P. (with Gunzig, E.) Symmetry constraints in general relativity and the Schwarzschild interior metric. *Gen. Relativity Gravitation* 10 (1979), no. 9, 751-759. (Brian O. J. Tupper) **80j:83009** 83C20 (53C80)
- Narita, Hidekazu On the creation of particles in a Robertson-Walker universe. *Progr. Theoret. Phys.* 62 (1979), no. 3, 832-834. (S. Deser) **80j:83036** 83F05
- Narici, Lawrence (with Shell, Niel; Beckenstein, Edward) Locally compact non-Archimedean spaces. *Rev. Mat. Ibero-Am.* (4) 38 (1978), no. 1, 46-49. (N. De Grande-De Kimpe) **80j:46119** 46P05 (12B99)
- (with Beckenstein, Edward) Banach algebras over valued fields. *Approximation theory and functional analysis (Proc. Internat. Sympos. Approximation Theory, Univ. Estadual de Campinas, Campinas, 1977)*, pp. 333-342. *North-Holland Math. Studies*, 35, North-Holland, Amsterdam, 1979. (J. B. Prolla) **80m:46064** 46P05
- Narita, Hiroyuki An algorithm for solving the stochastic programming problem. *Mem. Defense Acad.* 18 (1978), no. 3, 151-160. (Peter Kall) **80f:90102** 90C15
- Boolean programming. *Mem. Defense Acad.* 19 (1979), no. 1, 5-21. (C. R. Bector) **80f:90052** 90C10
- Narita, Y. R. On hypersurfaces in Euclidean space carrying a holonomic two-component orthogonal conjugate system of conical type. (Russian) *Ukrain. Geom. Sb.* No. 21 (1978), 99-108, 3-4. (M. A. Akiyis) **80h:53007** 53A05
- Narita, Fumio (with Takahashi, Takao; Toki, Yasunori; Yamagata, Masahiro) On some relation of curvature between Brieskorn manifolds and standard sphere. *Sci. Rep. Hiroaki Univ.* 26 (1979), no. 1, 1-6. (R. E. Stong) **80j:53048** 53C25 (57R15)
- Narita, Mamoru (with Yoshida, Norio) Oscillation theorems for linear ultrahyperbolic operators. *Utilitas Math.* 15 (1979), 143-159. (M. S. P. Eastham) **80c:35007** 35B05
- Narkun, Z. M. Green functions of the Dirichlet problem for the Laplace equation in a strip and a rectangle with  $N$  circular slits. (Russian) *Differentsial'nye Uravneniya* 14 (1978),

- no. 11, 2019-2025, 2108. (Author's summary) **80c:35024** 35J05  
Solution of the Dirichlet problem for the Laplace equation, and structure of its Green function in the case of a plane with  $N$  elliptic cuts. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 4, 704-708, 765. (Author's summary) **80c:35020** 35C99 (35J05)
- Narlikar, J. V.** (with Dhurandhar, S. V.) Tachyons and the second law of black hole physics. *Gen. Relativity Gravitation* 9 (1978), no. 12, 1089-1100. (Authors' summary) **80a:83057** 83D05 (00A89)
- Quantum fluctuations near the classical space-time singularity. *Gen. Relativity Gravitation* 10 (1979), no. 11, 883-896. (C. J. Eliezer) **80b:83021** 83C45 (58D30)  
(with Chitre, S. M.) Gravitational screens and superluminal separation in quasars. *Astrophys. J.* 235 (1980), no. 2, part 1, 335-346. (Authors' summary) **80j:85008** 85A99 (83F05)
- Narmanija, V. G.** Linear equations whose solutions form a subalgebra. (Russian. Georgian and English summaries) *Sobbič. Akad. Nauk Gruzii. SSR* 91 (1978), no. 2, 289-291. (Author's summary) **80c:46058** 46J05
- Narnhofer, Helmut** Time evolution in equilibrium states without time automorphism. *Acta Phys. Austriaca* 49 (1978), no. 3-4, 207-217. (Gerald A. Goldin) **80f:82021** 82A15 (46L60)  
(with Thirring, Walter) The taming of the dipole ghost. Symposium on Mathematical Methods in the Theory of Elementary Particles (Liblice, 1978). *Czechoslovak J. Phys. B* 29 (1979), no. 1, 60-67. (T. Sasakawa) **80a:81175** 81G25
- Narodetskii, I. M.** See Bjorken, James D.; et al., **80f:81001**
- Naruki, Isao** Über die Kleinsche Ikosaeder-Kurve sechsten Grades. *Math. Ann.* 231 (1977/78), no. 3, 205-216. (I. Dolgachev) **80d:14021** 14J25 (14H25, 14L30, 20C30)
- Narula, Subhash C.** (with Levy, Kenneth J.) Testing hypotheses concerning partial correlations: some methods and discussion. (French summary) *Internat. Statist. Rev.* 46 (1978), no. 2, 215-218. (Authors' summary) **80b:62066** 62H15 (62H20)
- Narukha, M.** (with Mizusawa, T.; Kajita, T.) Buckling of skew plate structures using B-spline functions. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 1, 87-96. (Authors' summary) **80j:73023** 73H05
- Narushima, Hiroshi** (with Era, Hiroshi) A variant of inclusion-exclusion of semilattices. *Discrete Math.* 21 (1978), no. 2, 215-217. (V. Nemitz) **80a:06004** 06A12  
A survey of enumerative combinatorial theory and a problem. *Proc. Fac. Sci. Tokai Univ.* 14 (1979), 1-10. (E. Keith Lloyd) **80i:05011** 05A15 (06A15)
- Narzulav, H. N.** (with Skubenko, B. F.) A refinement of the estimate of the arithmetical minimum of the product of inhomogeneous linear forms (on the inhomogeneous Minkowski conjecture). (Russian) Studies in number theory, 5. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 82 (1979), 88-94, 166. (R. A. Rankin) **80h:10040b** 10E15
- el Naschie, M. S.** See El Naschie, M. S.
- Naseeruddin, Md.** (with Kazim, M. A.) On almost semigroups. *Portugal. Math.* 36 (1977), no. 1, 41-47. (I. Gy. Maurer) **80j:20080** 20N99
- Nash, Charles** ★Relativistic quantum fields. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1978.* viii + 223 pp. ISBN 0-12-514350-8 (S. G. Mamaev) **80f:81082** 81E15 (28C20)  
(with Stuller, R. L.) On the use of the renormalisation group near the electron's mass shell. *Proc. Roy. Irish Acad. Sect. A* 78 (1978), no. 17, 149-156. (K. Kumar) **80a:81122** 81L05 (35Q99, 81E15)  
(with Stuller, R. L.) Infrared behaviour of Yang-Mills theories. *Proc. Roy. Irish Acad. Sect. A* 78 (1978), no. 22, 217-233. (P. K. Smrz) **80b:81050** 81E10
- Nash, John C.** ★Compact numerical methods for computers: linear algebra and function minimisation. A Halsted Press Book. John Wiley & Sons, Inc., New York, 1979. ix + 227 pp. ISBN 0-470-26559-0 (Editors) **80c:65002** 65-04
- Nash, Peter** (with Weber, Richard R.) An optimal strategy in multi-server stochastic scheduling. *J. Roy. Statist. Soc. Ser. B* 40 (1978), no. 3, 322-327. (Tadashi Kurisu) **80a:90082** 90B35  
Controlled jump process models for stochastic scheduling problems. *Internat. J. Control* 29 (1979), no. 6, 1011-1025. (R. Salia) **80k:93058** 93E99 (68C15, 90B35)
- Nashed, M. Z.** On the perturbation theory for generalized inverse operators in Banach spaces. *Functional analysis methods in numerical analysis (Proc. Special Session, Annual Meeting, Amer. Math. Soc., St. Louis, Mo., 1977)*, pp. 180-195. *Lecture Notes in Math.*, 701, Springer, Berlin, 1979. (Charles W. Groetsch) **80j:47018** 47A55  
(with Engl, Heinz W.) Stochastic projection schemes for random linear operator equations of the first and second kinds. *Numer. Funct. Anal. Optim.* 1 (1979), no. 5, 451-473. (A. T. Bharucha-Reid) **80m:60073** 60H25 (47A99)
- Nash-Williams, C. St. J. A.** Should axiomatic set theory be translated into graph theory? *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 743-757. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (Editors) **80b:03074** 03E30 (05C20)  
Another criterion for marriage in denumerable societies. Advances in graph theory (Cambridge Combinatorial Conf., Trinity College, Cambridge, 1977). *Ann. Discrete Math.* 3 (1978), 165-179. (E. C. Milner) **80m:05005** 05A05
- Nasibov, F. G.** (with Ibragimov, I. I.) Letter to the editors concerning the work of S. A. Kas'janjuk: "Extremal problems in a subclass of the entire functions of finite order" (*Mat. Zametki* 19 (1976), no. 1, 19-28). (Russian) *Mat. Zametki* 23 (1978), no. 6, 915-919. (T. Bojanov) **80f:30019** 30D15
- Nasim, C.** An inversion formula for a class of integral transforms. II. *J. Math. Anal. Appl.* 67 (1979), no. 1, 163-170. (E. Gesztesy) **80k:44002** 44A05
- Nasir ad-Din at-Tusi** See Berozashvili, N., **80a:01005**
- Nasirov, S. N.** The canonical form of the matrix of a linear operator in finite-dimensional modules over semifields. (Russian) *Dokl. Akad. Nauk UzSSR* No. 3 (1979), 7-9. (Veselin Perić) **80i:15009** 15A21
- Nasirova, T. I.** A model of inventory control. (Russian) *Theory of random processes*, No. 6 (Russian), pp. 107-119, 136. "Naukova Dumka", Kiev, 1978. (Author's summary) **80f:90056** 90B05 (60K15)  
An ergodic theorem for some semi-Markov processes with an absorbing barrier. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist.* No. 20 (1979), 90-97, 158. (M. V. Kartalov) **80e:60102** 60K15
- Naslund, Bertil** (with Sellstedt, Bo) ★Neo-Ricardian theory. With applications to some current economic problems. *Lecture Notes in Economics and Mathematical Systems*, 156. Springer-Verlag, Berlin-New York, 1978. vi + 165 pp. ISBN 3-540-08763-X (J. A. Rickard) **80c:90029** 90A15
- Nasr, A. H.** On the spectral functions of selfadjoint operators. (Arabic summary) *Proc. Math. Phys. Soc. Egypt* No. 46 (1978), 17-23. (Author's summary) **80m:47045** 47B18
- hassan Nasr, Ahmed Ismail** See Hassan Nasr, Ahmed Ismail
- Nasr Ibrahim, Ahmed Helmi Muhammed** Homotopy in the spectral homology theory homologies of Boolean algebras with closure. (Russian) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 8, 3-6. (I. Pop) **80k:55021** 55N35 (06E15)  
(with Bunjatov, M. R.) Homology of distributive lattices. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1978, no. 2, 74-81. (I. Pop) **80k:55023** 55N35 (06D99, 55N05)
- Nasritdinov, G.** An estimate of the number of switchings of time-optimal control for a class of  $n$ th order nonlinear control systems. (Russian. Uzbek summary) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1978, no. 4, 15-21, 94. (Author's summary) **80a:49029** 49B10
- abu Nasr Mansur, ibn 'Ali ibn 'Iraq** See Abu Nasr Mansur, ibn 'Ali ibn 'Iraq
- nemat-Nasser, S.** See Nemat-Nasser, S.
- Naselli, N.** (with Descloux, J.; Rappaz, J.) On properties of spectral approximations. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977)*, pp. 81-85. *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (P. M. Anselone) **80i:47002** 47A10 (47A55)
- Năstăsescu, Constantin** (with van Oystaeyen, F.) ★Graded and filtered rings and modules. *Lecture Notes in Mathematics*, 758. Springer-Verlag, Berlin-New York, 1979. x + 148 pp. ISBN 3-540-09708-2 (Melvin Hochster) **80k:16002** 16-02 (13D99)  
Conditions de finitude pour les modules. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 5, 745-758. (G. Krause) **80i:16032** 16A50 (18E15)
- Nasyrov, M. S.** (with Bekmuratov, T. F.; Musayev, M. M.; Šamsiev, T. G.) ★Гибридные средства моделирования и управления. (Russian) [Hybrid modeling and control devices] *Izdat. "Fan", Uzbek. SSR, Tashkent*, 1978. 138 pp. (Vadim Komkov) **80b:93092** 93C99
- vander Nat, Arnold** Beyond nonnormal possible worlds. *Notre Dame J. Formal Logic* 20 (1979), no. 3, 631-635. (Jerzy Perzanowski) **80k:03022** 03B45  
First-order infinitesimal and uniform neighbourhood semantics. *Studia Logica* 38 (1979), no. 3, 277-296. (J. F. A. K. van Benthem) **80m:03040** 03B45
- Natanzon, G. A.** General properties of potentials for which the Schrödinger equation is solvable by means of hypergeometric functions. (Russian. English summary) *Teor. Mat. Fiz.* 38 (1979), no. 2, 219-229. (M. M. Skraginov) **80g:81014** 81C05 (33A30, 34B25)
- Natanzon, S. M.** Automorphisms and real forms of a class of complex algebraic curves. (Russian) *Funkcional. Anal. i Prilozhen.* 13 (1979), no. 2, 89-90. (V. M. Harlamov) **80k:14042** 14H99
- Natarajan, K. S.** (with White, Lee J.) Optimum domination in weighted trees. *Inform. Process. Lett.* 7 (1978), no. 6, 261-265. (From the introduction) **80a:68072** 68E10 (68C05, 94C15)
- Natarajan, N. S.** Ordered nearings. *J. Madurai Univ.* 7 (1978), no. 1, 99-101. (J. Karasik) **80c:16032** 16A76
- Natarajan, P. N.** The Steinhilber theorem for Toeplitz matrices in non-Archimedean fields. *Comment. Math. Prace Mat.* 20 (1977/78), no. 2, 417-422. (V. K. Srinivasan) **80f:42007** 40J05  
Multiplication of series with terms in a non-Archimedean field. *Simon Stevin* 52 (1978), no. 4, 157-160. (L. Narici) **80c:12024** 12B40 (12J25, 40C99)  
(with Rangachari, M. S.) Matrix transformations between sequence spaces over non-Archimedean fields. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 4, 615-618. (K. Chandrasekhara Rao) **80j:46118** 46P05 (47B37)
- Nath, Pran** (with Arnowitz, R.) Superconnections in extended supergravity. *Phys. Rev. Lett.* 44 (1980), no. 4, 223-226. (Authors' summary) **80m:83012** 83C45
- Nath, Prem** On some functional equations connected with various entropies in information theory. *Nanta Math.* 12 (1979), no. 1, 48-61. (Inder Jeet Taneja) **80j:39011** 39B30 (94A17)
- Nathanson, Gilbert** (with Sinanoğlu, Oktay) The metric geometry of near equilibrium irreversible thermodynamics. *J. Chem. Phys.* 72 (1980), no. 5, 3127-3129. (Authors' summary) **80m:82028** 82A35
- Nathanson, Melvyn B.** (with Erdős, Paul) Bases and nonbases of squarefree integers. *J. Number Theory* 11 (1979), no. 2, 197-208. (Š. Znam) **80k:10062** 10L05
- Nathanson, W. I.** Control problems with intermediate constraints: a sufficient condition. *J. Optim. Theory Appl.* 29 (1979), no. 2, 253-290. (C. P. Orlieb) **80m:49015** 49B10
- Nation, J. B.** (with Freese, Ralph) Projective lattices. *Pacific J. Math.* 75 (1978), no. 1, 93-106. (G. Grätzer) **80c:06012** 06B25
- Natkovik, Ju. S.** A noise classifier in signal-detection systems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1977, no. 6, 151-158. (Russian); translated as *Engrg. Cybernetics* 15 (1977), no. 6, 116-123 (1978). (W. A. Gardner) **80c:93074** 93E10  
(with Zil'berstein, A. M.) Use of a noise classifier in detection of a signal in noise. *Automatika* 1979, no. 1, 11-16, 78. (Russian. English summary); translated as *Soviet Automat. Control* 12 (1979), no. 1, 8-12. (Authors' summary) **80j:94008** 94A12
- Natsovil, D. G.** ★Оценки тензоров Грина теории упругости и некоторые их приложения. (Russian) [Estimates of Green's tensors of elasticity theory and their applications] With Georgian and English summaries. *Izdat. Tbilis. Univ., Tbilisi*, 1978. 130 pp. (A. Haimovici) **80a:73019** 73C99 (35J55)  
(with Dzagmadze, A. Ja.) ★Динамические задачи классической теории упругости для кусочно-однородных тел. (Russian) [Dynamical problems of the classical theory of elasticity for piecewise homogeneous bodies] With Georgian and English summaries. *Izdat. Tbilis. Univ., Tbilisi*, 1978. 64 pp. (S. Matsyia) **80b:73008** 73C40  
The maximum principle in the moment theory of elasticity. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 9, 1649-1658, 1724. (T. G. Gegelia) **80k:73003** 73B25 (35Q99)  
A general representation of the solution of a system of equations of the moment theory of elasticity and its application to the solution of dynamical problems. (Russian. Georgian and English summaries) *Tbilis. Gos. Univ. Inst. Prikl. Mat. Trudy* 5/6 (1978), 225-234. (V. Gheorghijă) **80e:73005** 73B25 (35C99)



- Naimen, Toshikazu** Certain Weil algebras of infinite-dimensional Lie algebras. *Kodai Math. J.* 1 (1978), no. 3, 401–410. (Toru Tanihishita) **80a:58040** 58H10 (57R20)
- Natterer, Frank** Berechnung oberer Schranken für die Norm der Ritz-Projektion auf finite Elemente. *Numerische Behandlung von Differentialgleichungen mit besonderer Berücksichtigung freier Randwertaufgaben* (Tagung Math. Forschungsinst., Oberwolfach, 1977), pp. 236–245. Internat. Ser. Numer. Math., 39, Birkhäuser, Basel, 1978. (Juhani Pitkaranta) **80m:65080** 65N30
- On the inversion of the attenuated Radon transform. *Numer. Math.* 32 (1979), no. 4, 431–438. (Author's summary) **80e:65122** 65R10
- Nau, Dana S.** (with Markowsky, George; Woodbury, Max A.; Amos, D. Bernard) A mathematical analysis of human leukocyte antigen serology. *Math. Biosci.* 40 (1978), no. 3–4, 243–270. (Andrew Wohlgenuth) **80a:92063** 92A90 (06A10, 06B15)
- Naudé, Gert** A note on subcategories of reachable machines. *Questiones Math.* 3 (1978/79), no. 2, 147–154. (Aleksander Albicki) **80b:18005** 18B20
- A structure theory for a category of behaviours. *Questiones Math.* 3 (1978/79), no. 3, 229–240. (Jiří Adámek) **80i:18004** 18A25 (18A30)
- Naumann, Joachim** On second-order evolution inequalities of Volterra type. *Theory of nonlinear operators* (Proc. Fifth Internat. Summer School, Central Inst. Math. Mech. Acad. Sci. GDR, Berlin, 1977), pp. 185–193. *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.* 1978, 6, Akademie-Verlag, Berlin, 1978. (Seppo Heikkilä) **80a:45024** 45N05 (34G20)
- (with Hünlich, Rolf) On general boundary value problems and duality in linear elasticity. I. (Czech and Russian summaries) *Appl. Mat.* 23 (1978), no. 3, 208–230. (S.-F. Sburian) **80e:73014** 73C35 (35Q20, 46N05)
- (with Müller, Manfred W.) On evolution inequalities of a modified Navier-Stokes type. II. (Czech summary) *Appl. Mat.* 23 (1978), no. 6, 397–407. (V.-V. Olariu) **80a:35103** 35Q10 (47H15, 76D05)
- On a class of variational inequalities of Volterra type. (Italian summary) *Rend. Mat.* 6 (11) (1978), no. 2, 161–186. (Carlo Sbordone) **80c:49005** 49A29
- (with Müller, Manfred W.) On evolution inequalities of a modified Navier-Stokes type. III. (Russian and Czech summaries) *Appl. Mat.* 24 (1979), no. 2, 81–92. (V.-V. Olariu) **80f:35062** 35K22 (35Q10)
- On evolution inequalities of Navier-Stokes type in two dimensions. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 3, 265–278. (M. Birol) **80m:35062** 35Q10 (49A29, 76D05)
- (with Wulst, M.) On evolution inequalities of Bingham type in three dimensions. I. *J. Math. Anal. Appl.* 68 (1979), no. 1, 211–227. (P. S. Milojević) **80g:47058** 47H05 (34G20)
- On a class of first-order evolution inequalities arising in heat conduction with memory. *SIAM J. Math. Anal.* 10 (1979), no. 6, 1144–1160. (R. C. MacCamy) **80i:45019** 45J05 (80A20)
- Naumenko, K. I.** (with Aliev, F. A.; Larin, V. B.; Sunceev, V. N.) ★ОПТИМИЗАЦИЯ ЛИНЕЙНЫХ ИНВАРИАНТНЫХ ВО ВРЕМЯ СИСТЕМ УПРАВЛЕНИЯ. (Russian) [Optimization of linear time-invariant control systems] Edited by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii]. "Naukova Dumka", Kiev, 1978. 327 pp. (Vadim Komkov) **80d:93044** 93C99 (49B99)
- Stabilization of the horizontal motion of a two-legged walking apparatus in the case of incomplete information. (Russian) *Akad. Nauk Ukrain. SSR Int. Mat. Preprint No. 31* (1978), 44 pp. (Author's summary) **80e:93089** 93C99
- Optimization of an inhomogeneous linear system according to a quadratic quality criterion. (Russian) *Mat. Fiz. No. 26* (1979), 65–69, 128. (Author's summary) **80k:93023** 93C05
- Naumov, G. E.** The rule of multipliers for a vector problem of optimization with an infinite set of criteria. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 2, 36–38, 219 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 2, 29–31 (1979). (Michael J. Todd) **80g:90123** 90C99
- Naumov, V. A.** (with Gromov, A. I.) An approximate method of investigation of multiphase systems. (Russian) *Information networks and their analysis* (Russian), pp. 46–51, 216, "Nauka", Moscow, 1978. (Authors' summary) **80g:60100** 60K25 (90B22)
- Naumova, N. I.** M-systems of relations and their application in cooperative games. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 1, 60–66, 156. (O. N. Bondareva) **80i:90155** 90D12
- (with Bondareva, O. N.; Kulakovskaja, T. E.) The solution of an arbitrary four-person cooperative game. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, no. 2, 104–105, 121. (Editors) **80g:90129** 90D12
- Naumović, R. F.** Controllability of linear systems in the class of dynamic regulators with quantized signals. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 2, 25–30, 138. (K. Amborski) **80e:93038** 93B05
- Naundorf, F.** Ein Verfahren zur Lösung des Zusammenhangsproblems bei linearen Differentialgleichungen zweiter Ordnung mit mehreren unabhängigen Stellen. *Z. Angew. Math. Mech.* 59 (1979), no. 6, 273–275. (S. Drobot) **80c:34004** 34A20
- Nam, Joseph** (with Glaz, Joseph) Multiple coverage of the line. *Ann. Probab.* 7 (1979), no. 5, 900–906. (Leopold Flatto) **80j:60024** 60D05
- Nauwelaerts, E.** Symmetric localisation of Asano orders. *Ring theory* (Proc. Conf., Univ. Antwerp, Antwerp, 1977), pp. 65–80. *Lecture Notes in Pure and Appl. Math.*, 40, Dekker, New York, 1978. (M. Djabali) **80c:16005** 16A18 (16A08)
- Navarro, Carlos B.** On symmetry and monotonicity of relaxation functions in linear viscoelasticity. (French summary) *Z. Angew. Math. Phys.* 30 (1979), no. 3, 541–547. (L. W. Morland) **80k:73034** 73F05
- Navarro, J. M.** (with Shieh, Leang S.; Wei, Y. J.) An algebraic method to determine the common divisor, poles and transmission zeros of matrix transfer functions. *Internat. J. Systems Sci.* 9 (1978), no. 9, 949–964. (Joel Winthrop) **80a:93053** 93B25
- Navarro-Bermúdez, Francisco J.** Topologically equivalent measures in the Cantor space. *Proc. Amer. Math. Soc.* 77 (1979), no. 2, 229–236. (M. Bhaskara Rao) **80k:28017** 28D05
- Nazara, J.** (with Silva, A. M.) A geometrical approach to solving crystal structures. *Acta Cryst. Sect. A* 35 (1979), no. 2, 266–275. (Authors' summary) **80b:82054** 82A60 (51F15)
- Naveira, A. M.** See Martínez Naveira, Antonio
- martínez Naveira, Antonio** See Martínez Naveira, Antonio
- Navickis, K. V.** Intrinsic normalizations of seminonholonomic hypercomplexes of an even-dimensional affine space. (Russian. Lithuanian and English summaries) *Lietuv. Mat. Sb.* 18 (1978), no. 4, 87–94, 201. (M. A. Akiyis) **80i:53010** 53A15
- Navodnov, V. G.** (with Gribanov, Ju. I.) The smallest Banach space of a certain class, containing a given normed space. (Russian) *The constructive theory of functions and functional analysis* (Russian), pp. 24–27, Kazan. Univ., Kazan, 1977. (From the text) **80c:46018** 46B99
- Navojan, A. V.** (with Guz, O. M.) Stability of an incompressible rod under uniform lateral pressure. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* 31 (1978), no. 5, 63–70, 94. (Authors' summary) **80a:73044** 73H05 (35Q99)
- Navrods'kii, V. O.** (with Kirichenko, N. F.; Nakonečnii, O. G.) Minimax recurrent estimates of the parameters of dynamical systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 11, 1022–1026, 1056. (Authors' summary) **80c:93137** 93E10
- Nawrotzki, Kurt** Einige Bemerkungen zur Verwendung der Palmischen Verteilung in der Bedienungstheorie. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 2, 241–253. (N. P. Leont'eva) **80d:60136** 60K25 (60G55)
- Weak ergodicity of stationary random sequences of stochastic matrices. (Russian) *Serdica* 5 (1979), no. 1, 24–33. (Serban Grigorescu) **80a:60042** 60G10 (15A52)
- Nayak, K. C.** (with Parida, J.) An existence theorem for the complex linear complementarity problem. *Z. Angew. Math. Mech.* 59 (1979), no. 6, 275–276. (S. R. Mohan) **80j:90107** 90C33
- Nayak, P. R.** Efficiency of non-Walrasian equilibria. *Econometrica* 48 (1980), no. 1, 127–134. (Author's summary) **80j:90035** 90A14
- Nayak, S. K.** (with Parhi, N.) On the behavior of solutions of  $y'' - p(t)y' = f(t)$ . *Applicable Anal.* 9 (1979), no. 1, 1–5. (L. Pinter) **80k:34051** 34C10
- Nhat-Nayak, Vasanti N.** See Bhat-Nayak, Vasanti N.
- Nayanzin, N. G.** See Najanzin, N. G.
- Nayar, B. M.** Induced potential problem in three dimensions. II. Properties of the adjoint kernel. *Indian J. Pure Appl. Math.* 9 (1978), no. 2, 119–133. (P. M. Anselone) **80h:31004** 31B15 (35J99)
- Nayfeh, Ali Husein** (with Mook, Dean T.) ★Nonlinear oscillations. Pure and Applied Mathematics. Wiley-Interscience [John Wiley & Sons], New York, 1979. xiv+704 pp. ISBN 0-471-03555-6 (G. V. Hmelevskaja-Plotnikova) **80m:70002** 70-01 (34C15, 70-02)
- Stability of three-dimensional boundary layers. *AIAA J.* 18 (1980), no. 4, 406–416. (Author's summary) **80m:76047** 76E99
- Naylor, D.** On a nonselfadjoint eigenfunction expansion. *SIAM J. Math. Anal.* 9 (1978), no. 5, 967–978. (E. J. Scott) **80c:44001** 44A05
- On an integral transform. *Glasgow Math. J.* 20 (1979), no. 1, 1–14. (E. J. Scott) **80b:44002** 44A15
- Nazarkinski, V. E.** (with Karasev, M. V.) Quantization of rapidly oscillating symbols. (Russian) *Math. Sb. (N.S.)* 106(148) (1978), no. 2, 183–213. (H. Baumgärtel) **80j:35067** 35D05 (47A60, 58G15, 81C99)
- (with Kurdjumov, I. V.; Mosolova, M. V.) A computational algorithm for a quadratic programming problem of large dimension. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1119–1128, 1354–1355. (V. F. Dem'janov) **80d:90065** 90C20
- Nazarat, Ullah** Note on the traces of the angular momentum operators. *Phys. Rev. A* (3) 21 (1980), no. 3, 1069–1070. (Author's summary) **80m:81040** 81C99
- Nazarenko, T. I.** (with Marčenko, L. V.) An interval method for solving integro-differential equations of Fredholm type. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 282–291, 322. *Irkutsk. Gos. Univ., Irkutsk*, 1976. (Authors' summary) **80k:65106** 65R20 (65G10)
- Nazareth, Larry** A relationship between the BFGS and conjugate gradient algorithms and its implications for new algorithms. *SIAM J. Numer. Anal.* 16 (1979), no. 5, 794–800. (Author's summary) **80i:65078** 65K10 (90C30)
- Some recent approaches to solving large residual nonlinear least squares problems. *SIAM Rev.* 22 (1980), no. 1, 1–11. (K. H. V. Booth) **80k:65047** 65H10 (65D10)
- Nazarjan, A. E.** (with Eremjan, Š. S.) Exact summation of the quasi-cikonal series. *Jadernaja Fiz.* 28 (1978), no. 5, 1408–1417 (Russian); translated as *Soviet J. Nuclear Phys.* 28 (1978), no. 5, 724–728. (Authors' summary) **80c:81106** 81F20
- Nazarjan, G. A.** The synthesis of algorithms for approximating Boolean functions. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 66 (1978), no. 1, 15–21. (A. Mučnik (RZMat 1978:11 V788)) **80c:65040** 65D15 (68C25, 94C10)
- Nazarov, A. A.** (with Terpugov, A. F.) The finding of optimal dynamic priorities in the case of oblique observations. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1977, no. 6, 85–90 (Russian); translated as *Engng. Cybernetics* 15 (1977), no. 6, 66–71 (1978). (Micha Yadin) **80c:60111** 60K25
- Nazarov, B.** Basis of the application of dynamic programming to the variational Lagrange problem. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 50 (1978), 12–22, 159. (G. D. Maistrovskii) **80g:49037** 49D07
- Nazarov, S. A.** The smoothing of singularities of the boundary in two-dimensional problems of the theory of elasticity. (Russian) *Studies in elasticity and plasticity*, No. 12 (Russian), pp. 180–186, 222. *Leningrad. Univ., Leningrad*, 1978. (V. M. Isakov) **80g:73015** 73C35 (35Q99)
- Asymptotic behavior with respect to a small parameter of the solution of an elliptic boundary value problem in a domain with a conical point. (Russian) *Dokl. Akad. Nauk SSSR* 238 (1978), no. 4, 827–830. (H. Triebel) **80c:35055** 35J40 (35B40)
- The asymptotics for the deflection of a plate containing a crack on an elastic foundation. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, no. 2, 111–112, 121. (Author's summary) **80h:73044** 73K10
- Nazarov, V. B.** (with Geppener, V. V.) A recognition algorithm in the presence of noise. (Russian) *Automatizacija* 1978, no. 6, 66–71, 111. (Authors' summary) **80h:93155** 93E12
- Nazarova, T. M.** A variational inequality for a class of hyperbolic-parabolic equations. (Russian) *Dinamika Splošn. Sredy No. 36 Dinamika Žukosti so Svobodnymi Granicami* (1978), 78–85, 161. (Author's summary) **80k:35108** 35M05 (35K99)
- Nazaryan, A. E.** See Nazarjan, G. A.
- Nazin, A. V.** Game approach to the solution of a problem of stochastic programming.

- Automat. i Telemekh.* No. 2 (1978), 72-82 (Russian. English summary); translated as *Automat. Remote Control* 39 (1978), no. 2, part 1, 215-223. (Author's summary) 80c:90112 90C15 (90D15)
- (with Poznjack, A. S.) Matrix games of  $N$  persons with uncertainty conditions. (Russian) *Ekonom. i Mat. Metody* 14 (1978), no. 5, 958-968. (V. D. Dimitrov) 80c:90163 90D12
- Nazin, G. I. Description of Gibbs random fields using the generating functional technique. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 6, 1352-1355. (From the text) 80f:82812 82A05 (60K35)
- Nazirov, R. R. Analysis of errors arising from the realization of the approximate program of iterated measurements in the Elfving problem. (Russian) *Software for cosmic experiments* (Russian), pp. 88-91, 277, "Nauka", Moscow, 1978. (Ivar Petersen) 80c:62852 62K05
- Nasyrova, V. P. See *Mathematical methods of cybernetics*, 80d:90013
- Neagu, Alexandru C. The prolongations of  $G$ -spaces. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 6, 509-512 (1978). (I. Koldif) 80c:58007 58A20
- A geometric interpretation for the prolongation of a  $G$ -space. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 24 (1978), no. 1, 25-30. (Jean Pradines) 80g:57035 57R22 (57S15, 58A20)
- (with Oproiu, Vasile) Chern forms and  $H$ -projective curvature of complex manifolds. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 24 (1978), no. 1, 39-46. (V. Mihova-Nehmer) 80c:53077 53C55
- Quasistructural distributions. (Romanian. English summary) *Bul. Inst. Politehn. Iaşi Sect. I* 24(28) (1978), no. 1-2, 39-42. (R. Miron) 80c:53035 53C10 (58A30)
- Nebešky, Ladislav A projectivity theorem for weakly connected digraphs. *Prague studies in mathematical linguistics*, Vol. 6, pp. 209-213, North-Holland, Amsterdam, 1978. (B. Zelinka) 80a:05104 05C20 (68F05)
- The minimum degree and connectivity of a graph. *Theory and applications of graphs* (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976), pp. 412-419, *Lecture Notes in Math.*, 642, Springer, Berlin, 1978. (Author's summary) 80a:05136 05C40
- On pancyclic line graphs. *Czechoslovak Math. J.* 28(103) (1978), no. 4, 650-655. (Linda Lesniak-Foster) 80a:05137 05C40
- Some sufficient conditions for the existence of a 1-factor. *J. Graph Theory* 2 (1978), no. 3, 251-255. (Ian Anderson) 80a:05170 05C99
- On Eulerian subgraphs of complementary graphs. *Czechoslovak Math. J.* 29(104) (1979), no. 2, 298-302. (D. P. Geller) 80g:05048 05C45
- Nečesná, T. S. Symmetries of the space  $S^2$ . (Russian) *Problems of group theory and homological algebra*, No. 1 (Russian), pp. 136-142, Yaroslavl Gos. Univ., Yaroslavl, 1977. (E. J. F. Primrose) 80j:51018 51M10
- Nečas, Jindřich (with Kratochvíl, Alexander) Secant modulus method for the construction of a solution of nonlinear eigenvalue problems. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 2, 694-710. (T. I. Seidman) 80f:47009 47H17 (35P30, 65H15)
- (with Gaiquinta, Mariano) On the regularity of weak solutions to nonlinear elliptic systems via Liouville's type property. *Comment. Math. Univ. Carolin.* 20 (1979), no. 1, 111-121. (E. Giusti) 80g:35056 35J60
- (with Gröger, Konrad; Trávníček, L.) Dynamic deformation processes of elastic-plastic systems. (German and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 10, 567-572. (Authors' summary) 80m:73036 73E99
- Neck, Reinhard Random models of income and wealth distribution. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes* (Prague, 1978), Vol. B, pp. 59-68, Reidel, Dordrecht, 1978. (Authors' summary) 80c:90033 90A19
- Neçulescu, D. S. Stochastic models of the energy systems. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énergét.* 24 (1979), no. 2, 269-279, v. i. (Author's summary) 80c:90051 90A17
- Nećula, Maria-Ana An algorithm for fast evaluation of time functions. *IEEE Trans. Comput.* 28 (1979), no. 7, 506-513. (Author's summary) 80c:68074a 68C05 (93C15)
- See also Kamat, P. S., 80c:68074b
- Nečval', N. A. New methods for the synthesis of optimal statistical decision functions under a priori uncertainty conditions. (Russian) *Adaptation problems in technical systems* (Russian). *Problemy Šteĭn. Poiska* No. 7 (1978), 259-288, 321. (L. B. Klebanov) 80c:62024 62F10
- Nédélec, J.-C. Numerical approximations for some singular integral equations. *The use of finite element method and finite difference method in geophysics* (Proc. Summer School, Liblice, 1977), pp. 207-227, Česk. Akad. Věd, Prague, 1978. (E. N. Houstis) 80g:65130 65R20 (65Nxx)
- (with Verite, J. C.) Computation of eddy currents on a surface in  $R^3$  by finite element methods. *Computing methods in applied sciences and engineering* (Proc. Third Internat. Sympos., Versailles, 1977), I, pp. 111-126, *Lecture Notes in Math.*, 704, Springer, Berlin, 1979. (Authors' summary) 80c:78010 78A25 (65N30)
- Nedev, Stojan I. (with Arhangel'skii, A. V.) Some remarks on semi-metrizable spaces and their subspaces. *C. R. Acad. Bulgare Sci.* 31 (1978), no. 5, 499-500. (William G. Fleissner) 80c:54026 54E25
- Nedjál, Nicole I. Surfaces riemanniennes ou pseudoriemanniennes portant des champs concourants ou isotropes concourants. *Mathematica (Cluj)* 20(43) (1978), no. 1, 39-44. (Leopold Verstraeten) 80m:53021 53B25 (53A05)
- Variété riemannienne ou pseudo-riemannienne à champ vectoriel para-récurrent. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 8, 1177-1185. (Lieven Vanhecke) 80c:53015 53B20 (53B30)
- Nedjalkov, I. P. Limit of applicability for Einstein's gravitation equation. (Russian. Serbo-Croatian and English summaries) *Godišnik Vis. Učebn. Zaved. Tehn. Fiz.* 13 (1976), no. 1, 9-18 (1979). (Author's summary) 80f:83010 83C20
- (with Bančev, V. C.; Georgiev, G.) A numerical method of solving the inverse problem of potential theory. (Russian) *C. R. Acad. Bulgare Sci.* 31 (1978), no. 8, 983-985. (R. S. Anderssen) 80d:86002 86A20
- Nedoma, Jiří (with Rosa, K.; Čupal, I.) Geophysical problems and finite element and finite difference methods. *The use of finite element method and finite difference method in geophysics* (Proc. Summer School, Liblice, 1977), pp. 9-35, Česk. Akad. Věd, Prague, 1978. (G. Paria) 80i:86001 86-06 (86A15, 86A25)
- SH-wave propagation in quasianisotropic rocks: problem of partial differential equation with rapidly oscillating coefficients. *Inverse and improperly posed problems in differential equations* (Proc. Conf., Math. Numer. Methods, Halle, 1979), pp. 181-188, *Math. Research*, 1, Akademie-Verlag, Berlin, 1979. (Author's summary) 80f:73029 73D15
- See also Use of finite element method and finite difference method in geophysics, 80c:65007
- Nedoma, Josef The finite element solution of parabolic equations. (Czech summary) *Appl. Mat.* 23 (1978), no. 6, 408-438. (J. L. Morris) 80d:65121 65N30
- Linear independence and total separation of sets families. (Czech summary) *Ekonom.-Mat. Obzor* 14 (1978), no. 2, 164-187. (J. Borwein) 80a:90113 90C25 (52A20)
- The solution of parabolic models by finite element space and  $A$ -stable time discretization. *Equadiff IV* (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977), pp. 300-308, *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (J. D. Atkinson) 80g:65114 65N30
- Relatively convex sets and functions in  $R^n$ . (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 1, 3-16. (Ettore Santi) 80a:90032 90C25
- Nedreazov, L. V. Some self-learning population models. (Russian) *Learning algorithms in control systems and in data processing systems* (Russian), pp. 69-83, 127, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (Author's summary) 80c:92033 92A15
- Nedjalkov, I. P. See Nedjalkov, I. P.
- Nedziński, Thomas G. Quantification, domains of discourse, and existence. *Notre Dame J. Formal Logic* 20 (1979), no. 1, 130-140. (David W. Miller) 80f:03011 03A05
- Nee, Hao-ching See Ni, Hao Qing
- Needham, Joseph Address to the opening session of the XV International Congress of the History of Science, Edinburgh, 11 August 1977. *British J. Hist. Sci.* 11 (1978), no. 3, part 2, 103-113. (R. H. Atkin) 80m:01004 01A05
- Neel, D. (with Pair, C.; Amirchay, M.) Correctness proofs of syntax-directed processing descriptions by attributes. *J. Comput. System Sci.* 19 (1979), no. 1, 1-17. (Authors' summary) 80i:68009 68B10
- Neeman, Yuval Noninternal gauge theories. *Current trends in the theory of fields* (Sympos., Florida State Univ., Tallahassee, Fla., 1978), pp. 120-133, *AIP Conf. Proc.*, 48, Am. Inst. Physics, New York, 1978. (Author's summary) 80c:83019 83C45 (81M05)
- Gravity is the gauge theory of the parallel-transport modification of the Poincaré group. *Differential geometrical methods in mathematical physics, II* (Proc. Conf., Univ. Bonn, Bonn, 1977), pp. 189-215, *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (Virgil Obădeanu) 80d:83087 83E15 (58F05, 58F17)
- Spinor-type fields with linear, affine and general coordinate transformations. *Am. Inst. H. Poincaré Sect. A (N.S.)* 28 (1978), no. 4, 369-378. (Yvette Kosmann-Schwarzbach) 80c:81038 81C40 (22E70)
- (with Regge, T.) Gauge theory of gravity and supergravity on a group manifold. *Riv. Nuovo Cimento* (3) 1 (1978), no. 5, 1-43. (Hans Tilgner) 80c:17005 17A70 (53C80, 83E05)
- (with Šijački, Djordje) Unified affine gauge theory of gravity and strong interactions with finite and infinite  $GL(4, R)$  spinor fields. *Ann. Physics* 120 (1979), no. 2, 292-315. (M. Carmeli) 80i:81060 81G20 (22E70, 81C40)
- Irreducible gauge theory of a consolidated Salam-Weinberg model. *Phys. Lett. B* 81 (1979), no. 2, 190-194. (Porter W. Johnson) 80i:81076 81E10 (22E65)
- (with Šijački, Djordje) Gravitational interaction of hadrons and leptons: linear (multiplicity-free) bandon and nonlinear spinor unitary irreducible representations of  $SL(4, R)$ . *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 2, 561-564. (Authors' summary) 80d:81149 81M05 (22E45)
- (with Thierry-Mieg, Jean) Geometrical gauge theory of ghost and Goldstone fields and of ghost symmetries. *Proc. Nat. Acad. Sci. U.S.A.* 77 (1980), no. 2, part 1, 720-723. (Authors' summary) 80c:81133 81E99
- Neeragi, Prabha S. (with Sampathkumar, E.; Venkatachalam, C. V.) A generalization of the chromatic and line chromatic numbers of a graph. *J. Karnataka Univ. Sci.* 22 (1977), 44-49. (M. Plantholt) 80f:05064 05C15
- van Neerven, W. L. (with van Royen, R. P.) Infrared behaviour of  $\varphi^4$  theory in three dimensions and connection with critical phenomena. (Italian and Russian summaries) *Nuovo Cimento A* (11) 51 (1979), no. 4, 489-508. (Authors' summary) 80c:81116 81E15 (82A25)
- Nefedov, V. N. (with Zaikin, P. N.) Solution of some lexicographic problems of interpretation. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* 1979, no. 1, 5-13, 69. (I. Marușciac) 80c:90106 90C30
- Neffke, H. Bewertete Erneuerungsprozesse mit streng stationären Zuwächsen. *First Symposium on Operations Research* (Univ. Heidelberg, Heidelberg, 1976), Teil 1, pp. 503-514, *Operations Research Verfahren*, XXV, Hain, Königstein, 1977. (Allan Gut) 80d:60116 60K05
- Neggers, Joseph Counting finite posets. *Acta Math. Acad. Sci. Hungar.* 31 (1978), no. 34, 233-258. (D. A. Klarner) 80a:05014 05A15 (06A10)
- Finite modules and combinatorics. *J. Korean Math. Soc.* 15 (1978/79), no. 2, 63-75. (Gertrude Ehrlich) 80b:16025 16A64
- Negishi, Aiko (with Noguchi, Keiko) Fixed point free involutions on 4-dimensional tori. *Sci. Rep. Tokyo Woman's Christian Univ. No. 42-44* (1977), 476-483 (1978). (Jeffrey L. Tolleson) 80f:57018 57S17
- Negishi, Hiroshi The rate of convergence to normality for strong mixing sequences of random variables. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 24* (1977), 17-25. 80c:60039 60F05 (60G10)
- Negoescu, N. C. Sur les théorèmes d'inversion de Möbius et Shapiro. (Romanian summary) *An. Univ. Timișoara Ser. Ştiinţ. Mat.* 15 (1977), no. 1, 27-30 (1978). (Graham Lort) 80a:10004 10A20
- Negolák, C. V. (with Salaria, M.) Optimization in fuzzy environment. *Digital processing and transmission of data and control of processes by means of computers*, pp. 241-251, *Problems of Automation*, 10, Ed. Acad. RS România, Bucharest, 1978. (Klaus Tammert) 80c:90113b 90C15
- (with Stănescu, C. Al.) Fuzzy objects in topoi: a generalization of fuzzy sets. (Romanian summary) *Bul. Inst. Politehn. Iaşi Sect. I* 24(28) (1978), no. 3-4, 25-28.



- (Editors) **80j:03081** 03E72 (03G30, 94D05)
- Negrini, P. (with Caprino, Silvia; Scalia, M.) Asymptotic and total stability for generalized dynamical systems. *Applicable Anal.* **7** (1977/78), no. 4, 279–287. (Aubrey B. Poore) **80d:34054** 34C35 (34D05, 54H20)
- (with Salvadori, Luigi) Attractivity and Hopf bifurcation. *Nonlinear Anal.* **3** (1979), no. 1, 87–99 (1978). (Charles C. Conley) **80b:58045** 58F14 (34C05)
- Negro, Angelo Some variational formulation of nonlinear magnetic field problems in multiply connected domains. (Italian summary) *Rend. Sem. Mat. Univ. Politec. Torino* **36** (1977/78), 351–362 (1979). (Author's summary) **80e:78011** 78A30 (35J99, 58A12)
- (with Gabutti, Bruno) Some results on asymptotic behaviour of the Volterra-Lotka diffusion equations. (Italian summary) *Rend. Sem. Mat. Univ. Politec. Torino* **36** (1977/78), 403–414 (1979). (J. Smoller) **80d:35085** 35K99 (92A15)
- Nehari, Zeev Univalence criteria depending on the Schwarzian derivative. *Illinois J. Math.* **23** (1979), no. 3, 345–351. (S. K. Bajpai) **80i:30033** 30C55
- Nelkova-Nehmer, V. See Nelkova-Nehmer, V.
- Nehorosev, N. N. An exponential estimate of the time of stability of nearly integrable Hamiltonian systems. II. (Russian) *Trudy Sem. Petrovsk.* **No. 5** (1979), 5–50. (Ju. E. Gliklikh) **80m:58017** 58F05 (34D05, 70K20)
- Nelrich, Werner (with Goetze, Bernhard) Loop programs and classes of primitive recursive functions. *Mathematical foundations of computer science, 1978 (Proc. Seventh Sympos., Zakopane, 1978)*, pp. 232–238, *Lecture Notes in Comput. Sci.*, **64**, Springer, Berlin, 1978. (Robert M. Baer) **80g:68035** 68C01
- Nehse, Reinhard The Hahn-Banach property and equivalent conditions. *Comment. Math. Univ. Carolin.* **19** (1978), no. 1, 165–177. (T. L. Hicks) **80b:46014** 46A40
- Some general separation theorems. *Math. Nachr.* **84** (1978), 319–327. (René Fourneau) **80b:46005** 46A15 (90Cxx)
- (with Achilles, A.; Elster, Karl-Heinz) Bibliographie zur Vektoroptimierung (Theorie und Anwendungen). *Math. Operationsforsch. Statist. Ser. Optim.* **10** (1979), no. 2, 277–321. (Editors) **80h:90002** 90–02 (90C30)
- Nelhardt, H. Zwei-Raum-Verallgemeinerung des Theorems von Rosenblum und Kato. *Math. Nachr.* **84** (1978), 195–211. (T. Kato) **80i:47011** 47A40
- Nelkova, A. ★Сверточные коды для передачи дискретной информации. (Russian) [Convolution codes for discrete information transmission] “Nauka”, Moscow, 1979. 221 pp. (Przemyslaw Prusniakiewicz) **80d:94055** 94B10
- Nelman, F. See Neuman, František
- Nelmark, Ju. I. Invariant manifolds and stochastic motion of dynamical systems. (Russian) *Problems of the asymptotic theory of nonlinear oscillations (Russian)*, pp. 160–168, 278, *Naukova Dumka*, Kiev, 1977. (J. S. Joel) **80d:58054** 58F15 (34C35, 58F12)
- Synchronization and stochasticity. (Russian) VII. Internationale Konferenz über Nichtlineare Schwingungen (Berlin, 1975), Band I, Teil 2, pp. 133–146, *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977, 4, Akademie-Verlag, Berlin, 1977. (J. S. Joel) **80d:58042** 58F13 (34C35)
- ★Динамические системы и управляемые процессы. (Russian) [Dynamical systems and control processes] “Nauka”, Moscow, 1978. 336 pp. (Vadim Komkov) **80d:93006** 93–02 (34C35, 93D05)
- Nelander-Dorfer, Joseph Lie algebras, coalgebras and rational homotopy theory for nilpotent spaces. *Pacific J. Math.* **74** (1978), no. 2, 429–460. (J. Stasheff) **80b:55010** 55P62 (55P65, 55U35)
- (with Taylor, Laurence R.) Dolbeault homotopy theory. *Trans. Amer. Math. Soc.* **245** (1978/79), 183–210. (J. F. Adams) **80f:32004** 32C10 (14F40, 55P62, 57R99, 58A14)
- (with Cohen, F. R.; Moore, J. C.) Torsion in homotopy groups. *Ann. of Math.* (2) **109** (1979), no. 1, 121–168. (V. P. Snaith) **80e:55024** 55Q40
- The rational homotopy groups of complete intersections. *Illinois J. Math.* **23** (1979), no. 2, 175–182. (Jean-Michel Lemaire) **80j:55018** 55P62 (32C10)
- Nelkova, Pekka Randwertaufgaben zur Plattengleichung. *Ann. Acad. Sci. Fenn. Ser. A I Math. Dissertationes* **No. 16** (1978), 71 pp. (Z. C. Mottelet) **80b:35056** 35J40 (73K10)
- Nekrylova, Z. V. (with Kaniovskii, Ju. M.; Knopov, P. S.) The stochastic programming method in Hilbert space. (Russian. English summary) *Kibernetika (Kiev)* **1978**, no. 6, 71–79. (G. S. Tarasenko) **80h:90109** 90C15
- Nel, D. G. On the symmetric multivariate normal distribution and the asymptotic expansion of a Wishart matrix. *South African Statist. J.* **12** (1978), no. 2, 145–159. (Mir M. Ali) **80b:62062** 62H10
- Nel, Louis D. (with Hong, Sung Sa; Rho, Jae Chul) Nearness structure of  $C(X)$ . *Kyungpook Math. J.* **18** (1978), no. 2, 175–182. (H. Herrlich) **80b:54031** 54E17
- Convenient topological algebra and reflexive objects. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 259–276, *Lecture Notes in Math.*, **719**, Springer, Berlin, 1979. (H. Gonsior) **80i:18008** 18B25 (18B30)
- (with Hong, Sung Sa) Duality theorems for algebras in convenient categories. *Math. Z.* **166** (1979), no. 2, 131–136. (Robert Piacenza) **80g:18007** 18D15 (18C99)
- Nelipa, N. F. (with Chaichian, M.; Hayashi, M.; Pukhov, A. E.) On the problem of existence of quantum field theory. *J. Math. Phys.* **20** (1979), no. 8, 1783–1790. (James D. Fabrey) **80k:81124** 81E99 (46N05, 47H10)
- Nelson, Bruce (with DeWitt-Morette, Cecile; Maheshwari, Amar) Path integration in nonrelativistic quantum mechanics. *Phys. Rep.* **50** (1979), no. 5, 255–372. (L. L. Lee) **80i:81039** 81C35
- Nelson, H. D. (with Glasgow, D. A.) Eigenrelations for general second-order systems. *AIAA J.* **17** (1979), no. 7, 795–797. (From the text) **80e:70026** 70J05 (34B25)
- Nelson, James, Jr. Fixed points of order preserving surjections on partially ordered sets. *Bull. Malaysian Math. Soc.* (2) **1** (1978), 53–60. (Ivan Rival) **80d:06002** 06A10
- A common fixed-point structure. *Rocky Mountain J. Math.* **8** (1978), no. 4, 675–682. (Heinrich Steinlein) **80d:54058** 54H25
- (with Putcha, Mohan S.) Word equations in a band of paths. *Pacific J. Math.* **82** (1979), no. 1, 189–196. (Fred W. Roush) **80i:20052** 20M20
- Nelson, P. R. A prediction interval search scheme for the move-to-the-front replacement algorithm. *J. Inst. Math. Appl.* **24** (1979), no. 2, 231–236. (James W. Savely, Jr.) **80h:68010** 68B15 (60K10, 68H05)
- Nelson, Paul, Jr. (with Victory, H. Dean, Jr.) Theoretical properties of one-dimensional discrete ordinates. *SIAM J. Numer. Anal.* **16** (1979), no. 2, 270–283. (V. Sree-Hari-Rao) **80b:65155** 65R20 (82A70)
- Nelson, Robert R. The spaces of functions of finite upper  $p$ -variation. *Trans. Amer. Math. Soc.* **253** (1979), 171–190. (Paul Lewis) **80i:46027** 46E30 (28B05)
- Nelson, S. (with Triggiani, Roberto) Analytic properties of cosine operators. *Proc. Amer. Math. Soc.* **74** (1979), no. 1, 101–104. (S. Kurepa) **80b:47051** 47D05
- Nemat-Nasser, S. (with Horgan, C. O.) Bounds on eigenvalues of Sturm-Liouville problems with discontinuous coefficients. (French summary) *Z. Angew. Math. Phys.* **30** (1979), no. 1, 77–86. (Editors) **80b:34020** 34B25 (49H05)
- Némec, Petr (with Ježek, Jaroslav; Kepka, Tomáš) The category of totally symmetric quasigroups is binding. (Russian and Czech summaries) *Acta Univ. Carolin.—Math. Phys.* **19** (1978), no. 2, 63–64. (D. A. Robinson) **80b:20091** 20N05
- (with Kepka, Tomáš) Quasigroups whose regular mappings are automorphisms. *Acta Univ. Carolin.—Math. Phys.* **20** (1979), no. 1, 61–71. (D. A. Robinson) **80j:20051** 20L05 (20N05)
- (with Kepka, Tomáš) Quasimodules generated by three elements. *Comment. Math. Univ. Carolin.* **20** (1979), no. 2, 249–266. (D. A. Robinson) **80b:20105b** 20N05
- (with Kepka, Tomáš) Notes on distributive groupoids. *Math. Nachr.* **87** (1979), 93–101. (N. I. Sandu) **80j:20052** 20L05 (20N05)
- Néményi, Judit (with Hunyadi, László) A method of combining yearly and quarterly econometric models. (Hungarian. English and Russian summaries) *Stigma—Mat.-Közgazdasági Folyóirat* **11** (1978), no. 3–4, 129–150. (Authors' summary) **80i:90047** 90A19 (62P25)
- Nemeth, Evi (with Seberry, Jennifer; Shu, Michael) On the distribution of the permanent of cyclic (0, 1) matrices. *Utilitas Math.* **16** (1979), 171–182. (R. A. Brualdi) **80m:15094** 15A15 (05A15)
- Némethi, Csaba Characterizations of certain spaces in terms of divergent filters. *Mathematica (Cluj)* **19**(42) (1977), no. 1, 75–83 (1978). (D. C. Kent) **80b:54002** 54A05 (54A20)
- On almost sequential locally convex spaces. I. (Romanian summary) *Studia Univ. Babeş-Bolyai Math.* **23** (1978), no. 2, 54–58. (W. H. Ruckle) **80c:46002** 46A05
- Némethy, Alojs Solution of differential equations of parabolic type by the finite element method. (Russian) *Mathematical models and numerical methods (Papers, Fifth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 175–182, *Banach Center Publ.*, **3**, PWN, Warsaw, 1978. (Ju. K. Dem'janović) **80b:65137** 65N30
- Némethi, István (with Andrka, Hajnal) The generalised completeness of Horn predicate-logic as a programming language. *Acta Cybernet.* **4** (1978/79), no. 1, 3–10. (From the text) **80c:68006** 68B05 (03D05)
- (with Andrka, Hajnal) Completeness of Floyd logic. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **7** (1978), no. 3, 115–120. (A. Pluskevicius) **80a:03027** 68C01 (03B99)
- (with Andrka, Hajnal) On universal algebraic logic and cylindric algebras. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **7** (1978), no. 4, 152–158. (D. Monk) **80c:03075** 03G15
- (with Andrka, Hajnal; Makai, E. Jr.; Márki, L.) Reduced products in categories. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 25–45, *Heyn, Klagenfurt*, 1979. (Paul Bankston) **80b:03049** 03C20 (03C60, 18A30, 18C05)
- (with Andrka, Hajnal) Not all representable cylindric algebras are neat reducts. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **8** (1979), no. 3, 145–147. (From the text) **80m:03100** 03G15
- Nemethy, Alojs See Némethy, Alojs
- Nemetz, Tibor O. H. (with Simon, Judit) On estimating the entropy of written Hungarian by gambling technique. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 69–76, *Reidel, Dordrecht*, 1978. (Authors' summary) **80j:94032** 94A17
- On a finite decision model. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 379–390, *Academia, Prague*, 1978. (W. E. Strawderman) **80m:62007** 62C05 (62B10)
- (with Györfi, L.)  $f$ -dissimilarity: a generalization of the affinity of several distributions. *Ann. Inst. Statist. Math.* **30** (1978), no. 1, 105–113. (Wolfgang Sendlir) **80i:94009** 94A17 (62B10)
- (with Horibe, Yasuichi) On the max-entropy rule for a binary search tree. *Acta Inform.* **12** (1979), no. 1, 63–72. (Authors' summary) **80i:68076** 68E10 (68H05)
- Nemhauser, George L. (with Wolsey, L. A.) Best algorithms for approximating the maximum of a submodular set function. *Math. Oper. Res.* **3** (1978), no. 3, 177–188. (From the summary) **80g:90100** 90C30
- (with Fisher, M. L.; Wolsey, L. A.) An analysis of approximations for maximizing submodular set functions. II. Polyhedral combinatorics. *Math. Programming Stud.* **No. 8** (1978), 73–87. (Jacques Dubois) **80d:90090** 90C99 (05A05)
- (with Ball, Michael O.) Matroids and a reliability analysis problem. *Math. Oper. Res.* **4** (1979), no. 2, 132–143. (Masafumi Sasaki) **80g:90057** 90B25 (05B35, 90B15)
- Nemirovskii, A. S. (with Judin, D. B.) Effectiveness of randomization of control. (Russian) Adaptation problems in technical systems. *Problemy Steklov. Poiska No. 7* (1978), 22–66, 317. (V. Kolmanovskii) **80e:93145** 93E20
- (with Judin, D. B.) Effective methods for the solution of convex programming problems of large dimensions. (Russian) *Ekonom. i Mat. Metody* **15** (1979), no. 1, 135–152. (Bruce D. Craven) **80e:90083** 90C25
- Nemirovskii, Ju. V. (with Siemenzon, K. M.) On the question of the propagation of elastic stress waves in continuously inhomogeneous anisotropic media. (Russian) *Z. Prikl. Meh. i Tehn. Fiz.* **1979**, no. 5, 126–134, 159. (Authors' summary) **80k:73028** 73D99
- Nemitz, William C. Irreducibility in implicative semilattices. *Algebra Universalis* **9** (1979), no. 2, 244–249. (R. Balbes) **80b:06003** 06A12
- Nenciu, G. (with Scharf, G.) On regular external fields in quantum electrodynamics. *Helv. Phys. Acta* **51** (1978), no. 3, 412–424. (K. Drühl) **80d:81139** 81L05
- (with Rasche, G.; Stühi, M.; Woolcock, W. S.) General solution of multichannel partial-wave dispersion relations. I. Coincident thresholds, pole approximation. *Helv. Phys. Acta* **51** (1978), no. 4, 608–633. (N. Nakamishi) **80i:81096** 81F15 (47A40)
- On the adiabatic theorem of quantum mechanics. *J. Phys. A* **13** (1980), no. 2, L15–L18. (Authors' summary) **80k:81071** 81D99
- Nenov, N. D. (with Hadziivanov, Nikolai G.) The number of  $p$ -cliques in graphs with

- p*-filters. (Russian) *C. R. Acad. Bulgare Sci.* **30** (1977), no. 9, 1231–1234. (From the introduction) **80c:05113** 05C99
- (with Hadžiivanov, Nikolaï G.) Sharpening of a theorem of Greenwood and Gleason on the colorings of the edges of a complete graph with nine vertices. (Russian) *C. R. Acad. Bulgare Sci.* **31** (1978), no. 6, 631–633. (E. Jucović) **80d:05024** 05C15
- (with Hadžiivanov, Nikolaï G.) The Graham-Spencer number. (Russian) *C. R. Acad. Bulgare Sci.* **32** (1979), no. 2, 155–158. (J. Bosák) **80m:05043** 05C15
- Nepeivoda, N. N. A relation between natural deduction rules and operators of high level algorithmic languages. (Russian) *Dokl. Akad. Nauk SSSR* **239** (1978), no. 3, 526–529. (G. Asser) **80a:03013** 03B20 (68B10)
- Synthesis of correct programs out of correct subroutines. *Programirovanie* **1979**, no. 1, 15–25, 95 (Russian); translated as *Programming and Comput. Software* **5** (1979), no. 1, 10–19. (Author's summary) **80i:68007** 68B05
- Nepomniastchy, Pierre Étude d'un système gouverné par une inéquation différentielle. *Étude numérique des grands systèmes* (Proc. Sympos., Novosibirsk, 1976), pp. 213–232. *Méthodes Math. de l'Informatique*, 7, Dunod, Paris, 1978. (P. M. Mereau) **80b:49028** 49D30 (65P05)
- Study of a system controllable by a differential inequality. (Russian) *Numerical methods in mathematical physics, geophysics and optimal control* (Sympos., Novosibirsk, 1976) (Russian), pp. 146–159, 235, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (L. von Wolfersdorf) **80j:93024** 93B05 (34H05)
- Nepomniastchy, V. A. See Nepomniastchii, V. A.
- Nepomniastchii, G. M. (with Smirnov, Ju. M.) Retraction of mappings. (Russian) *Czechoslovak Math. J.* **29(104)** (1979), no. 3, 366–377. (T. Maćkowiak) **80h:54014** 54C15 (54C10, 54C55)
- Equivalence of some properties of continuous mappings. (Russian) *Czechoslovak Math. J.* **29(104)** (1979), no. 3, 378–384. (T. Maćkowiak) **80h:54016** 54C20 (54C10, 54C55)
- Multiplicative extension operators. (Russian) *Dokl. Akad. Nauk SSSR* **245** (1979), no. 6, 1311–1314. (Ju. K. Dem'janović) **80j:54006** 54C10 (54C20, 54C30, 54D30)
- Nepomniastchii, V. A. On divergence and halting problems for monadic program schemas. *Mathematical foundations of computer science*, 1978 (Proc. Seventh Sympos., Zakopane, 1978), pp. 385–392. *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (A. V. Anisimov) **80c:68022** 68B10 (68C30)
- (with Voelkel, Lutz) Zur Vollständigkeit von Befehlssystemen. (English and Russian summaries) *Elektron. Informatsionverarb. Kybernet.* **14** (1978), no. 1–2, 43–48. (George Tourlakis) **80a:03052** 03D10 (68C20)
- Neri, Filippo (with Brandt, Richard A.) Nonabelian gauge invariant classical Lagrangian formalism for point electric and magnetic charge. *Nuclear Phys. B* **145** (1978), no. 1, 221–253. (From the summary) **80c:78004** 78A25 (81L05)
- (with Brandt, Richard A.; Zwanziger, Daniel) Lorentz invariance from classical particle paths in quantum field theory of electric and magnetic charge. *Phys. Rev. D* (3) **19** (1979), no. 4, 1153–1167. (Authors' summary) **80d:81060** 81E05 (81M05)
- Neri, Umberto (with Grimaldi, A.; Ragnedda, F.) On a Cauchy problem (with  $L^p$  data) for the square of the heat operator. (Italian summary) *Boll. Un. Mat. Ital. A* (5) **15** (1978), no. 3, 552–559. (Maria Cinquini-Cibrario) **80c:35046** 35K30 (35C15)
- Harmonic functions with BMO boundary values. *Harmonic analysis in Euclidean spaces* (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 1, pp. 353–357. *Proc. Sympos. Pure Math.*, XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (Jang Mei G. Wu) **80j:31007** 31B05
- Nermuth, Manfred Minimal conditions for upper-hemicontinuity of the choice correspondence. *J. Econom. Theory* **19** (1978), no. 2, 558–560. (D. R. Traylor) **80g:90006** 90A06 (54C08)
- Sensitivity of optimal growth paths with respect to a change in target stocks or in the length of the planning horizon in a multisector model. *J. Math. Econom.* **5** (1978), no. 3, 289–301. (Mukul Majumdar) **80c:90043** 90A17 (90A05)
- Nesenzuk, A. P. Indefinite quantities in problems of control with incomplete information. *Automatika* **1979**, no. 2, 55–64 (Russian, English summary); translated as *Soviet Automat. Control* **12** (1979), no. 2, 46–54. (Author's summary) **80c:93057** 93E20
- Nesetril, Jaroslav (with Babai, László) High chromatic rigid graphs. I. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. I, pp. 53–60. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (Pavol Hell) **80i:05044** 05C25
- (with Rödl, Vojtěch) Partition (Ramsey) theory—a survey. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 759–792. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (Stefan A. Burr) **80c:05003** 05–02 (05C55)
- (with Rödl, Vojtěch) A selective theorem for graphs and hypergraphs. (French summary) *Problèmes combinatoires et théorie des graphes* (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 309–311. *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Authors' summary) **80m:05044** 05C15 (05C65)
- (with Rödl, Vojtěch) The structure of critical Ramsey graphs. *Acta Math. Acad. Sci. Hungar.* **32** (1978), no. 3–4, 295–300. (R. L. Graham) **80c:05102** 05C55
- (with Pultr, Aleš) On classes of relations and graphs determined by subobjects and factorobjects. *Discrete Math.* **22** (1978), no. 3, 287–300. (Pavol Hell) **80c:05086** 05C99
- (with Rödl, Vojtěch) A simple proof of the Galvin-Ramsey property of the class of all finite graphs and a dimension of a graph. *Discrete Math.* **23** (1978), no. 1, 49–55. (Charles M. Grinstead) **80j:05091** 05C55
- Infinite precise objects. (Russian summary) *Math. Slovaca* **28** (1978), no. 3, 253–260. (Andreas Blass) **80i:05061** 05C38 (04A20)
- (with Hell, Pavol) Homomorphisms of graphs and of their orientations. *Monatsh. Math.* **85** (1978), no. 1, 39–48. (Authors' summary) **80a:05110** 05C25 (05C20)
- (with Rödl, Vojtěch) On a probabilistic graph-theoretical method. *Proc. Amer. Math. Soc.* **72** (1978), no. 2, 417–421. (J. Spencer) **80a:05158** 05C65
- (with Rödl, Vojtěch) Ramsey theorem for classes of hypergraphs with forbidden complete subhypergraphs. *Czechoslovak Math. J.* **29(104)** (1979), no. 2, 202–218. (R. L. Graham) **80j:05094** 05C65
- Ness, Linda Curvature on the Fermat cubic. *Duke Math. J.* **45** (1978), no. 4, 797–807. (M. A. Kiviva) **80m:14020** 14H99 (53A20)
- Nessel, R. J. (with Butzer, P. L.; Dickmeis, W.) Lax-type theorems with orders in connection with inhomogeneous evolution equations in Banach spaces. *Linear spaces and approximation* (Proc. Conf., Math. Res. Inst., Oberwolfach, 1977), pp. 531–546. *Internat. Schriftenreihe Numer. Math.*, 40, Birkhäuser, Basel, 1978. (Hans J. Smeul) **80a:65103** 65J05 (34G99, 35K99)
- (with Dickmeis, W.) On Banach-Steinhaus theorems with orders. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* **1** (1978), 95–107. (P. D. Morris) **80k:47024** 47A99 (41A65)
- (with Wilmes, G.) Nikol'skii-type inequalities in connection with regular spectral measures. Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* **33** (1979), no. 1–2, 169–182. (Anthony Holland) **80f:41009** 41A17 (41A65)
- (with Butzer, P. L.; Dickmeis, W.; Hahn, Lothar) Lax-type theorems and a unified approach to some limit theorems in probability theory with rates. *Resultate Math.* **2** (1979), no. 1, 30–53. (J. A. Goldstein) **80m:60027** 60F05 (47D05)
- Nesselmann, Dieter Über superzifflische Systeme von Parametern. *Math. Nachr.* **88** (1979), 279–283. (J.-P. Lafon) **80m:13004** 13H15
- Über monodiale Transformationen lokaler Ringe. *Math. Nachr.* **88** (1979), 285–294. (J.-P. Lafon) **80m:13005** 13H15
- Nessett, D. M. (with Reichard, O. W.) Allocation algorithms for dynamically microprogrammable multiprocessor systems. *Comput. J.* **22** (1979), no. 2, 155–161. (Authors' summary) **80f:68029** 68B20
- Nessonov, M. I. (with Golodets, V. Ja.) Invariant states on asymptotically abelian factors of type III. (Russian) *Funktsional. Anal. i Prilozhen.* **13** (1979), no. 2, 81–82. (Robert S. Doran) **80h:46100** 46L10
- Nester, James M. (with Gotay, Mark J.; Hinds, George) Presymplectic manifolds and the Dirac-Bergmann theory of constraints. *J. Math. Phys.* **19** (1978), no. 11, 2388–2399. (Virgil Obădeanu) **80c:58025** 58F06 (53C15)
- (with Gotay, Mark J.) Presymplectic Lagrangian systems. I. The constraint algorithm and the equivalence theorem. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **30** (1979), no. 2, 129–142. (Demeter Krupka) **80j:58035** 58F05 (70H05)
- Nesterenko, Ju. V. The number  $\pi$  and Lindemann's theorem. (Russian) *Comment. Math. Univ. Carolin.* **20** (1979), no. 2, 335–343. (S. V. Kotov) **80i:10042** 10F35
- See also Brownawell, W. Dale. **80c:10036**
- Nesterenko, V. A. (with Veršikov, G. M.; Grižkan, Ju. S.; Ivanov, S. V.; Poltavcev, A. N.) Quantum gravitational effects in an anisotropic universe. *Ž. Eksper. Teoret. Fiz.* **73** (1977), no. 6, 1985–2077 (Russian, English summary); translated as *Soviet Phys. JETP* **46** (1977), no. 6, 1041–1051. (Derek Raine) **80b:83028** 83C45 (35Q99)
- Nesterenko, V. V. (with Barbašov, B. M.) The dynamics of a relativistic string. (Russian) *Fiz. Elementar. Častic i Atom. Jadra* **9** (1978), no. 5, 709–758. (Authors' summary) **80b:81063** 81D99 (35Q99, 81M05)
- (with Barbašov, B. M.; Červjakov, A. M.) Solitons in geometric field theories. (Russian, English summary) *Teoret. Mat. Fiz.* **40** (1979), no. 1, 15–27. (Authors' summary) **80f:81126** 81M05 (58A17)
- (with Barbašov, B. M.; Červjakov, A. M.) The solitons in some geometrical field theories. *J. Phys. A* (3) (1980), no. 1, 301–312. (Authors' summary) **80k:81215** 81M05 (35Q20, 53A05)
- Nesterov, A. V. (with Butuzov, V. F.) A singularly perturbed equation of parabolic type. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyšisl. Mat. Kibernet.* **1978**, no. 2, 49–56. (L. Cattabriga) **80d:35027** 35C20 (35K20)
- Nesterov, Ju. E. (with Vladimirov, A. A.; Čekanov, Ju. N.) Uniformly convex functionals. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyšisl. Mat. Kibernet.* **1978**, no. 3, 12–23. (Vladimir L. Levin) **80m:49006** 49A27 (46G05)
- (with Vladimirov, A. A.; Čekanov, Ju. N.) Uniformly quasiconvex functionals. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyšisl. Mat. Kibernet.* **1978**, no. 4, 18–27. (M. M. Cvetanov) **80f:49021** 49B34 (46G99)
- Nesterov, S. V. Examples of nonlinear Klein-Gordon equations that are solvable in elementary functions. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst. No. 357* (1978), 68–70. (Ja. A. Roitberg) **80b:35018** 35C05 (35L70)
- Nesterova, T. A. (with Kac, A. O.) Graphs with exactly three vertices of the same degree. (Russian, Czech and English summaries) *Časopis Pěst. Mat.* **103** (1978), no. 2, 159–174, 203. (M. M. Syslo) **80a:05069** 05Cxx
- Nesterova, T. N. (with Il'in, A. M.) Asymptotic behavior of the solution of the Cauchy problem for a certain quasilinear parabolic equation with a small parameter. (Russian) *Dokl. Akad. Nauk SSSR* **240** (1978), no. 1, 11–13. (V. Djuriković) **80b:35020** 35B40 (35K15)
- Nestke, A. (with Friedrich, Th.) Über SL-Mannigfaltigkeiten. *Math. Nachr.* **85** (1978), 31–36. (K. Lamotte) **80d:57017** 57R40 (57R25)
- Neta, Beny Finite element approximation of a nonlinear parabolic problem. *Comput. Math. Appl.* **4** (1978), no. 3, 247–255. (Charlie H. Cooke) **80a:65230** 65N30
- A sixth-order family of methods for nonlinear equations. *Internat. J. Comput. Math.* **7** (1979), no. 2, 157–161. (Author's summary) **80c:65111** 65H05
- Netanyahu, E. (with Schiffer, M.) On the monotonicity of some functionals in the family of univalent functions. *Israel J. Math.* **32** (1979), no. 1, 14–26. (E. Zlotkiewicz) **80m:30014** 30C55
- Netes, V. A. An existence and uniqueness theorem for the solution of an ordinary differential equation in a locally convex space. (Russian) *Mat. Zametki* **25** (1979), no. 6, 891–898, 957. (Angelo Favini) **80b:34082** 34G20 (47H10)
- Netrebia, A. G. Properties of systems of  $n$ -dimensional convex sets in finite-dimensional linear spaces. (Russian) *Mat. Zametki* **25** (1979), no. 4, 603–618, 637. (Ju. A. Šaškin) **80j:52004** 52A20 (52A35)
- Netuka, Ivan (with Lukáš, Jaroslav) What is the right solution of the Dirichlet problem? *Romanian-Finnish Seminar on Complex Analysis* (Proc., Bucharest, 1976), pp. 564–572. *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (R. M. Hervé) **80m:31015** 31D05
- Netzer, Norbert Differentialgleichungen im Zusammenhang mit der Pigerschritttransformation. *Iterationsprobleme* (Graz, 1977), Ber. No. 86, 10 pp., Forschungszentrum Graz, Graz, 1978. (Walter Hengartner) **80m:22010** 22E05 (34A99)
- Verallgemeinerte topologische Strukturen. *Jahrbuch Überblicke Mathematik*, 1978, pp. 87–106. *Bibliographisches Inst., Mannheim*, 1978. (B. T. Sims) **80d:54002** 54A05
- Neu, John See Bibliography: History of science and its cultural influences. **80c:00017a** and



- Bibliography: History of science and its cultural influences.** 80c:00017b
- Neu, John C.** (with Cohen, Donald S.; Rosales, Rodolfo R.) Rotating spiral wave solutions of reaction-diffusion equations. *SIAM J. Appl. Math.* 35 (1978), no. 3, 536-547. (T. W. Barrett) 80c:00008 80A30 (35Q20, 92A40)
- (with Cohen, Donald S.; Coutsias, Evangelos) Stable oscillations in single species growth models with hereditary effects. *Math. Biosci.* 44 (1979), no. 3-4, 255-267. (Authors' summary) 80c:92015 92A10
- Chemical waves and the diffusive coupling of limit cycle oscillators. *SIAM J. Appl. Math.* 36 (1979), no. 3, 509-515. (V. P. Milant'ev) 80f:00008 80A30 (35B99)
- Coupled chemical oscillators. *SIAM J. Appl. Math.* 37 (1979), no. 2, 307-315. (Aubrey B. Poore) 80f:00009 80A30 (34C15)
- Neuber, H.** Korrelation von Mikro- und Makrospannungskonzentrationen am Beispiel des Risses in einer halbelliptischen Kerbe. *Bayer. Akad. Wiss. Math.-Natur. Kl. Sitzungsber.* 1977, 139-158 (1978). (H. G. Hopkins) 80f:73074 73M05
- Neuberg, Jiří** Universality of the best determined terms method. (Russian and Czech summaries) *Apl. Mat.* 24 (1979), no. 6, 401-405. (M. Z. Nashed) 80c:47021 47A50 (65J10)
- Neuberger, J. W.** An iterative method for approximating solutions to nonlinear partial differential equations. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978), pp. 287-297, Academic Press, New York, 1979.* (J. R. Kuttler) 80c:65108 65N20
- Boundary value problems for systems of nonlinear partial differential equations. *Functional analysis methods in numerical analysis (Proc. Special Session, Annual Meeting, Amer. Math. Soc., St. Louis, Mo., 1977), pp. 196-208, Lecture Notes in Math., 701, Springer, Berlin, 1979.* (J. R. Kuttler) 80c:65109 65N20 (47F05, 65J15)
- Neubrand, Michael** Einheiten in algebraischen Funktionen- und Zahlkörpern. *J. Reine Angew. Math.* 303/304 (1978), 170-204. (K. Lakkis) 80b:12005 12A45
- Neubrunn, Tibor** Generalized continuity and separate continuity. (Russian summary) *Math. Slovaca* 27 (1977), no. 3, 307-314. (Hughes B. Hoyle, III) 80c:54017 54C05
- Erratum: "A note on mappings of Baire spaces" (*Math. Slovaca* 27 (1977), no. 2, 173-176). *Math. Slovaca* 27 (1977), no. 4, 442. (S. T. Lin) 80c:54017 54C50 (54G20)
- Almost uniform convergence for continuous parameters. (Russian summary) *Math. Slovaca* 28 (1978), no. 3, 321-328. (Dieter Hoffmann) 80g:28005 28A20
- Neudachin, V. G.** (with Kukulin, V. I.; Smirnov, Ju. F.) Interaction of composite particles and the Pauli principle. (Russian. English summary) *Fiz. Elementar. Častíc i Atom. Jadr* 10 (1979), no. 6, 1236-1293. (Authors' summary) 80m:81105 81G35 (81F10)
- Neufeld, Wilhelm** A note on the denseness of differentiable aggregate demand. *J. Math. Econom.* 5 (1978), no. 2, 129-131. (Georg Bol) 80b:90025 90A14
- (with Artzner, Philippe) Boundary behavior of supply. A continuity property of the maximizing correspondence. *J. Math. Econom.* 5 (1978), no. 2, 133-152. (Carl P. Simon) 80c:90031 90A16
- Neuenschwander, E.** Der Nachlass von Casorati (1835-1890) in Pavia. *Arch. Hist. Exact Sci.* 19 (1978/79), no. 1, 1-89. (D. J. Struik) 80c:01006 01A55 (14-03, 30-03)
- Augustin Cauchy: ein Wendepunkt in der Geschichte der Analysis. *Proceedings, Bicentennial Congress Wiskundig Genootschap (Vrije Univ., Amsterdam, 1978), Part II, pp. 275-294, Math. Centre Tracts, 101, Math. Centrum, Amsterdam, 1979.* (J. Dieudonné) 80f:01013 01A55
- Augustin Cauchy: ein Wendepunkt in der Geschichte der Analysis. 14th Dutch Mathematical Congress (Vrije Univ., Amsterdam, 1978). *Nieuw Arch. Wisk.* (3) 27 (1979), no. 1, 50-69. (Editors) 80f:01014 01A55
- Neugebauer, C. J.** Strong differentiability of Lipschitz functions. *Trans. Amer. Math. Soc.* 240 (1978), 295-306. (W. P. Ziemer) 80c:26002 26A16 (46E35)
- Neugebauer, G.** Bäcklund transformations of axially symmetric stationary gravitational fields. *J. Phys. A* 12 (1979), no. 4, L67-L70. (Author's summary) 80c:83007 83C05 (49A99, 58A15)
- A general integral of the axially symmetric stationary Einstein equations. *J. Phys. A* 13 (1980), no. 2, L19-L21. (Author's summary) 80c:83024 83C40
- Neugebauer, Otto** See Boas, Ralph P. 80c:01022
- Neuhardt, John B.** (with Mount-Campbell, Clark A.) Selection of cost-optimal  $2^{k-p}$  fractional factorials. Optimization in statistics. *Comm. Statist. B—Simulation Comput.* 7 (1978), no. 4, 369-383. (U. B. Paik) 80a:62114 62K05 (62K15)
- Neuhoff, David L.** (with Leon-Garcia, Alberto; Davison, Lee D.) New results on coding of stationary nonergodic sources. *IEEE Trans. Inform. Theory* 25 (1979), no. 2, 137-144. (Robert Gray) 80b:94020 94A29
- (with Shields, Paul C.) Channels with almost finite memory. *IEEE Trans. Inform. Theory* 25 (1979), no. 4, 440-447. (Authors' summary) 80g:94049 94A40
- Neuhof, Erich J.** See Formal description of programming concepts. 80d:68004
- Neukirch, Jürgen** (with Bayer, Pilar) On values of zeta functions and  $\ell$ -adic Euler characteristics. *Invent. Math.* 50 (1978/79), no. 1, 35-64. (Lawrence Washington) 80b:12009 12A70 (14G10)
- Neuman, E.** Convex interpolating splines of odd degree. *Utilitas Math.* 14 (1978), 129-140. (Manfred Sommer) 80d:41001 41A05 (41A15)
- Neuman, František** (with Vosmanický, Jaromír) Functions (sequences) whose derivatives (differentiations) are of constant signs. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 7, 8-12. (J. Mařík) 80c:26006 26E10
- Limit circle classification and boundedness of solutions. *Proc. Roy. Soc. Edinburgh Sect. A* 81 (1978), no. 1-2, 31-34. (M. S. P. Eastham) 80b:34024 34B20
- Global properties of the  $n$ th order linear differential equations. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977), pp. 309-317, Lecture Notes in Math., 703, Springer, Berlin, 1979.* (H. W. Guggenheimer) 80d:34001 34-02 (34C11, 53A04, 53A20, 58A17)
- The twentieth birthday of academici Otakar Borůvka. *Czechoslovak Math. J.* 29(104) (1979), no. 2, 330-335. (I. Plátek) (Editors) 80c:01032 01A70
- Invariants of third-order linear differential equations and the moving frame method of É. Cartan. (Russian) *Differencial'nye Uravnenija* 15 (1979), no. 3, 398-404, 570. (L. Reizig) 80b:34049 34C20 (58A15)
- Neuman, Gerald** Rational surfaces with too many vector fields. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 189-195. (G. Horrocks) 80c:14021 14L30
- Neumann, B. H.** A problem of I. D. Macdonald: "Factor groups" (*Math. Gaz.* 62 (1978), no. 419, 29-35). *Math. Gaz.* 62 (1978), no. 422, 298-299. (Hugo S. Sun) 80c:20049 20E26
- Some new rumours in group theory. *Math. Medley* 6 (1978), no. 3, 100-103. (Editors) 80c:20001 20-02
- On a problem of Ian D. Macdonald. *Math. Medley* 6 (1978), no. 3, 104-108. (John S. Wilson) 80f:20002 20A05
- (with Wilson, L. O.) Some sequences like Fibonacci's. *Fibonacci Quart.* 17 (1979), no. 1, 80-83. (Christian Radoux) 80b:10014 10A35
- See also How convincing is a proof? 80m:03024
- Neumann, K.** (with Steinhardt, U.) Time planning by means of GERT networks with basic elements. *Operations Research Verfahren*, 30, pp. 111-129, Hain, Meisenheim, 1979. (Authors' summary) 80b:90146 90C35 (90B10)
- Neumann, Manfred** A probabilistic analysis of the difficulties of unifying quantum mechanics with the theory of relativity. *Found. Phys.* 8 (1978), no. 9-10, 721-733. (Author's summary) 80c:82012 82A05 (00A89)
- Neumann, Michael** (with Fuchssteiner, Benno) Small boundaries. *Arch. Math. (Basel)* 30 (1978), no. 6, 613-621. (S. Simons) 80d:46043 46E05 (46A55)
- (with Albrecht, Ernst) Über die Stetigkeit von dissipativen linearen Operatoren. *Arch. Math. (Basel)* 31 (1978/79), no. 1, 74-88. (H. Langer) 80f:47030 47B44 (46A99, 46F99)
- Continuity of sublinear operators of  $F$ -spaces. *Manuscripta Math.* 26 (1978/79), no. 1-2, 37-61. (S. Kutateladze) 80c:47047 47H07
- (with Plemmons, Robert J.) Convergent nonnegative matrices and iterative methods for consistent linear systems. *Numer. Math.* 31 (1978/79), no. 3, 265-279. (L. W. Ehrlich) 80b:65047 65F10
- A note on generalizations of strict diagonal dominance for real matrices. *Linear Algebra Appl.* 26 (1979), 3-14. (R. J. Plemmons) 80d:15005 15A09 (65F15)
- (with Masser, D. W.) On the square roots of strictly quasi-accretive complex matrices. *Linear Algebra Appl.* 28 (1979), 135-140. (G. N. de Oliveira) 80g:15011 15A24 (15A48, 15A57)
- Neumann, Peter M.** (with Cameron, Peter J.; Saxl, Jan) An interchange property in finite permutation groups. *Bull. London Math. Soc.* 11 (1979), no. 2, 161-169. (Peter Rowlinson) 80g:20005 20B10
- (with Saxl, Jan) The primitive permutation groups of some special degrees. II. Small multiples of certain large primes. *Math. Z.* 169 (1979), no. 3, 205-222. (W. M. Kantor) 80m:20002 20B20
- Neumann, Walter D.** ★Equivariant Witt rings. *Bonner Mathematische Schriften*, 100. Universität Bonn, Mathematisches Institut, Bonn, 1977. 81 pp. (Author's review) 80a:57010 57R20 (15A63, 20C05)
- (with Raymond, Frank) Seifert manifolds, plumbing,  $\mu$ -invariant and orientation reversing maps. *Algebraic and geometric topology (Proc. Sympos., Univ. California, Santa Barbara, Calif., 1977), pp. 163-196, Lecture Notes in Math., 664, Springer, Berlin, 1978.* (M. Sebastiani) 80c:57008 57N10 (14J17, 32B99)
- Multiplicativity of signature. *J. Pure Appl. Algebra* 13 (1978), no. 1, 19-31. (K. Lamotte) 80b:57019 57R22 (55R20)
- (with Weintraub, Steven H.) Four-manifolds constructed via plumbing. *Math. Ann.* 238 (1978), no. 1, 71-78. (Alan H. Durfee) 80g:57047 57R60 (57Q60, 57R65)
- Signature related invariants of manifolds. I. Monodromy and  $\gamma$ -invariants. *Topology* 18 (1979), no. 2, 147-172. (K. Lamotte) 80c:57048 57R20 (10C07, 57R15)
- Neumanová, Eva** Numerical solution of the three-dimensional multigroup diffusion equations in hexagonal geometry. (Czech and Russian summaries) *Acta Polytech. Práce ČVUT* (4) 1979, no. 1, 77-87. (Author's summary) 80m:65076 65N20 (65P05)
- Neundorff, W.** (with Schoenefeld, Re.) Stable iterative hybrid method for the solution of weak nonlinear parabolic differential equations. *Math. Comput. Simulation* 22 (1980), no. 1, 1-6. (John Crank) 80m:65064 65M99
- Neunhöffer, Helmut** Über Kronecker-Produkte irreduzibler Darstellungen von  $SL(2, R)$ . (English summary) *Sitzungsber. Heidelb. Akad. Wiss. Math.-Natur. Kl.* 1978, no. 3, 173-260. (Audrey A. Terras) 80c:22034 22E45
- Neussert, H.** (with Illner, Reinhard) An existence theorem for the unmodified Vlasov equation. *Math. Methods Appl. Sci.* 1 (1979), no. 4, 530-544. (A. A. Arsen'ev) 80j:35085 35Q20 (82A45, 85A05)
- Neustupa, Jiří** A contribution to the theory of stability of differential equations in Banach space. *Czechoslovak Math. J.* 29(104) (1979), no. 1, 27-52. (Peter J. Bushell) 80b:34000 34G20 (35B35)
- Neuts, Marcel F.** The second moments of the absorption times in the Markov renewal branching process. *J. Appl. Probab.* 15 (1978), no. 4, 707-714. (A. M. Zaharin) 80g:60094 60K15 (60K25)
- Renewal processes of phase type. *Naval Res. Logist. Quart.* 25 (1978), no. 3, 445-454. (Andor Dobó) 80b:90068 90B25
- A versatile Markovian point process. *J. Appl. Probab.* 16 (1979), no. 4, 764-779. (D. J. Daley) 80c:60080 60G55 (60K25)
- The probabilistic significance of the rate matrix in matrix-geometric invariant vectors. *J. Appl. Probab.* 17 (1980), no. 1, 291-296. (Ralph L. Disney) 80b:60084 60J10 (60K25)
- Neuvonen, Timo** A complete reducibility criterion with an application to representations of semisimple groups. *J. Algebra* 60 (1979), no. 1, 282-288. (Vinay V. Deodhar) 80j:20042 20G05 (22E47)
- Neuwirth, J. H.** Ergodicity of some mappings of the circle and the line. *Israel J. Math.* 31 (1978), no. 3-4, 359-367. (R. L. Adler) 80c:28031 28D20 (10K99)
- Nevai, Paul G.** Bernstein's inequality in  $L^p$  for  $0 < p < 1$ . *J. Approx. Theory* 27 (1979), no. 3, 239-243. (J. S. Byrnes) 80m:41009 41A17
- Orthogonal polynomials. *Mem. Amer. Math. Soc.* 18 (1979), no. 213, v+185 pp. (T. S. Chihara) 80c:42025 42C05
- An asymptotic formula for the derivatives of orthogonal polynomials. *SIAM J. Math. Anal.* 10 (1979), no. 3, 472-477. (A. Magnus) 80j:42040 42C05
- (with Dehesa, Jesús S.) On asymptotic average properties of zeros of orthogonal polynomials. *SIAM J. Math. Anal.* 10 (1979), no. 6, 1184-1192. (T. S. Chihara) 80m:42031 42C05
- Distribution of zeros of orthogonal polynomials. *Trans. Amer. Math. Soc.* 249 (1979), no. 2, 341-361. (A. E. Danese) 80j:42041 42C05

- Orthogonal polynomials defined by a recurrence relation. *Trans. Amer. Math. Soc.* **250** (1979), 369–384. (A. G. Law) **80d:42011** 42C05
- Nevalainen, O. (with Leipälä, T.) On a dynamic nearest neighbour problem. (French summary) *RAIRO Inform.* **13** (1979), no. 1, 3–15, i. (Vangalur S. Alagar) **80g:68041** 68C05 (68G10)
- Nevalinna, Olavi (with Liniger, Werner) Contractive methods for stiff differential equations. I. *BIT* **18** (1978), no. 4, 457–474. (W. H. Enright) **80b:6503a** 65L05  
(with Jeltsch, Rolf) Largest disk of stability of explicit Runge-Kutta methods. *BIT* **18** (1978), no. 4, 500–502. (R. Leonard Brown) **80b:65099** 65L05  
A note on semidiscretization methods. *Math. Comput. Simulation* **20** (1978), no. 3, 208–210. (Wilhelm Schappacher) **80a:65111** 65J05 (47H15)  
(with Liniger, Werner) Contractive methods for stiff differential equations. II. *BIT* **19** (1979), no. 1, 53–72. (W. H. Enright) **80b:6503b** 65L05  
(with Reich, Simeon) Strong convergence of contraction semigroups and of iterative methods for accretive operators in Banach spaces. *Israel J. Math.* **32** (1979), no. 1, 44–58. (A. Pazy) **80e:47057** 47H20 (47H06)
- Nevalinna, Rolf On the minimal modulus of an entire function. (Russian summary) *Complex analysis and its applications* (Russian), pp. 418–420, 670, "Nauka", Moscow, 1978. (S. M. Shah) **80a:30028** 30D20 (30D50)
- See also Proceedings: Rolf Nevalinna Symposium on Complex Analysis, **80c:30004**
- Neveska, N. V. The metric projection and connectedness of sets in linear normed spaces. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* **1979**, no. 1, 51–53. (G. Godini) **80b:41017** 41A65
- Neveu, André (with Gervais, Jean-Loup) The quantum dual string wave functional in Yang-Mills theories. *Phys. Lett. B* **80** (1978/79), no. 3, 255–258. (S. Deser) **80c:81063** 81E10  
(with Hasslacher, Brosl) Dynamic charges in field theories. *Nuclear Phys. B* **151** (1979), no. 1, 1–15. (Authors' summary) **80b:81087** 81E99 (35Q20, 58F07)  
(with Gervais, Jean-Loup) The slope of the leading Regge trajectory in quantum chromodynamics. *Nuclear Phys. B* **163** (1980), no. 3, 189–216. (Virendra Singh) **80m:81087** 81G05
- Neville, Donald E. Gravity theories with propagating torsion. *Phys. Rev. D* (3) **21** (1980), no. 4, 867–873. (Author's summary) **80m:83042** 83D05
- Nevia, B. (with Folland, N.; Pedersen, F.) When must a base for a locally connected space contain a base of connected sets? *Portugal. Math.* **36** (1977), no. 1, 61–63. (C. W. Patty) **80d:54017** 54D05
- Nevostruev, L. M. (with Ivaškina, G. A.) A boundary value problem with displacement for an equation of the second kind. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 2, 281–290, 387. (A. Džuraev) **80g:35085** 35M05
- Nevskii, M. V. Properties of some classes of vector fields. (Russian) *Kvalitative and approximate methods for the investigation of operator equations*, No. 2 (Russian), pp. 166–173, Jaroslav. Gos. Univ., Yaroslavl, 1977. (N. A. Sidorov) **80k:46041** 46E40
- Nezrovov, V. B. The maximum of cumulative sums for the Cauchy distribution. (Russian. English summary) *Investigations in the theory of probability distributions*, IV. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **85** (1979), 169–174, 241, 246–247. (D. A. Darling) **80k:60032** 60F05 (60G50)
- See also David, Herbert Aron, **80k:62067**
- Newcomb, R. W. MOS neuron lines. *Constructive approaches to mathematical models* (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978), pp. 87–111, Academic Press, New York, 1979. (Author's summary) **80m:94078** 94C05
- Newcomb, Simon See Norberg, Arthur L., **80c:01017**
- et-Newehli, Emdad See El-Newehli, Emdad
- Newell, Alan C. Near-integrable systems, nonlinear tunnelling and solitons in slowly changing media. *Nonlinear evolution equations solvable by the spectral transform* (Internat. Sympos., Accad. Lincei, Rome, 1977), pp. 127–179, Res. Notes in Math., **26**, Pitman, London, 1978. (Author's summary) **80e:81093** 81F99 (35Q20, 76D99)
- Soliton perturbations and nonlinear focussing. *Solitons and condensed matter physics* (Proc. Sympos. Nonlinear (Soliton) Structure and Dynamics in Condensed Matter, Oxford, 1978), pp. 52–67, Springer Ser. in Solid-State Sci., **8**, Springer, Berlin, 1978. (Author's summary) **80i:81022** 81C99 (35Q20)
- (with Kaup, David J.) Theory of nonlinear oscillating dipolar excitations in one-dimensional condensates. *Phys. Rev. B* (3) **18** (1978), no. 10, 5162–5167. (Authors' summary) **80b:81073** 81E10 (35Q20, 81C05)
- The inverse scattering transform, nonlinear waves, singular perturbations and synchronized solitons. Conference on the Theory and Application of Solitons (Tucson, Ariz., 1976). *Rocky Mountain J. Math.* **8** (1978), no. 1–2, 25–52. (G. L. Lamb, Jr.) **80c:81020** 81C05 (35Q20)
- (with Kaup, David J.) The Goursat and Cauchy problems for the sine-Gordon equation. *SIAM J. Appl. Math.* **34** (1978), no. 1, 37–54. (G. L. Lamb, Jr.) **80b:35124** 35Q20 (58F07)
- Long waves—short waves; a solvable model. *SIAM J. Appl. Math.* **35** (1978), no. 4, 650–664. (J. J. Mahony) **80c:76009** 76B99 (35Q20)
- (with Kaup, David J.) Evolution equations, singular dispersion relations, and moving eigenvalues. *Adv. in Math.* **31** (1979), no. 1, 67–100. (L. A. Takhtajan (Tahtadzhian)) **80i:35159** 35Q20 (58F07)
- The general structure of integrable evolution equations. *Proc. Roy. Soc. London Ser. A* **365** (1979), no. 1722, 283–311. (Alexander A. Pankov) **80k:58057** 58F07 (35Q20, 49C15)
- Newell, G. F. (with Asgharzadeh, Kamran) Optimal dispatching strategies for vehicles having exponentially distributed trip times. *Naval Res. Logist. Quart.* **25** (1978), no. 3, 489–509. (Authors' summary) **80a:90077** 90B35
- Newhouse, Sheldon (with Ruelle, David; Takens, Floris) Occurrence of strange Axiom A attractors near quasiperiodic flows on  $T^m$ ,  $m \geq 3$ . *Comm. Math. Phys.* **64** (1978/79), no. 1, 35–40. (Shigehiro Ushiki) **80f:58029** 58F13  
(with Marcus, Brian) Measures of maximal entropy for a class of skew products. *Ergodic theory* (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1978), pp. 105–125, *Lecture Notes in Math.*, **729**, Springer, Berlin, 1979. (Peter Walters) **80j:28030** 28D20
- Newman, Charles M. (with Ellis, Richard S.) Fluctuations in Curie-Weiss exemplis. *Mathematical problems in theoretical physics* (Proc. Internat. Conf., Univ. Rome, Rome, 1977), pp. 313–324, *Lecture Notes in Phys.*, **80**, Springer, Berlin, 1978. (V. P. Milant'ev) **80f:82006** 82A05
- (with Ellis, Richard S.) Extensions of the maximum principle: exponential preservation by the heat equation. *J. Differential Equations* **30** (1978), no. 3, 365–378. (Antonino Maugeri) **80d:35069** 35K05
- Critical point inequalities and scaling limits. *Comm. Math. Phys.* **66** (1979), no. 2, 181–196. (Gerhard Hegerfeldt) **80c:82039** 82A67 (60F05, 60K35)  
(with Stuck, B. W.) Chernoff bounds for discriminating between two Markov processes. *Stochastics* **2**, no. 3, 139–153 (1979). (T. Pitcher) **80i:62073** 62M02  
(with Stuck, B. W.) Optimal sampling of independent increment processes. *Stochastics* **2**, no. 4, 213–225 (1979). (T. Pitcher) **80m:62080** 62M02 (60G30, 60J30)
- Newman, D. J. See Newman, Donald J.
- Newman, D. Paul (with Kwon, Young K.; Fellingham, John C.) Stochastic dominance and information value. *J. Econom. Theory* **20** (1979), no. 2, 213–230. (I. M. Stancu-Minasian) **80f:90008** 90A05
- Newman, Donald J. Rational approximation to  $x^n$ . *Fourier analysis and approximation theory* (Proc. Colloq., Budapest, 1976), Vol. II, pp. 577–582, *Colloq. Math. Soc. János Bolyai*, **19**, North-Holland, Amsterdam, 1978. (Darrell Schmidt) **80j:41023** 41A20  
(with Erdős, Paul; Reddy, A. R.) Rational approximation. II. *Adv. in Math.* **2** (1978), no. 2, 135–156. (Myron S. Henry) **80c:41008** 41A20 (30E10)  
(with Johnson, Ellis L.; Winston, Kenneth) An inequality on binomial coefficients. Algorithmic aspects of combinatorics (Conf., Vancouver Island, B.C., 1976). *Am. Discrete Math.* **2** (1978), 155–159. (Morton Abramson) **80d:05004** 05A10 (05C10, 05C65)  
(with Richards, Ian) Finite measures designed for accuracy on arithmetic progressions. *J. Number Theory* **10** (1978), no. 4, 385–394. (J. W. Porter) **80c:10040** 10K10 (10L20)  
(with Cavaretta, A. S., Jr.) Periodic interpolating splines and their limits. *Nederl. Akad. Wetensch. Indag. Math.* **40** (1978), no. 4, 515–526. (Karl Scherer) **80j:41011** 41A15  
(with Rubel, Lee A.) On osculatory interpolation by trigonometric polynomials. *Internat. J. Math. Math. Sci.* **2** (1979), no. 4, 717–720. (Authors' summary) **80c:42003** 42A15  
(with Reddy, A. R.) Rational approximation to  $e^x$  and to related functions. *J. Approx. Theory* **25** (1979), no. 1, 21–30. (D. Leviatan) **80j:41024** 41A20 (41A25)  
Efficient co-monotone approximation. *J. Approx. Theory* **25** (1979), no. 3, 189–192. (W. W. Breckner) **80j:41011** 41A10  
(with Slater, Morton) Waring's problem for the ring of polynomials. *J. Number Theory* **11** (1979), no. 4, 477–487. (S. E. Schuur) **80m:10016** 10B35 (10J99)  
Quadrature formulae for  $H^p$  functions. *Math. Z.* **166** (1979), no. 2, 111–115. (B. Bojanov) **80g:41022** 41A55 (65D30)  
A simplified proof of the Erdős-Fuchs theorem. *Proc. Amer. Math. Soc.* **75** (1979), no. 2, 209–210. (K. Thanigasalam) **80f:10058** 10J99  
See also Sprindžuk, Vladimir G., **80k:10048**
- Newman, Ezra T. (with Porter, John R.; Tod, K. P.) Twistor surfaces and right-flat spaces. *Gen. Relativity Gravitation* **9** (1978), no. 12, 1129–1142. (R. Behari) **80a:83021** 83C20 (32L05, 53C55)  
Source-free Yang-Mills theories. *Phys. Rev. D* (3) **18** (1978), no. 8, 2901–2908. (Eckehard W. Mielke) **80d:81078** 81E10 (55R10, 83C30)  
(with Hansen, R. O.; Penrose, R.; Tod, K. P.) The metric and curvature properties of  $\mathcal{H}$ -space. *Proc. Roy. Soc. London Ser. A* **363** (1978), no. 1715, 445–468. (C. T. I. Dodson) **80b:83017** 83C30 (53C50)
- Newman, Kenneth (with Berkson, Astrid J.) Constructing sequences of divided powers. II. *Proc. Amer. Math. Soc.* **72** (1978), no. 1, 11–15. (R. G. Larson) **80c:16007** 16A24  
(with Radford, David E.) The cofree irreducible Hopf algebra on an algebra. *Amer. J. Math.* **101** (1979), no. 5, 1025–1045. (Mitsuhiko Takeuchi) **80j:16017** 16A24
- Newman, M. F. (with Grunewald, Fritz J.; Havas, George; Mennicke, J. L.) Groups of exponent eight. *Bull. Austral. Math. Soc.* **20** (1979), no. 1, 7–16. (Authors' summary) **80g:20044** 20E34  
See also Topics in algebra, **80a:00011**
- Newman, Morris Combinatorial matrices with small determinants. *Canad. J. Math.* **30** (1978), no. 4, 756–762. (Frank W. Owens) **80g:05019** 05B20  
Normalizers of modular groups. *Math. Ann.* **238** (1978), no. 2, 123–129. (K. Wohlfahrt) **80b:10033** 10D07 (20H05)  
(with Ryavec, C.; Shure, B. N.) The use of integral operators in number theory. *J. Funct. Anal.* **32** (1979), no. 2, 123–130. (Henri Joris) **80b:10046** 10H05  
Equivalence without determinantal divisors. *Linear and Multilinear Algebra* **7** (1979), no. 2, 107–109. (Thomas H. Foregger) **80b:15018** 15A21
- Newmann, M. M. (with O'Reilly, John) Minimal-order optimal estimators for discrete-time linear stochastic systems. *Recent theoretical developments in control* (Proc. Conf., Univ. Leicester, Leicester, 1976), pp. 439–464, Academic Press, London, 1978. (A. P. Roberts) **80c:93116** 93E10  
(with Sprevak, D.) Comments on: "Bootstrap estimation of parameters and states of linear multivariable systems" [IEEE Trans. Automat. Control **24** (1979), no. 2, 340–343; MR **80d:93072**] by H. El-Sherief and N. K. Sinha. With a reply by El-Sherief and Sinha. *IEEE Trans. Automat. Control* **25** (1980), no. 1, 138–139. (Editors) **80d:93072** 93E11  
See also Fahmy, Moustafa M.; et al., **80j:93080**
- Newton, D. (with Keynes, H. B.) Lifting in non-abelian  $(G, \tau)$ -extensions. *The structure of attractors in dynamical systems* (Proc. Conf., North Dakota State Univ., Fargo, N.D., 1977), pp. 173–178, *Lecture Notes in Math.*, **668**, Springer, Berlin, 1978. (R. Ellis) **80c:54048** 54H20  
(with Keynes, H. B.) Minimal  $(G, \tau)$ -extensions. *Pacific J. Math.* **77** (1978), no. 1, 145–163. (V. Kannan) **80c:54049** 54H20  
On canonical factors of ergodic dynamical systems. *J. London Math. Soc.* (2) **19** (1979), no. 1, 129–136. (V. Drobot) **80c:28012** 28D05
- Newton, Isaac ★ Isaac Newton's papers & letters on natural philosophy and related documents. Second edition. Edited and with an introduction by I. Bernard Cohen. With the assistance of Robert D. Schofield. With explanatory prefaces by Marie Boas, Charles Coulston Gillispie, Thomas S. Kuhn and Perry Miller. *Harvard University Press, Cambridge, Mass.-London*, 1978. xviii + 540 pp. (1 plate). ISBN 0-674-46853-8 (H. Treder) **80d:01011** 01A45 (01A70, 78–03)



- See also Hollingsdale, S. H., 80h:01017; Kuznetsov, B. G., 80d:01012; Jukić, A. P., 80g:01009; Fellmann, E. A., 80h:01005; Treder, Hans-Jürgen, 80h:01007; Forbes, Eric Gray, 80h:01010; Freistein, H. C., 80h:01011 and Figala, Karin, 80g:01026
- Newton, Roger G. A new representation for quantum mechanics. *Phys. A* 96 (1979), no. 1-2, 271-279. (Jean-Paul Marchand) 80f:81099 81F20 (47A40, 81C99)
- New result on the inverse scattering problem in three dimensions. *Phys. Rev. Lett.* 43 (1979), no. 8, 541-542. (P. Rochus) 80e:81085 81F05
- Ney, Andrei Nouvelle étude sur l'accélération de la convergence des séries numériques. *Anal. Numér. Théor. Approx.* 7 (1978), no. 1, 81-93. (Claude Brezinski) 80d:65012 65B10 (40A05)
- Problèmes de convergence regardant les séries en espaces topologiques. *Anal. Numér. Théor. Approx.* 7 (1978), no. 2, 171-188. (Kenneth A. Jukes) 80j:40011 40J05 (40A05, 54A20)
- Ney, Peter E. (with Athreya, K. B.) A Markov process approach to systems of renewal equations with application to branching processes. *Branching processes (Conf., Saint Hippolyte, Que., 1976)*, pp. 293-317, *Advances in Probability and Related Topics*, 5, Dekker, New York, 1978. (Esa Nummelin) 80f:60077 60K15 (60J80)
- (with Athreya, K. B.; McDonald, David R.) Coupling and the renewal theorem. *Amer. Math. Monthly* 85 (1978), no. 10, 809-814. (Allan Gut) 80j:60115 60K05
- (with Athreya, K. B.; McDonald, David R.) Limit theorems for semi-Markov processes and renewal theory for Markov chains. *Ann. Probab.* 6 (1978), no. 5, 788-797. (Esa Nummelin) 80f:60076 60K15 (60J10)
- (with Athreya, K. B.) Limit theorems for semi-Markov processes. *Bull. Austral. Math. Soc.* 19 (1978), no. 2, 283-294. (Esa Nummelin) 80f:60078 60K15
- (with Athreya, K. B.) A new approach to the limit theory of recurrent Markov chains. *Trans. Amer. Math. Soc.* 245 (1978), 493-501. (Esa Nummelin) 80d:60092 60J10 (60K05)
- (with Foster, James H.) Limit laws for decomposable critical branching processes. *Z. Wahrsch. Verw. Gebiete* 46 (1978/79), no. 1, 13-43. (H. Hering) 80c:60096 60J80
- See also Branching processes, 80c:60004
- Neyman, Abraham Continuous values are diagonal. *Math. Oper. Res.* 2 (1977), no. 4, 338-342 (1978). (Louis J. Billera) 80h:90174 90D13
- (with Tauman, Yair) The partition value. *Math. Oper. Res.* 4 (1979), no. 3, 236-264. (Authors' summary) 80f:90157 90D13
- Neyman, J. ★Probabilidade frequentista e estatística frequentista. (Portuguese) [Frequentist probability and frequentist statistics] Translated from the English and with an introduction by Djalma G. C. Pessa. *Monografias de Matemática* [Mathematical Monographs], 31. Instituto de Matemática Pura e Aplicada, Rio de Janeiro, 1978. ii+59 pp. (Editors) 80c:62009 62A99
- Nezbeda, I. (with Pavlíček, J.; Boublík, T.) An accurate equation of state of a hard convex body fluid mixture. *Czechoslovak J. Phys. B* 29 (1979), no. 10, 1061-1070. (Authors' summary) 80i:82023 82A50
- Netinskii, V. M. Suspended sequences in the theory of links. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 5(203), 193-194. (Jonathan A. Hillman) 80k:57054 57R40 (57Q45)
- Nezil, Pierre Ondes de gravitation avec tension superficielle fonction des impuretés. Analogie avec la dynamique des gaz. (English summary) *J. Mécanique* 18 (1979), no. 1, 3-17. (Carlo Cercignani) 80g:76009 76B15 (35Q20)
- Ng, B. S. (with Reid, W. H.) An initial value method for eigenvalue problems using compound matrices. *J. Comput. Phys.* 30 (1979), no. 1, 125-136. (Authors' summary) 80c:65176 65L15
- (with Reid, W. H.) A numerical method for linear two-point boundary value problems using compound matrices. *J. Comput. Phys.* 33 (1979), no. 1, 70-85. (Authors' summary) 80h:65062 65L10
- Ng, Edward W. A general algorithm for the solution of Kepler's equation for elliptic orbits. *Celestial Mech.* 20 (1979), no. 3, 243-249. (V. Szebehely) 80m:70007 70F05 (65L99)
- Ng, K. Y. K. A note on the upper and lower solutions of a mass transfer problem with chemical kinetics. *AIChE J.* 25 (1979), no. 2, 362-365. (From the text) 80g:80010 80A30 (35C99)
- Ng, Kung Fu Invariant measures for compact affine semi-groups. *Ann. Soc. Sci. Bruxelles Sér. I* 92 (1978), no. 4, 237-240 (1979). (L. Janos) 80b:28014 28C10 (22A20, 43A05, 46A99)
- A maximum principle. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 1, 23-26. (Ehrhard Behrend) 80c:46011 46A55
- Ng, M. H. (with Leigh, J. R.) An algorithm for decomposing a two-dimensional nonlinear vector field. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 131-132. (Authors' summary) 80m:93010 93A99
- Ng, P. H. (with Gunson, J.) Approximation of special functions of complex variables. *J. Inst. Math. Appl.* 22 (1978), no. 1, 43-52. (V. V. Saleev) 80c:30015 30E10 (30E15)
- Ng, Peng Nung (with Lee, Peng Yee) Cesàro sequence spaces of non-absolute type. *Comment. Math. Prace Mat.* 20 (1977/78), no. 2, 429-433. (W. H. Ruckle) 80c:46009 46A45
- (with Lee, Peng Yee) Orlicz sequence spaces of a nonabsolute type. *Comment. Math. Univ. St. Paul.* 26 (1977/78), no. 2, 209-213. (Zvi Althuler) 80c:46015 46A45
- On modular sequence space of a nonabsolute type. *Nanta Math.* 11 (1978), no. 1, 84-93. (J. Albrycht) 80d:46013 46A45 (46E30)
- Ng, Peter Ann-Beng (with Chen, David T.) A note on a graph-structural approach to the generalization of data management systems. *Inform. Sci.* 16 (1978), no. 2, 115-136. (Authors' summary) 80c:68240 68H05 (68E10)
- Ng, S. K. (with Chan, W. L.) Variational control problems for linear differential systems with Stieltjes boundary conditions. *J. Austral. Math. Soc. Ser. B* 20 (1977/78), no. 4, 434-445. (A. Kôsa) 80f:49015 49B10
- Ng, Tze Beng The existence of 7-fields and 8-fields on manifolds. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 118, 197-221. (Ulrich Koschorke) 80h:57034 57R25
- Ng, Wing Chiu (with Yeung, Wai Bong) New procedure for summing perturbation theory. *Lett. Nuovo Cimento* 23 (1978), no. 11, 413-418. (From the text) 80d:81024 81C12 (81G05)
- (with Brandt, Richard A.; Yeung, Wai Bong) Finite field equation for asymptotically free  $\phi^4$  theory. *Phys. Rev. D* (3) 19 (1979), no. 2, 503-510. (Authors' summary) 80b:81057 81D05 (35Q99)
- (with Nandi, Satyanarayan) Can coupling constants be related? *Phys. Rev. D* (3) 20 (1979), no. 4, 972-984. (Authors' summary) 80h:81058 81E15
- Nghiêm Đình Ngọc (with Dubois, Roger-Marie) Une remarque sur un principe du maximum pour des équations semi-elliptiques quasi-linéaires. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 22, A1017-A1020. (Authors' summary) 80d:35041 35J15
- Nghiêm Xuân Hải ★Algèbres de Heisenberg et géométrie symplectique des algèbres de Lie. Publications Mathématiques d'Orsay 77, 8. Université de Paris-Sud, Département de Mathématique, Orsay, 1978. 52 pp. (Anthony Joseph) 80g:17005 17B35 (16A08)
- Commutative subalgebras and representations of the enveloping algebra of a solvable Lie algebra. *Acta Math. Vietnam.* 3 (1978), no. 2, 61-74. (Anthony Joseph) 80h:17011 17B35
- Réduction de produits semi-directs et conjecture de Gelfand et Kirillov. (English summary) *Bull. Soc. Math. France* 107 (1979), no. 3, 241-267. (Anthony Joseph) 80i:17013 17B35
- nguen Ngia See Nguyen Ngia
- nghiêm đình ngọc See NghiêM Đình Ngọc
- pham Ngoc Anh See Pham Ngoc Anh
- Ngô Dak Tan Minimal transitive permutation groups on a countable set. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 1, 12-18, 138. (József Pélikán) 80c:20004 20B22
- Ngô Văn Lu'e Summary representation formulas for a class of equations with variable coefficients. (Russian) *Acta Math. Vietnam.* 3 (1978), no. 1, 5-13. (V.-V. Olariu) 80c:35011 35C99
- Summary representation formulas for a class of equations with variable coefficients. (Russian. English summary) *Vysisl. Prikl. Mat. (Kiev)* No. 37 (1979), 131-138, 144. (Author's summary) 80f:35026 35C99 (76S05)
- Ngô Văn Quê Formes singulières génériques. *Proceedings of the Ninth Brazilian Mathematical Colloquium (Poços de Caldas, 1973)*, Vol. I (Portuguese), pp. 217-226, *Inst. Mat. Pura Apl., São Paulo*, 1977. (J. S. Joel) 80h:58002 58A10 (57R30, 58C27, 58F18)
- Ngô Viet Trung (with Schenzel, Peter; Nguyễn Tý Cu'ông) Verallgemeinerte Cohen-Macaulay-Moduln. *Math. Nachr.* 85 (1978), 57-73. (W. Vogel) 80i:13008 13H10 (14M05)
- On the symbolic powers of determinantal ideals. *J. Algebra* 58 (1979), no. 2, 361-369. (Manfred Herrmann) 80k:14053 14M12 (13H10)
- Ngô Zai Kan The free rotation of a rigid body having a cavity filled with viscous liquids. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 4, 823-827. (From the text) 80i:70006 70E99 (35Q10, 76C99)
- nguyen suan Nguyen See Nguyen Suan Nguyen
- Nguyễn Đình Dân (with Bui-Min-Chi) Noiseproof approximation of automata. (Russian) *Vysisl. Tehn. i Voprosy Kibernet.* No. 16 (1979), 158-173, 225. (Authors' summary) 80k:68045 68D35
- Nguyen Dong An (with Šul'gin, A. M.) Equations for variations in the trajectory of nonholonomic mechanical systems. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 53 (1978), 125-129, 183. (V. T. Golovchan) 80k:70016 70F25 (49A10)
- Nguyen Khak Lan Study of oscillations in nonlinear systems with slowly changing parameters and with lag. (Russian) *Mat. Fiz. No. 24* (1978), 40-46, 121. (M. Iolov) 80c:34075 34K15
- Nguyen Kuok Tsun (with Đỗ Long Vân) Quasimodules. I. (Russian. English and Hungarian summaries) *Közl.-MTA Számítástech. Automat. Kutató Int. Budapest* No. 21 (1978), 73-84. (B. M. Schein) 80g:16045a 16A78 (08A99)
- (with Đỗ Long Vân) Quasimodules. II. (Russian. Hungarian and English summaries) *Közl.-MTA Számítástech. Automat. Kutató Int. Budapest* No. 21 (1978), 85-100. (B. M. Schein) 80g:16045b 16A78 (08A99)
- Nguyen Ngia (with Kovalev, M. M.; Isačenko, A. N.) Linearization of combinatorial optimization problems. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 22 (1978), no. 10, 869-872, 955. (Authors' summary) 80c:90099 90C10
- Nguyen Suan Nguyen (with Kafarov, V. V.; Melalkin, V. P.) Modeling of chemical engineering systems by the method of the compact transformation. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 2, 408-410. (Josef Kaika) 80g:93005a 93A10 (80A30)
- (with Kafarov, V. V.; Melalkin, V. P.) An algorithm for modeling chemical engineering systems based on the method of the compact transformation. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 3, 669-672. (Josef Kaika) 80g:93005b 93A10 (80A30)
- (with Kafarov, V. V.; Melalkin, V. P.) A method for reflecting free variables of chemical engineering systems based on the compact transformation of matrix informational structure. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 4, 888-891. (Josef Kaika) 80g:93005c 93A10 (80A30)
- Nguyen Tang Probability density of a generalized coordinate. (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 1, 139-144. (Author's summary) 80b:82008 82A05
- Nguyen Zai Tien The structure of measurable linear functionals on Banach spaces with Gaussian measures. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 1, 165-168. (A. Weron) 80f:60009 60B11 (60G15)
- Nguyen Zung (with Can Dyk Cung) Some problems on the optimization of rods. (Russian) *Prikl. Meh.* 15 (1979), no. 7, 95-100, 143. (Vadim Komkov) 80h:73044 73K05 (49H05)
- xuan quynh Nguyen See Xuan Quynh Nguyen
- Nguyen, Hien Q. Projections and weak maps in combinatorial geometries. *Discrete Math.* 24 (1978), no. 3, 281-289. (P. B. Kirkpatrick) 80c:05060 05B35
- Weak cuts of combinatorial geometries. *Trans. Amer. Math. Soc.* 250 (1979), 247-262. (Thomas Brylawski) 80j:05045 05B35
- Nguyen, Hung Trung Sur l'estimation dans les processus de Markov. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 16, A1129-A1132. (Author's summary) 80c:62099 62M05 (93E10)
- On conditional possibility distributions. *Fuzzy Sets and Systems* 1 (1978), no. 4, 299-309. (Jiri Šustál) 80c:60010 60A99 (94D05)
- On random sets and belief functions. *J. Math. Anal. Appl.* 65 (1978), no. 3, 531-542. (Glenn Shafer) 80g:60004 60A05 (60D05, 62A99)
- Toward a calculus of the mathematical notion of possibility. *Advances in fuzzy set*

- theory and applications, pp. 235-246, North-Holland, Amsterdam, 1979. (Anca Pascu) **80m:03090** 03E72 (60A99, 94D05)
- Density estimation in a continuous-time stationary Markov process. *Ann. Statist.* 7 (1979), no. 2, 341-348. (G. Roussas) **80d:62036** 62G05 (62M05)
- (with Pham Dinh Tuan) Loi des grands nombres pour les martingales et application à la statistique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 4, A303-A305. (Authors' summary) **80e:60041** 60F15 (60G42, 62M05)
- Some mathematical tools for linguistic probabilities. *Fuzzy Sets and Systems* 2 (1979), no. 1, 53-65. (Jiri Šustal) **80e:03069** 03E72 (94D05)
- (with Pham Dinh Tuan) Sur l'utilisation du temps local en statistique des processus. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 3, A165-A168. (Authors' summary) **80m:62081** 62M05 (60J55, 62G05)
- (with Pham Dinh Tuan) Estimation non paramétrique par la méthode de Grenander dans les modèles de diffusion linéaires et non stationnaires. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 4, A197-A200. (Authors' summary) **80m:62082** 62M05 (62G05)
- Nguyen, S. (with Erlander, S.; Stewart, N. F.) On the calibration of the combined distribution-assignment model. *Transportation Res. Part B* 13 (1979), no. 3, 259-267. (Authors' summary) **80e:90041** 90B10
- Nguyen, V. Hien (with Strodt, Jean-Jacques) An exponential penalty method for nondifferentiable minimax problems with general constraints. *J. Optim. Theory Appl.* 27 (1979), no. 2, 205-219. (Siegfried Schaible) **80e:90103** 90C30
- (with Strodt, Jean-Jacques) On the convergence rate for a penalty function method of exponential type. *J. Optim. Theory Appl.* 27 (1979), no. 4, 495-508. (Pierre Loridan) **80h:90130** 90C30 (49D29)
- (with Strodt, Jean-Jacques) Some properties of a uniformly linearly independent sequence of subspaces. *Linear Algebra Appl.* 25 (1979), 115-127. (W. C. Rheinboldt) **80d:65081** 65K10
- Nguyen, Xuan-Xanh (with Zessin, Hans) Integral and differential characterizations of the Gibbs process. *Math. Nachr.* 88 (1979), 105-115. (Olav Kallenberg) **80i:60018** 60G55 (60K35, 82A05)
- See also Matthes, Klaus; et al. **80i:60018b**
- Nguyen Anh Minh (with Do Hong Tan) Some fixed-point theorems for mappings of contractive type. *Acta Math. Vietnam.* 3 (1978), no. 1, 24-42. (I. A. Rus) **80d:54054** 54H25
- Nguyen Dinh Quyet On the stability and the observability of  $D$ - $R$  systems in Banach spaces. *Demonstratio Math.* 12 (1979), no. 1, 203-209. (F. J. Beutler) **80k:93048** 93D99 (93B07)
- Nguyen Do, K. (with Teo, K. L.) Optimal control of a two-class national economic model. *Internat. J. Systems Sci.* 9 (1978), no. 9, 965-979. (P. Kischnka) **80a:90040** 90A16
- Nguyen Ho Quynh On the mixed autoregressive moving average model. (Russian summary) *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* 7 (1978), no. 1, 37-48. (Melvin Hinich) **80a:62148** 62M10
- Nguyen Hung Nouvelle approche numérique des solutions de la couche limite laminaire incompressible en régime non-stationnaire autour d'une paroi cylindrique elliptique mise en impulsion brutale. (English and German summaries) *Internat. J. Non-Linear Mech.* 14 (1979), no. 1, 43-58. (Authors' summary) **80d:76059** 76N05
- Nguyen Huu Anh Classification des groupes de Lie connexes unimodulaires possédant une série discrète. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 13, A847-A849. (Authors' summary) **80m:22022** 22E45
- Sur une conjecture de Wolf et Moore caractérisant les groupes de Lie ayant une série discrète. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 14, A919-A921. (Authors' summary) **80e:22015** 22E45
- Nguyen Huy Xuong (with Payan, Charles) Upper embeddability and connectivity of graphs. *Discrete Math.* 27 (1979), no. 1, 71-80. (Saul Stahl) **80i:05038** 05C10 (05C40)
- How to determine the maximum genus of a graph. *J. Combin. Theory Ser. B* 26 (1979), no. 2, 217-225. (F. Harary) **80e:05051** 05C10
- Upper-embeddable graphs and related topics. *J. Combin. Theory Ser. B* 26 (1979), no. 2, 226-232. (E. A. Nordhaus) **80m:05027** 05C10
- (with Jaeger, F.; Payan, Charles) A class of upper-embeddable graphs. *J. Graph Theory* 3 (1979), no. 4, 387-391. (Richard D. Ringesen) **80k:05046** 05C10
- Nguyen Ky Toan (with Antipps, Adel F.) Topological solution for systems of simultaneous linear equations. *J. Math. Phys.* 20 (1979), no. 12, 2375-2379. (Authors' summary) **80j:39002** 39A10 (94C15)
- Nguyen Phuong Cke (with Gatica, Juan A.) Fixed point theorems for mappings in ordered Banach spaces. *J. Math. Anal. Appl.* 71 (1979), no. 2, 547-557. (L. P. Belluce) **80j:47071** 47H10
- Nguyen Q. Duc (with Rudolph, Luther D.; Hartmann, Carlos R. P.; Hwang, Tai Yang) Algebraic analog decoding of linear binary codes. *IEEE Trans. Inform. Theory* 25 (1979), no. 4, 430-440. (Authors' summary) **80g:94063** 94B35 (94B15)
- Nguyen Quang-Do Thuong Sur le multiplicateur de Schur d'un  $p$ -groupe. *Séminaire Delange-Pisot-Poitou, 19e année: 1977/78, Théorie des nombres, Fasc. 2, Exp. No. 34, 7 pp.* Secrétariat Math., Paris, 1978. (Hans Opolka) **80c:20014** 20C25 (12G05)
- Nguyen Thanh Van Sur le lemme de Hartogs dans les espaces vectoriels topologiques de Baire. (English summary) Avec une remarque par Pierre Lelong. *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 6, A421-A424. (Authors' summary) **80b:46053** 46G20 (32F05)
- Nguyen Thiep (with Ho Duc Viet) A note on close-to-normal structure. *Comment. Math. Univ. Carolin.* 20 (1979), no. 1, 29-36. (Chi-Song Wong) **80j:47069** 47H10 (46B20)
- Nguyen Thuc Loan Control and identification for adjusting systems in the presence of random effects. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976), Part 3, pp. 1919-1934, North-Holland, Amsterdam, 1978.* (Authors' summary) **80i:93060** 93E12
- Nguyen To Nhu The gluing theorem for uniform neighbourhood retracts. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 2, 189-194. (Donald Coram) **80j:54009** 54C55
- Nguyen Tu' Cu'o'ng (with Schenzel, Peter; Ngo Viet Trung) Verallgemeinerte Cohen-Macaulay-Moduln. *Math. Nachr.* 85 (1978), 57-73. (W. Vogel) **80i:13008** 13H10 (14M05)
- Nguyen Van Dao Parametric oscillations of dynamical systems with cubic term at the modulation depth under the influence of nonlinear frictions. *Acta Math. Vietnam.* 3 (1978), no. 2, 3-16. (Authors' summary) **80b:70024** 70K99 (34C15)
- Nguyen Van Hien (with Strodt, Jean-Jacques) Caractérisation des solutions optimales en programmation non différentiable. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 23, A1075-A1078. (Authors' summary) **80i:49025** 49D37
- Nguyen Van Hien Isotropic and solitary-wave solutions of classical  $SO_4$  and  $SL_{2,C}$  gauge field equations. (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 1, 13-18. (Authors' summary) **80d:81079** 81E10 (22E70)
- Nguyen Van Ho The locally most powerful signed rank tests. *Acta Math. Vietnam.* 3 (1978), no. 1, 14-23. (Z. Govindarajulu) **80i:62050** 62G10
- Nguyen van Nhan Jeux différentiels d'interception et de combat aérien: résolution par programmation dynamique différentielle. (English summary) *Rech. Aéropat.* 1979, no. 2, 75-84. (Authors' summary) **80i:90108** 90D26
- Nguyen Van Thoai (with Hoàng Tuy; Le Dung Muu) A modification of Scarf's algorithm allowing restarting. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 3, 357-372. (S. R. Mohan) **80i:90119** 90C30 (54H25)
- Nguyen Van Thu (with Weron, Aleksander) Examples of non-stationary Banach space valued stochastic processes of second order. *Probability theory on vector spaces (Proc. Conf., Trebieszowice, 1977), pp. 171-181, Lecture Notes in Math., 656, Springer, Berlin, 1978.* (Franz Schmidt) **80d:60042** 60G12 (60J65)
- Banach space valued Brownian motions. *Acta Math. Vietnam.* 3 (1978), no. 2, 35-46. (Mou-Hsiung Chang) **80i:60071** 60J65
- Multiply self-decomposable measures in generalized convolution algebras. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 9-10, 855-861. (Thomas A. O'Connor) **80d:60021** 60E07
- Nguyen Xuân Kỳ A contribution to the problem of weighted polynomial approximation of the derivative of a function by the derivative of its approximating polynomial. *Studia Sci. Math. Hungar.* 10 (1975), no. 3-4, 309-316 (1978). (Bl. Sendov) **80k:41002** 41A10
- Nguyen-Xuan-Loc Sur la théorie des fonctions finement holomorphes. (English summary) *Bull. Sci. Math.* (2) 102 (1978), no. 4, 337-364. (Manfred Stoll) **80c:31006** 31D05 (30G30)
- Nguyen Xuan Quynh (with Kacki, Edward) On a theory of fault detection in logical networks. (Polish and Russian summaries) *Zeszyty Nauk. Politech. Łódź. Mat. No. 9* (1977), 49-61. (Jan Grabowski) **80c:94023** 94C10
- Fault detection in logical sequential networks. (Polish and Russian summaries) *Zeszyty Nauk. Politech. Łódź. Mat. No. 10* (1978), 77-86. (Krystof Sapiecha) **80m:94107** 94C10
- (with Kacki, Edward) On an algorithmic technique for hazard identification in logical networks. (German and Russian summaries) *Elektron. Informatsionverarb. Kybernet.* 15 (1979), no. 5-6, 279-300. (Authors' summary) **80m:94096** 94C10
- Ni, Guang Jiong The Levinson theorem and its generalization in relativistic quantum mechanics. (Chinese) *Kexue Tongbao* 24 (1979), no. 6, 249-252. (Hsin-Yang Yeh) **80g:81065** 81F05
- Ni, Hao Qing Analysis of two-dimensional forced water waves. (Chinese) *Kexue Tongbao* 23 (1978), no. 6, 352-356. (From the summary) **80b:76007** 76B15 (35L99)
- Ni, Wei Ming (with Gidas, Basilis; Nirenberg, Louis) Symmetry and related properties via the maximum principle. *Comm. Math. Phys.* 68 (1979), no. 3, 209-243. (E. M. Sack) **80b:35043** 35J25 (35B50)
- Niecwander, W. Alan (with Cramer, Elliot M.) Some symmetric, invariant measures of multivariate association. *Psychometrika* 44 (1979), no. 1, 43-54. (Masashi Okamoto) **80m:62056** 62H20
- Nicholls, P. (with Zarrow, Robert) Convex fundamental regions for Fuchsian groups. II. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 2, 295-300. (Ch. Pommerenke) **80i:30065** 30F35
- Nichols, Warren D. Quotients of Hopf algebras. *Comm. Algebra* 6 (1978), no. 17, 1789-1800. (Lindsay N. Childs) **80a:16017** 16A24
- Pointed irreducible bialgebras. *J. Algebra* 57 (1979), no. 1, 64-76. (Mitsuhiro Takeuchi) **80g:16010** 16A24 (17B45)
- Nicholson, D. R. (with Hansen, P. J.) Simple soliton solutions. *Amer. J. Phys.* 47 (1979), no. 9, 769-771. (Junkichi Satsuma) **80i:35158** 35Q20
- Nicholson, David W. On the forced vibration of a damped linear system. *Mech. Res. Comm.* 5 (1978), no. 2, 73-77. (Authors' summary) **80e:70027a** 70J20 (34C15)
- A note on vibrations of damped linear systems. *Mech. Res. Comm.* 5 (1978), no. 2, 79-83. (Authors' summary) **80e:70027b** 70J20 (34C15)
- On preconditioning a nonsingular matrix. *Mech. Res. Comm.* 5 (1978), no. 5, 239-249. (Authors' summary) **80b:65053** 65F35
- Comments on damped response in linear systems. *Mech. Res. Comm.* 6 (1979), no. 1, 17-25. (Authors' summary) **80b:70029** 70J05 (34C99)
- On the optimal preconditioning of nonsingular matrices. *Mech. Res. Comm.* 6 (1979), no. 4, 223-230. (Authors' summary) **80m:65040** 65F35 (49D07)
- Nicholson, H. ★Structure of interconnected systems. IEE Control Engineering Series. 5. Peter Peregrinus, Ltd., Stevenage; on behalf of the Institution of Electrical Engineers (IEE), London, 1978. vii + 250 pp. ISBN 0-90122369-7 (Vadim Komkov) **80b:93010** 93A15
- Nicholson, W. K. (with Watters, J. F.) Normal radicals and normal classes of rings. *J. Algebra* 59 (1979), no. 1, 5-15. (C. Tsai) **80b:16007** 16A21
- Nickel, Karl Strongly coupled systems of nonlinear parabolic differential equations. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976) (Russian), pp. 179-184, Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978.* (From the text) **80g:65121** 65N99 (35K60)
- Das Lemma von Max Müller - Nagumo - Westphal für stark gekoppelte Systeme parabolischer Funktional-Differentialgleichungen. *Math. Z.* 161 (1978), no. 3, 221-234. (P. Laasonen) **80p:35137** 35R10 (35K60)
- Nickell, R. E. (with Gartling, D. K.; Strang, Gilbert) Spectral decomposition in advection-diffusion analysis by finite element methods. *Comput. Methods Appl. Mech. Engrg.* 17/18 (1979), part 3, 561-580. (Michael J. O'Carroll) **80g:65115** 65N30 (35Q20, 76R10)
- Nickell, Stephen Estimating the probability of leaving unemployment. *Econometrica* 47



- (1979), no. 5, 1249-1266. (Author's summary) **80g:50034** 90A19 (62P20)
- Nickerson, Robert C. (with Boyd, Dean W.) The use and value of models in decision analysis. *Oper. Res.* **28** (1980), no. 1, 139-155. (Authors' summary) **80m:90005** 90A05
- Nico, William R. A classification of indecomposable S-sets. *J. Algebra* **54** (1978), no. 1, 260-272. (M. Friedberg) **80b:20083** 20M20
- Niculescu, Dan Determining the stationary extremum of incompletely defined efficiency functions. (Romanian. English summary) *Stud. Cerc. Mat.* **31** (1979), no. 2, 199-207. (Author's summary) **80f:65035** 65D99
- Nicolenco, Basil A general class of nonlinear bifurcation problems from a point in the essential spectrum. Application to shock wave solutions of kinetic equations. *Applications of bifurcation theory (Proc. Advanced Sem., Univ. Wisconsin, Madison, Wis., 1976)*, pp. 333-357. *Publ. Math. Res. Center Univ. Wisconsin*, **38**, Academic Press, New York, 1977. (Marjorie McCracken) **80g:58023** 58E07
- (with Brauner, Claude-Michel) Sur des problèmes aux valeurs propres non linéaires qui se prolongent en problèmes à frontière libre. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 16, A1105-A1108. (Authors' summary) **80b:35048** 35J25 (35J65, 35K99)
- (with Brauner, Claude-Michel) Sur des problèmes aux valeurs propres non linéaires qui se prolongent en problèmes à frontière libre. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 2, A125-A127. (Authors' summary) **80g:35102** 35P99 (35J65)
- Nicolai, Hermann A remark on higher orders of perturbation theory in Euclidean (super- $\phi^4$ ). Symposium on Mathematical Models in the Theory of Elementary Particles (Liblice, 1978). *II. Czechoslovak J. Phys. B* **29** (1979), no. 3, 308-311. (From the text) **80f:81089** 81E99
- On a new characterization of scalar supersymmetric theories. *Phys. Lett. B* **89** (1980), no. 3-4, 341-346. (Author's summary) **80k:81228** 81M05 (83C45)
- Nicolaide, Andrei Conformal transformation using direct minimization methods. *Rev. Roumaine Sci. Tech. Sér. Electrotech. Energ.* **23** (1978), no. 3, 373-380. (G. Opfer) **80b:39008** 30C30 (65E05)
- Nicolalde, R. A. On some theoretical and practical aspects of multigrid methods. *Math. Comp.* **33** (1979), no. 147, 933-952. (Author's summary) **80c:65209** 65N30
- Nicolas, Anne-Marie Sur les modules tels que toute suite croissante de sous-modules engendrés par  $n$  générateurs soit stationnaire. *J. Algebra* **60** (1979), no. 1, 249-260. (E. Graham Evans, Jr.) **80j:13011** 13E99 (13G05)
- Nicolas, Jean-Louis Répartitions des nombres largement composés. (English summary) *Séminaire Delange-Pisot-Poitou, 19e année: 1977/78, Théorie des nombres, Fasc. 2, Exp. No. 41*, 10 pp. *Secrétariat Math.*, Paris, 1978. (Carl Pomerance) **80j:10066a** 10A20 (10H25)
- Sur les entiers  $N$  pour lesquels il y a beaucoup de groupes abéliens d'ordre  $N$ . (English summary) *Ann. Inst. Fourier (Grenoble)* **28** (1978), no. 4, 1-16, ix. (Ernst Heppner) **80b:10063** 10H25 (10J20)
- Répartition des nombres largement composés. *Acta Arith.* **34**, no. 4, 379-390 (1979). (Carl Pomerance) **80j:10066b** 10A20 (10H25)
- Nicolau, Edmond See Digital processing and transmission of data and control of processes by means of computers. **80c:90113a**
- Niculescu, Liviu Deux observations sur les métriques conformes. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sec. I a Mat. (N.S.)* **24** (1978), no. 2, 351-355. (J. Ferrand) **80k:53042** 53C20
- Sur les transformations de Nördén-Miron. (Romanian summary) *Bul. Inst. Politehn. Bucureşti Ser. Electrotehn.* **40** (1978), no. 1, 9-14. (Bernard Rouxel) **80a:53019** 53B20
- Sur la géométrie de l'algèbre de déformation associée à une variété de Weyl. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **22(70)** (1978), no. 4, 411-424. (R. Roşca) **80c:53036** 53C15
- Les espaces de Riemann en représentation subgéodésique. *Tensor (N.S.)* **32** (1978), no. 2, 183-187. (G. Tsagas) **80a:53020** 53B20
- (with Teodorescu, Ion D.) Sur les espaces de Riemann conformément euclidiens. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 5, 759-773. (Hassan Akbar-Zadeh) **80j:53022** 53B20
- Nicols, G. (with Erneux, T.; Hiernaux, J.) Turing's theory in morphogenesis. *Bull. Math. Biol.* **40** (1978), no. 6, 771-789. (Fred L. Bookstein) **80a:92015** 92A05 (58F14)
- Nicols, John S. (with Protonotarios, Emmanuel N.) Modelling communication and control between hierarchical systems. *Internat. J. Systems Sci.* **11** (1980), no. 1, 107-127. (From the summary) **80k:93010** 93A13 (92A27)
- Nicolò, F. (with Cini, M.; De Maria, M.; Mattioli, G.) Wave packet reduction in quantum mechanics: a model of a measuring apparatus. *Found. Phys.* **9** (1979), no. 7-8, 479-500. (Authors' summary) **80g:81005** 81B10
- Niculescu, Constantin P. Lebesgue-Radon-Nikodym type theorems for operators defined on ordered Banach spaces. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 1, 85-93. (F. Cunningham, Jr.) **80b:46051** 46G10 (46A40)
- Niculescu, Stefan P. Extension of a renewal theorem. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **23(71)** (1979), no. 3, 289-292. (N. R. Mohan) **80m:60088** 60K05
- Niculescu, Stelian An algorithm for finding the paths between two vertices of a graph. (Romanian. English summary) *Stud. Cerc. Mat.* **31** (1979), no. 5, 581-592. (Author's summary) **80k:68053** 68E10 (68C05)
- meyer-Nieberg, Peter See Meyer-Nieberg, Peter
- Niedbalska, T. An example of the decomposability semigroup. *Colloq. Math.* **39** (1978), no. 1, 137-139. (V. M. Kruglov) **80a:60017** 60E07
- Niederer, U. Massless fields as unitary representations of the Poincaré group. *Fortschr. Phys.* **27** (1979), no. 4, 191-207. (K. T. Mahanthappa) **80g:81084** 81G40 (22E70)
- Niederle, J. (with Hlavaty, L.) Relativistic equations and indecomposable representations of the Lorentz group  $SL(2, C)$ . Symposium on Mathematical Models in the Theory of Elementary Particles (Liblice, 1978). *II. Czechoslovak J. Phys. B* **29** (1979), no. 3, 283-288. (J. F. Cornwell) **80g:81092** 81M05 (22E70)
- (with Tolar, J.) Quantization as mapping and as deformation. *Czechoslovak J. Phys. B* **29** (1979), no. 12, 1358-1368. (F. J. Bloore) **80k:81055** 81C99 (58F06)
- Niederreiter, Harald (with Montgomery, Hugh L.) Estimation optimale de sommes exponentielles. *Bull. Soc. Math. Grèce (N.S.)* **18** (1977), no. 2, 291-301. (E. Stankus) **80c:10042** 10G10
- Statistical tests for linear congruential pseudorandom numbers. *Computat* 1978 (*Proc. Third Sympos. Comput. Statist., Leiden, 1978*), pp. 398-404. *Physica, Vienna*, 1978. (James E. Gentle) **80g:65008** 65C10
- Ergodic sequences of measures and a problem in additive number theory. *Arch. Math. (Basel)* **31** (1978/79), no. 1, 21-32. (Gérard Rauzy) **80c:10038** 10K05 (10J10, 28D05)
- Quasi-Monte Carlo methods and pseudo-random numbers. *Bull. Amer. Math. Soc.* **84** (1978), no. 6, 957-1041. (George Marsaglia) **80d:65016** 65C05 (10K15, 65C10, 68J05)
- Existence of good lattice points in the sense of Hlawka. *Monatsh. Math.* **86** (1978/79), no. 3, 203-219. (L. Kuipers) **80c:10039** 10K05 (65D99)
- (with Lo, Siu Kwong) Permutation polynomials over rings of algebraic integers. *Abh. Math. Sem. Univ. Hamburg* **49** (1979), 126-139. (S. D. Cohen) **80k:12002** 12A20 (12C05)
- (with Shiu, Jau Shyong) Uniform distribution of sequences in rings of integral matrices. *Glasgow Math. J.* **20** (1979), no. 2, 169-178. (Charles Pisot) **80k:10058** 10K05 (15A36)
- win-Nielsen, A. See Win-Nielsen, A.
- Nielsen, Christopher P. (with Bunch, James R.; Sorensen, Danny C.) Rank-one modification of the symmetric eigenproblem. *Numer. Math.* **31** (1978/79), no. 1, 31-48. (C. G. Cullen) **80g:65038** 65F15
- (with Bunch, James R.) Updating the singular value decomposition. *Numer. Math.* **31** (1978/79), no. 2, 111-129. (B. Levinger) **80m:65025** 65F15
- Nielsen, Hans Bruun (with Iloos, Gérard; True, Hans) Bifurcation of the stationary Ekman flow into a stable periodic flow. *Arch. Rational Mech. Anal.* **68** (1978), no. 3, 227-256. (F. Milinazzo) **80c:76023** 76E20 (35B32)
- (with Duff, I. S.; Reid, J. K.; Munksgaard, Niels) Direct solution of sets of linear equations whose matrix is sparse, symmetric and indefinite. *J. Inst. Math. Appl.* **23** (1979), no. 2, 235-250. (Authors' summary) **80c:65070** 65F05
- Nielsen, Holger Bech Tachyons in field theory. Conventional treatment. *Tachyons, monopoles, and related topics (Proc. First Session, Interdisciplinary Sem., Erice, 1976)*, pp. 169-174. North-Holland, Amsterdam, 1978. (Editors) **80a:81079** 81E10 (46N05)
- (with Ninomiya, Masao)  $\beta$ -function in a noncovariant Yang-Mills theory. *Nuclear Phys. B* **141** (1978), no. 1-2, 153-177. (B. N. Frolov) **80k:81104** 81E10 (22E30, 53B30)
- Nielsen, N. K. (with Olesen, P.) An unstable Yang-Mills field mode. *Nuclear Phys. B* **144** (1978), no. 2-3, 376-396. (Authors' summary) **80b:81077** 81E10 (22E70)
- Implications of non-linear invariances for spinor theories in curved space-time. *Nuclear Phys. B* **151** (1979), no. 3, 536-546. (C. S. Sharma) **80d:81150** 81M05 (83C45)
- (with Ambjørn, J.; Olesen, P.) A hidden Higgs Lagrangian in QCD. *Nuclear Phys. B* **152** (1979), no. 1, 75-96. (P. K. Smrz) **80k:81076** 81E15 (81G05)
- barndorff-Nielsen, Ole See Barndorff-Nielsen, Ole
- Nielson, Gregory M. A Mangeron theorem for triangular domains. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 4, 619-632. (Thomas A. Atchison) **80j:65009** 65D05
- Niemann, Heinrich (with Weiss, Jürgen) A fast-converging algorithm for nonlinear mapping of high-dimensional data to a plane. *IEEE Trans. Comput.* **28** (1978), no. 2, 142-147. (Sidney Berkowitz) **80c:62045** 62H30 (68G10)
- Niemeyer, H. (with Honsák, U.) Konstruktive Verfahren zur Lösung von Ausenraumaufgaben der Schwingungsgleichung. *Z. Angew. Math. Mech.* **58** (1978), no. 7, T374-T375. **80a:65253** 65P05
- (with Minkler, H.) Erweitert-reguläre Randwertprobleme. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* **59** (1979), no. 3, T34-T35. (R. E. Gaines) **80f:34024** 34B25
- Niemi, Hannu Prediction theory for nonstationary sequences of random vectors. *Probability theory on vector spaces (Proc. Conf., Trzebiezowice, 1977)*, pp. 183-205. *Lecture Notes in Math.*, **656**, Springer, Berlin, 1978. (H. Salehi) **80f:60041** 60G25
- Nieminen, Juhani Operations on graphs determining congruences on graphs. *Arch. Math. (Brn.)* **14** (1978), no. 4, 215-218. (William T. Trotter, Jr.) **80a:06010** 06C05
- The ideal structure of simple ternary algebras. *Colloq. Math.* **40** (1978/79), no. 1, 23-29. (O. Frink) **80c:20095** 20N10 (06D99)
- Applications of lattice theory and ideals to graph theory. *Demonstratio Math.* **11** (1978), no. 4, 929-935 (1979). (R. A. Melter) **80c:05090** 05C38 (06B10)
- Screens and rounding mappings. *Z. Angew. Math. Mech.* **58** (1978), no. 11, 519-520. (Werner Poguntke) **80b:65054** 65G05 (06A10, 06B05)
- On nonblocking and rearrangeable communication graphs. *Kybernetika (Prague)* **15** (1979), no. 5, 359-365. (Author's summary) **80j:94049** 94C15
- Nienhuis, B. (with Riedel, E. K.; Schick, M.) Variational renormalisation-group approach to the  $q$ -state Potts model in two dimensions. *J. Phys. A* **13** (1980), no. 2, L31-L34. (Authors' summary) **80k:82034** 82A25 (81E15)
- Niethammer, Wilhelm On different splittings and the associated iteration methods. *SIAM J. Numer. Anal.* **16** (1979), no. 2, 186-200. (D. S. Henderson) **80b:65043** 65F10
- Über verschiedene Zerlegungen und die entsprechenden Iterationsverfahren. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* **59** (1979), no. 3, T69-T71. (B. Levinger) **80g:65034** 65F10
- Nieto, Joseph L. Sur l'absorbance spectrale d'un opérateur et le théorème généralisé de Liapounov. *Ann. Sci. Math. Québec* **2** (1978), no. 1, 113-121. (Chandler Davis) **80a:47006** 47A10
- Nieto, Michael Martin (with Simmons, L. M., Jr.) Limiting spectra from confining potentials. *Amer. J. Phys.* **47** (1979), no. 7, 634-635. (Authors' summary) **80d:81012** 81C05 (47A10)
- (with Simmons, L. M., Jr.) Eigenstates, coherent states, and uncertainty products for the Morse oscillator. *Phys. Rev. A* **3** (1979), no. 2, 438-444. (Authors' summary) **80b:81031** 81C10 (47B99)
- (with Simmons, L. M., Jr.) Coherent states for general potentials. I. Formalism. *Phys. Rev. D* **3** (1979), no. 6, 1321-1331. (Tuan W. Chen) **80b:81067a** 81G25 (22E70)

- (with Simmons, L. M., Jr.) Coherent states for general potentials. II. Confining one-dimensional examples. *Phys. Rev. D* (3) **20** (1979), no. 6, 1332-1341. (Tuan W. Chen) **80f:81067b** 81G25 (22E70)
- (with Simmons, L. M., Jr.) Coherent states for general potentials. III. Nonconfining one-dimensional examples. *Phys. Rev. D* (3) **20** (1979), no. 6, 1342-1350. (Tuan W. Chen) **80f:81067c** 81G25 (22E70)
- Nieto-Vesperinas, M. (with Ross, G.; Fiddy, M. A.; Manolitsakis, I.) The propagation and encoding of information in the scattered field by complex zeros. *Optica Acta* **26** (1979), no. 2, 229-238. (Authors' summary) **80e:78006** 78A45
- van Nieuwenhuizen, P. (with Cremmer, E.; Julia, B.; Scherk, J.; Ferrara, S.; Girardello, L.) Spontaneous symmetry breaking and Higgs effect in supergravity without cosmological constant. *Nuclear Phys. B* **147** (1979), no. 1-2, 105-131. (Authors' summary) **80e:83024** 83C45 (35Q99)
- (with Townsend, P. K.) Simplifications of conformal supergravity. *Phys. Rev. D* (3) **19** (1979), no. 10, 3166-3169. (Authors' summary) **80e:81140** 81M05 (53C80, 81E10)
- (with Townsend, P. K.) Anomalies, topological invariants, and the Gauss-Bonnet theorem in supergravity. *Phys. Rev. D* (3) **19** (1979), no. 12, 3592-3603. (Authors' summary) **80f:83040** 83C99 (57R20, 57R25)
- (with Ferrara, S.) Simplifications of Einstein supergravity. *Phys. Rev. D* (3) **20** (1979), no. 8, 2079-2081. (Authors' summary) **80e:83038** 83E15 (81E15)
- Niewiadomski, Tadeusz Contribution to the theory of experimental real-time spectrum analysis. (Polish and Russian summaries) *Arch. Elektrotech. (Warsaw)* **27** (1978), no. 3, 627-667. (From the summary) **80e:93139** 93E10 (94A12)
- Nigam, A. (with Singh, K. D.) On almost decomposable pair of scalar functions. *Math. Balkanica* **6** (1976), 230-236 (1978). (R. Rosca) **80j:53029** 53B30
- Nigam, A. K. (with Pari, P. D.) Balanced factorial experiments. II. *Comm. Statist. A—Theory Methods* **7** (1978), no. 6, 591-605. (J. A. John) **80e:62096** 62K15
- Nijlän, S. A. Partial decidability of the nonequivalence of free schemata. *Programirovanie* **1979**, no. 2, 23-33 (Russian); translated as *Programming and Comput. Software* **5** (1979), no. 2, 93-101. (Authors' summary) **80m:68046** 68C30 (68B10)
- Nigmatullin, R. L. ★ Основы механики гетерогенных сред. (Russian) [Foundations of the mechanics of heterogeneous media] "Nauka", Moscow, 1978. 336 pp. (J. F. Heyda) **80e:76040** 76T05 (35Q99)
- Nigul, U. K. (with Engelbrecht, J.) On dissipative, diffractive and nonlinear effects in acoustodiagnostics of layered media. *Modern problems in elastic wave propagation (Proc. IUTAM Sympos., Northwestern Univ., Evanston, Ill., 1977)*, pp. 265-282. Wiley, New York, 1978. (W. K. Nowacki) **80f:76039** 76Q05
- Asymptotic description of the process of feeble distortion of a longitudinal wave in a nonlinear hereditarily elastic medium. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 1, 60-63. (A. S. Alekseev) **80m:73025** 73D35
- Nikifor, Markko T. Deterministic filtering algorithms for nonlinear differential systems. *Acta Polytech. Scand. Math. Comput. Sci. Ser. No. 30* (1979), 51 pp. (Andrew P. Sage) **80f:93074** 93E10 (93E11)
- Nilmar, Mikko On a uniqueness theorem. *Canad. J. Math.* **31** (1979), no. 5, 1072-1076. (J. G. Krzyż) **80j:30041** 30D40 (30F25)
- On boundary cluster sets. *J. Reine Angew. Math.* **307/308** (1979), 130-133. (Tatsuo Fujiie) **80j:30042** 30D40
- On asymptotic values of meromorphic functions. *Monatsh. Math.* **88** (1979), no. 3, 249-251. (Authors' summary) **80e:30051** 30D40
- Nilminio, Ilkka Truthlikeness in first-order languages. *Essays on mathematical and philosophical logic (Proc. Fourth Scandinavian Logic Sympos. and First Societ-Finnish Logic Conf., Jyväskylä, 1976)*, pp. 437-458. Synthese Library, 122, Reidel, Dordrecht, 1979. (David W. Miller) **80e:03014** 03A05 (03B10)
- See also *Essays on mathematical and philosophical logic*. **80f:03006**
- Nilson, Kiyoshi On prime entire functions. *J. Math. Anal. Appl.* **66** (1978), no. 1, 178-187. (S. K. Bajpai) **80g:30018** 30D20
- Niwa, Fumio (with Sawashima, Ikuko) A reduction of a positive operator in an arbitrary Banach lattice to its irreducible components. *Natur. Sci. Rep. Ochanomizu Univ.* **30** (1979), no. 1, 11-16. (A. V. Bulvalov) **80e:47052** 47B55
- Nijboer, B. R. A. (with Ventevoel, W. J.) On the configuration of systems of interacting particle with minimum potential energy per particle. *Phys. A* **98** (1979), no. 1-2, 274-288. (Tuan W. Chen) **80f:81060** 81H05
- Nijenhuis, Albert (with Wilf, Herbert S.) ★ Combinatorial algorithms. For computers and calculators. Second edition. Computer Science and Applied Mathematics. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1978. xv + 302 pp. ISBN 0-12-519260-6 (Editors) **80e:68076** 68E99 (05-04, 05Axx)
- (with Greene, Curtis; Wilf, Herbert S.) A probabilistic proof of a formula for the number of Young tableaux of a given shape. *Adv. in Math.* **31** (1979), no. 1, 104-109. (J. S. Frame) **80e:05016** 05B30 (20C30)
- Nijhawan, R. R. (with Bahadur, Lal; Pandya, G. P.) Banach space of vector valued Lipschitz functions. *Indian J. Mech. Math.* **15** (1977), no. 1-2, 36-43 (1979). (P. K. Kamthan) **80e:46049** 46E40 (26A16)
- (with Bahadur, Lal; Pandya, G. P.) Banach space of vector-valued Lipschitz functions. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **21** (1978), no. 1, 59-70. (Authors' summary) **80e:46040** 46E40
- Nijlhoi, Anton On the parsing and covering of simple chain grammars. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978)*, pp. 330-344. *Lecture Notes in Comput. Sci.*, 62, Springer, Berlin, 1978. (David B. Benson) **80e:68112** 68F25
- Grammar functors and covers: from non-left-recursive to Greibach normal form grammars. *BIT* **19** (1979), no. 1, 73-78. (Authors' summary) **80e:68190** 68F05
- A left part theorem for grammatical trees. *Discrete Math.* **25** (1979), no. 1, 51-63. (Ju. G. Karpov) **80e:68092** 68F05
- Strict deterministic grammars and Greibach normal form. (German and Russian summaries) *Elektron. Informatsionverarb. Kybernet.* **15** (1979), no. 8-9, 395-401. (Authors' summary) **80m:68068** 68F05
- From left-regular to Greibach normal form grammars. *Inform. Process. Lett.* **9** (1979), no. 1, 51-55. (From the introduction) **80e:68189** 68F05
- Simple chain grammars and languages. *Theoret. Comput. Sci.* **9** (1979), no. 3, 287-309. (Martti Penttonen) **80e:68059** 68F05
- Nikif, Karl See Nickel, Karl
- Niki, Hiroshi (with Sawami, Hideo; Ondoh, Tetsuya) A note on a practical technique for solving elliptic equations. *J. Inst. Math. Appl.* **22** (1978), no. 3, 353-359. (Authors' summary) **80e:65215** 65N20
- Niki, Naoto On computation methods for the discrimination problem by Hayashi (quantification method type II). (Japanese. English summary) *Proc. Inst. Statist. Math.* **26** (1979), no. 2, 115-123. (Authors' summary) **80e:65041** 65F15 (62H30)
- Niklas, C. L. Error-free coefficient realization of recursive part via input-partitioned filter structure. *Electron. Lett.* **16** (1980), no. 6, 236-237. (Authors' summary) **80m:93008** 93E11
- Nikiforov, Vladimir S. (with Hadžiivanov, Nikola G.) The Nordhaus-Stewart-Moon-Moser inequality. (Russian) *Serdica* **4** (1978), no. 4, 344-350. (B. Zelinka) **80j:05077** 05C35
- Nikiforovskii, V. A. (with Freiman, L. S.) ★ Wegbereiter der neuen Mathematik. Translated from the Russian by Harald Sommer. Verlag Mir, Moscow; VEB Fachbuchverlag, Leipzig, 1978. 223 pp. (Editors) **80e:01012** 01A45
- Nikiforuk, P. N. (with Gupta, Madan M.) On the design of an adaptive controller for uncertain plants via Liapunov signal synthesis method. *J. Cybernet.* **9** (1979), no. 1, 73-98. (From the summary) **80e:93080** 93C40
- (with Gupta, Madan M.; Minamide, Nariyasu) A dual approach to a linear smoothing problem. *J. Franklin Inst.* **308** (1979), no. 4, 381-388. (Authors' summary) **80e:93066** 93E14
- Nikitiin, E. M. Irrationality of values of functions  $F(x, s)$ . (Russian) *Mat. Sb. (N.S.)* **109(151)** (1979), no. 3, 410-417, 479. (S. A. Stepanov) **80e:10031** 10F37 (10F35)
- Nikitiin, V. A. Singularities of the solution of the Dirichlet problem for a second-order equation in the neighborhood of an edge. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **2** (1979), 51-62, 103. (V. A. Kondrat'ev) **80e:35046** 35J25
- Nikitiin, A. G. (with Fušić, V. I.) Conformal invariance of relativistic equations for arbitrary spin particles. *Lett. Math. Phys.* **2** (1977/78), no. 6, 471-475. (Authors' summary) **80e:81044** 81C40 (22E70, 58H10)
- (with Fušić, V. I.) Group properties of Maxwell equations. (Russian. English summary) *Group theoretic methods in mathematical physics (Russian)*, pp. 45-80, 189, 197. *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (Authors' summary) **80e:78006** 78A25 (22E05, 35A30, 81K05)
- The invariance group of the Kemmer-Duffin-Petiau equation for a particle with anomalous moment. (Russian. English summary) *Group theoretic methods in mathematical physics (Russian)*, pp. 81-95, 190, 198. *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (A. J. Coleman) **80e:81049** 81C99 (35A30, 58G35)
- The additional symmetry of the Dirac-Fierz-Pauli equation. (Russian. English summary) *Group theoretic methods in mathematical physics (Russian)*, pp. 96-102, 190, 198. *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (Peter Holod) **80e:81061** 81G20 (35Q20)
- (with Fušić, V. I.; Salogub, V. A.) On the non-relativistic motion equations in the Hamiltonian form. *Rep. Math. Phys.* **13** (1978), no. 2, 175-185. (Authors' summary) **80e:81129** 81G40 (58G35)
- (with Fušić, V. I.) On the new invariance algebras of relativistic equations for massless particles. *J. Phys. A* **12** (1979), no. 6, 747-757. (J.-P. Antoine) **80e:81035** 81C40 (22E70, 58G35)
- (with Fušić, V. I.) On the new invariance group of Maxwell equations. *Lett. Nuovo Cimento* (2) **24** (1979), no. 7, 220-224. (M. Carmeli) **80e:78006** 78A25 (35Q99, 58G35)
- Nikitiin, A. S. (with Vengerov, V. N.) Heuristic algorithm for cutting weighted graphs. (Russian. English summary) *Vestn. Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **5** (1979), no. 5, 26-30, 138-139. (Authors' summary) **80m:68060** 68E10
- Nikitiin, Ja. Ju. Large deviations and asymptotic efficiency of integral type statistics. I. (Russian. English summary) *Investigations in the theory of probability distributions. IV. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **85** (1979), 175-187, 241, 247. (S. A. Book) **80m:60041** 60F10 (62E20, 62G20)
- Nikitiin, Ju. P. (with Volkov, G. G.; Liparteliani, A. G.) Gauge schemes of weak and electromagnetic interactions. (Russian. English summary) *Fiz. Elementar. Častic i Atom. Jdra* **10** (1979), no. 1, 191-254. (Authors' summary) **80e:81101** 81G15 (47B99)
- Nikitiin, N. V. A special case of a mapping of coordinates of a nonholonomic dissipative system. (Russian) *Prikl. Meh.* **14** (1978), no. 9, 134-137, 144. (D. P. Rašković) **80b:70021** 70H05 (34C20, 70F25)
- Niknam, Asadollah On one-parameter automorphism groups of tensor products of  $C^*$ -algebras and their corresponding generators. *Proceedings of the Eighth National Mathematics Conference (Arya-Mehr Univ. Tech., Tehran, 1977)*, pp. 253-266. *Arya-Mehr Univ. Tech., Tehran*, 1977. (Ola Bratteli) **80e:46071** 46L05 (46L55)
- Nikogosjan, A. G. (with Arutjunjan, G. A.) Diffused reflection of light with an arbitrary dispersion index. (Russian. English summary) *Astrofizika* **14** (1978), no. 3, 393-406. (Authors' summary) **80e:78004** 78A10 (00A89)
- (with Arutjunjan, G. A.) The radiation field in a semi-infinite atmosphere containing energy sources. (Russian) *Astrophys. and Space Sci.* **64** (1979), no. 2, 269-283. (Authors' summary) **80e:86009** 86A35
- Nikoladze, N. R. (with Nanobashvili, N. D.) A logical extremal model in economics. (Russian. English and Georgian summaries) *Soobšč. Akad. Nauk Gruz. SSR* **91** (1978), no. 1, 65-68. (Authors' summary) **80f:90043** 90A16
- Nikolaenko, M. A. Characteristic lines of a first order quasilinear partial differential equation and the Pfaffian manifold. (Russian) *Ukrain. Geom. Sb.* **21** (1978), 109-110, 4. (J. Chrastina) **80e:35024** 35F05 (58A15)
- Nikolaenko, V. M. Reverse influence of a quantized field in a gauge interpretation of gravity. (Russian) *Problemy Teor. Gravitacii i Element. Častic* **9** (1978), 46-54. (From the text) **80e:83039** 83C45 (53C05)
- Nikolaev, B. G. An approach to the solution of problems in the case of asymmetric ring domains. (Russian. English summary) *Mathematical questions in the theory of wave propagation. 9. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **78** (1978), 174-183, 250. (A. S. Silbergleit) **80e:35021** 35C10 (35J05)
- Nikolov, E. S. (with Samarskii, A. A.) Direct and iteration methods for solving difference equations. (Russian) *Problems in mathematical physics and numerical mathematics*



- (Russian), pp. 239-254, 327, "Nauka", Moscow, 1977. (Authors' summary) **80c:65194** 65N20 (65Q05)
- (with Bogdanova, M. S.; Kucherov, A. B.; Taran, M. D.; Tikhin, V. F.; Favorskii, A. P.; Sapozhnikova, S. A.; Saikov, M. Ju.) Some implicit iteration methods. Analysis and comparison. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 115* (1978), 35 pp. (Authors' summary) **80c:65117** 65J05
- Nikolov, I. G.** Space of directions at a point of a space of curvature not greater than  $K$ . (Russian) *Sibirsk. Mat. Zh.* **19** (1978), no. 6, 1341-1348, 1438. (Ju. Burago) **80d:53045** 53C70
- Solution of the Plateau problem in spaces of curvature at most  $K$ . (Russian) *Sibirsk. Mat. Zh.* **20** (1979), no. 2, 345-353, 459. (M. L. Gromov) **80a:58041** 58E12 (49F25, 53A10)
- Nikolov, Ju. P.** (with Petrov, B. N.; Aleksandrov, A. D.; Andreev, V. P.; Bulekov, V. P.; Viktorov, B. V.; Izvol'akii, E. G.; Kudrjavcev, P. S.; Kuzin, V. P.; Mahan'ko, A. V.; Mikhailov, F. A.; Muravlev, G. A.; Pobedonosev, G. V.; Pohvalenskii, V. L.; Sadikov, F. R.; Serpionov, G. V.; Salikova, I. M.; Ufjačenko, A. E.; Frolov, P. A.; Červjakov, V. P.; Satorjan, K. T.) ★Многомерные и нестационарные системы автоматического управления. (Russian) [Multidimensional and nonstationary automatic control systems] ★"Машиностроение", Moscow, 1978. 240 pp. (Publisher's summary) **80c:93073** 93C40
- Nikolov, M. V.** (with Ol'hovskii, V. S.) Analytical structure of the  $S$ -matrix for some classes of potentials. (Russian. English summary) *Teoret. Mat. Fiz.* **31** (1977), no. 2, 214-219. (Authors' summary) **80f:81097** 81F15
- Nikolov, N. Ja.** (with Volkodavov, V. F.) The Gellerstedt problem for a particular form of the Euler-Darboux equation. (Russian) *Differentsial'nye Uravnenija (Ryazan) No. 12* (1978), 24-35. (Authors' summary) **80b:35110** 35M05
- The  $N$  problem for an equation of mixed type in a half-plane that contains in its interior a line of singularity of the coefficients of the equation. (Russian) *Differentsial'nye Uravnenija (Ryazan) No. 12* (1978), 105-112. (Editors) **80d:35109** 35M05
- Nikolov, P. N.** (with Bazarov, I. P.) Solution of a chain of equations for correlation functions. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* **19** (1978), no. 3, 59-62. (Authors' summary) **80c:82053** 82A99
- Nikolov, V. B.** (with Kazhiov, A. V.) On the theory of Navier-Stokes equations of a viscous gas with a nonmonotone state function. (Russian) *Dokl. Akad. Nauk SSSR* **246** (1979), no. 5, 1045-1047. (A. A. Arsen'ev) **80i:35147** 35Q10 (76D05)
- Nikolačuk, A. M.** (with Mišnjakov, N. T.) Noether's theory for a general boundary value problem with Carleman shift and conjugation in a class of generalized analytic functions. (Russian) *Ukrain. Mat. Zh.* **31** (1979), no. 4, 441-447, 479. (E. V. Tjurikov) **80b:30042** 30E25 (30G20, 35J55)
- Nikolačuk, Š. S.** (with Grigorovič, G. A.) On a numerical solution of equations of the radiation transfer theory by the method of moments. (Russian. Georgian and English summaries) *Tbilis. Gos. Univ. Inst. Prikl. Mat. Trudy* **5/6** (1978), 108-116. (From the summary) **80d:80009** 80A20
- Ferentinou-Nikolakopoulou, Ioanna** See Ferentinou-Nikolakopoulou, Ioanna
- Nikolenko, L. D.** (with Molčanov, I. M.; Jakovlev, M. F.) Solution of a class of systems of linear algebraic equations with degenerate matrices. (Russian) *Computational methods in linear algebra (Proc. Fourth All-Union Conf., Acad. Sci. USSR, Novosibirsk, 1976)*, pp. 97-109. *Akad. Nauk SSSR Sibirsk. Otdel. Vychisl. Centr. Novosibirsk*, 1977. (Zdeněk Dostál) **80a:65036** 65F20
- Nikolenko, N. V.** Perturbations of the Korteweg-de Vries equation. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 3(201), 179-180. (L. A. Takhtjan (Tahtadžjan)) **80a:35105** 35Q20 (35B10)
- Nikolić, Zlatiborka** A. Time-reversal noninvariance of the quantum-mechanical kinetic equation of Kadanoff and Baym. *J. Math. Phys.* **19** (1978), no. 12, 2437-2440. (Author's summary) **80b:82035** 82A35
- Nikolić-Despotović, Danica** Probabilistic metric spaces. (Serbo-Croatian) *Matematika (Belgrade)* **5** (1976), no. 3, 41-49. (From the introduction) **80a:40041** 54E99 (60B99)
- The representation of one exponential function. *Generalized functions and operational calculus (Proc. Conf., Varna, 1975)*, pp. 163-169. *Bulgar. Acad. Sci., Sofia*, 1979. (R. A. Struble) **80j:44013** 44A40 (35C99)
- The analysis of a class of exponential operational functions. *Publ. Inst. Math. (Beograd) (N.S.)* **25**(39) (1979), 105-115. (Edward W. Kamen) **80a:44004** 44A40
- Nikolov, A. V.** (with Vaklev, I. S.; Ivanov, M. I.) A field equation for baryons with an arbitrary spin (a generalization of the Dirac equation). (Russian. English summary) *Teoret. Mat. Fiz.* **40** (1979), no. 1, 64-76. (Authors' summary) **80f:81024** 81C05
- Nikolov, D. A.** (with Ščerbina, U. V.) Prediction of random processes using a harmonic series expansion and the Kalman filter taking into account correlation between noise and the model. *Automatika* **1978**, no. 5, 85-87, 94. (Russian); translated as *Societ Automat. Control* **11** (1978), no. 5, 70-71. (Agostino Villa) **80g:93076** 93E10
- Nikolov, K. I.** The analyticity of the solution of evolution equations. (Russian) *C. R. Acad. Bulgare Sci.* **31** (1978), no. 7, 791-794. (A. Szép) **80c:34043** 34G10
- Analyticity of the solutions of differential equations with a variable operator coefficient. (Russian) *C. R. Acad. Bulgare Sci.* **31** (1978), no. 12, 1527-1529. (J. Christina) **80i:35174** 35R20 (34G10, 58D25)
- Nikolova, L. I.** The complex interpolation method for several spaces. (Russian) *C. R. Acad. Bulgare Sci.* **31** (1978), no. 11, 1523-1526. (S. D. Riemenschneider) **80a:46062** 46M35
- Nikolova, T. St.** (with Bainov, D. D.) A boundary value problem for differential equations of superneural type with control. (Russian. Bulgarian and English summaries) *Godišnik Visš. Učebn. Zaved. Plovdiv. Mat.* **12** (1976), no. 3, 209-218 (1978). (From the text) **80b:34087** 34K10
- (with Bainov, D. D.) A boundary value problem with infinite defect for differential equations of superneural type with control. (Russian) *VII. Internationale Konferenz über Nichtlineare Schwingungen (Berlin, 1975)*, Band I, Teil 2, pp. 147-152. *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977. 4N, Akademie-Verlag, Berlin, 1977. (R. F. Datko) **80a:34097** 34K10
- (with Bainov, D. D.) On a multipoint boundary value problem for differential equations with deviating argument. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Plovdiv. Mat.* **13** (1977), no. 1, 115-122 (1978). (Authors' summary) **80b:34092** 34K10
- (with Bainov, D. D.) Existence and uniqueness of the solution of some integro-differential equations. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Plovdiv. Mat.* **13** (1977), no. 1, 123-126 (1978). (From the text) **80a:45013** 45J05 (34K05)
- (with Bainov, D. D.) The existence and uniqueness of a solution of some systems of integro-differential equations. (Russian) *Ann. Univ. Sci. Budapest. Eötvös Sect. Math.* **21** (1978), 5-12 (1979). (Nicolae Luca) **80f:45019** 45J05
- (with Bainov, D. D.) A boundary value problem for an infinite system of differential equations. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* **1978**, no. 1, 30-36, 91. (József Kalinowski) **80a:34117** 34K30 (34G99)
- Nikol'skii, É. V.** (with Džalilov, D.) Exact and approximate general solution of a second-order ordinary linear differential equation. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* **22** (1979), no. 1, 20-24. (D. Bobrowski) **80j:34013** 34A45 (65L99)
- (with Džalilov, D.) A generalized method of variation of constants. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* **22** (1979), no. 2, 80-83. (J. Jarník) **80k:34012** 34A30 (65L05)
- Nikol'skii, N. K.** (with Dobryš, L. N.; Sudakov, V. N.) How good can a nonhereditarily complete family be? (Russian. English summary) Investigations on linear operators and the theory of functions, VIII. *Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **73** (1977), 52-69, 230-231 (1978). (Authors' summary) **80d:46041** 46C05
- An attempt to use the factor-operator for the localization of  $\mathcal{I}$ -invariant subspaces. (Russian) *Dokl. Akad. Nauk SSSR* **240** (1978), no. 1, 24-27. (D. Sarason) **80c:46019** 46E10 (30H05)
- Bases of invariant subspaces and operator interpolation. (Russian) Spectral theory of functions and operators. *Trudy Mat. Inst. Steklov.* **130** (1978), 50-123, 223. (D. Sarason) **80b:47021** 47A65 (30D50, 46B15, 47B37)
- Nikol'skii, S. M.** (with Besov, O. V.; Il'in, V. P.) ★Integral representations of functions and imbedding theorems. Vol. I. Translated from the Russian. Edited by Mitchell H. Taibleson. Scripta Series in Mathematics. V. H. Winston & Sons, Washington, D.C.; Halsted Press [John Wiley & Sons], New York-Toronto, Ont.-London, 1978. viii + 345 pp. ISBN 0-470-26540-X (Editors) **80i:46030a** 46E35
- Some inequalities for the functions of the weight classes. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 583-590. *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (Jan Bochenek) **80j:46059** 46E35 (41A17)
- (with Men'šov, D. E.) Petr Lavrent'evič Ul'janov (on the occasion of his fiftieth birthday). (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 6(193), 3-5. (Editors) **80g:01027** 01A70
- Integral representations of functions, and imbedding theory. (Russian) *Mat. Zametki* **24** (1978), no. 3, 415-424, 448. (Author's summary) **80c:46045** 46E35
- (with Besov, O. V.; Il'in, V. P.) ★Integral representations of functions and imbedding theorems. Vol. II. Edited by Mitchell H. Taibleson. Scripta Series in Mathematics. V. H. Winston & Sons, Washington, D.C.; Halsted Press [John Wiley & Sons], New York-Toronto, Ont.-London, 1979. viii + 311 pp. ISBN 0-470-26593-0 (Editors) **80i:46030b** 46E35
- A variational problem for an equation of elliptic type with degeneration on the boundary. (Russian) Studies in the theory of differentiable functions of several variables and its applications, VII. *Trudy Mat. Inst. Steklov.* **130** (1979), 212-238, 323. (Todor G. Genčev) **80j:35031** 35J35
- See also Theory and applications of differentiable functions of several variables, **80c:00022**; Studies in the theory of differentiable functions of several variables and its applications, **80c:46001** and Algebra, number theory and its applications, **80a:16004**
- Nikolmarov, E. S.** (with Belinskii, V. A.; Halatnikov, I. M.) Investigation of the cosmological evolution of viscoelastic matter with causal thermodynamics. *Ž. Eksp. Teoret. Fiz.* **77** (1979), no. 2, 417-433. (Russian); translated as *Soviet Phys. JETP* **50** (1979), no. 2, 213-221. (Authors' summary) **80i:83053** 83F05
- Nikonenko, A. V.** (with Stojanov, V. T.; Hesin, A. Ja.) The exactness of the method of approximate calculation of the area of an image at a given level of optical density. (Russian) *Problemy Šlučain. Poiska No. 6 Zadaci Optimizacij* (1978), 275-281, 335. (Authors' summary) **80a:78002** 78A05 (65D30)
- Nikonor, O. I.** (with Kuržanskii, A. B.) Optimal control of an ensemble of trajectories. (Russian) *Trudy Inst. Mat. i Meh. Ural. Naučn. Centr. Akad. Nauk SSSR No. 24 Igrovyje Zadaci Upravlenija* (1977), 53-67, 116. (From the text) **80i:93042** 93C99 (49B10)
- Nikonor, V. A.** Application of a theorem of the alternative to nonlinear programming in a complex space. (Russian) *Application of computers to the solution of problems in mathematical physics and automatic control systems (Russian)*, pp. 54-61. *Kazan. Univ., Kazan*, 1978. (I. Maruşciac) **80j:90089a** 90C25 (90C30)
- Stability in nonlinear complex programming. (Russian) *Application of computers to the solution of problems in mathematical physics and automatic control systems (Russian)*, pp. 61-64. *Kazan. Univ., Kazan*, 1978. (I. Maruşciac) **80j:90089b** 90C25 (90C30)
- Nikonorova, G. A.** The Cauchy problem for certain linear multidimensional systems over Geyrey-Leray-Ohya spaces. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 7(194), 57-63. (P. Szepietycki) **80c:35090** 35L55
- Nikulin, M. S.** S. N. Bernstein's regularity conditions in a problem of the empirical Bayes approach. (Russian. English summary) Studies in statistical estimation theory, II. *Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **79** (1978), 38-43, 97, 101. (A. L. Rukhin) **80a:62033** 62E20
- Testing the hypothesis of equality of parameters of several binomial laws. (Russian. French summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 2, 385-389. (I. N. Volodin) **80k:62035** 62F03
- (with Džaparidze, K. O.) The probability distributions of the Kolmogorov and omega-squared statistics for continuous distributions with shift and location parameters. (Russian. English summary) Investigations in the theory of probability distributions, IV. *Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **85** (1979), 46-74, 238, 245. (Sándor Csörgő) **80j:62044** 62G10 (62E20)
- See also Studies in statistical estimation theory, **80f:62005** and Oberhettinger, F., **80j:42002**
- Nikula, V. V.** Integer symmetric bilinear forms and some of their geometric applications. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* **43** (1979), no. 1, 111-177, 238. (I.

- Dolgachev 80:10031 10C05 (14G30, 14J17, 14J25, 57M99, 57R45, 58C27)
- Nikunen, M. Selfadjoint diffusion processes with rapidly oscillating coefficients. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 5, 30-35. (Constantin Tudor) 80:60081 60J60 (35B99)
- Niles, Richard Pushing-up in finite groups. *J. Algebra* 57 (1979), no. 1, 26-63. (Gary L. Walls) 80:20027 20D05
- Nimato, H. The reconstruction of a function from its integral with respect to a class of families of curves. (Russian) *Akad. Nauk SSSR Sibirsk. Otdel. Vychisl. Centr Preprint No. 82* (1977), 27 pp. (Editors) 80:44005 44A15 (68G10)
- Ninio, Jacques An algorithm that generates a large number of geometric visual illusions. *J. Theoret. Biol.* 79 (1979), no. 2, 167-201. (Author's summary) 80:92046 92A25
- Ninomiya, Masao (with Nielsen, Holger Bech)  $\beta$ -function in a noncovariant Yang-Mills theory. *Nuclear Phys. B* 141 (1978), no. 1-2, 153-177. (B. N. Frolov) 80:81104 81E10 (22E30, 53B30)
- Ninomiya, Nobuyuki On the kernel of positive definite type. *Osaka J. Math.* 17 (1980), no. 1, 187-198. (R. M. Hervé) 80:31008 31C15
- Ninomiya, Tomoko (with Goto, Motinori; Kao, Shinji) Axiomatization of Kleene's three-valued logic by a computer. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic* (Bath, 1979), pp. 241-247, IEEE, Long Beach, Calif., 1979. (Maurizio Fattorosi-Barnaba) 80:03052 03B50 (68G99)
- Niordano, Frithiof L. A consistent refined shell theory. (Russian summary) *Complex analysis and its applications* (Russian), pp. 421-429, 670, "Nauka", Moscow, 1978. (Author's summary) 80:73041 73L05
- An asymptotic theory for vibrating plates. *Internat. J. Solids and Structures* 15 (1979), no. 2, 167-181. (Author's summary) 80:73037 73K10
- (with Olhoff, N.) Some problems concerning singularities of optimal beams and columns. *Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I* (Brussels, 1978). *Z. Angew. Math. Mech.* 59 (1979), no. 3, T16-T26. (Vadim Komkov) 80:73054 73K99 (49H05)
- Nipp, K. A formal method for matched asymptotic expansions applied to the Field-Noyes model of the Belousov-Zhabotinskii reaction. *Mech. Res. Comm.* 5 (1978), no. 4, 231-238. (Richard J. Field) 80:80012 80A30 (34E15)
- Nirenberg, Louis (with Kinderlehrer, David; Spruck, Joel) Régularité dans les problèmes elliptiques à frontière libre. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 24, A1187-A1190. (Authors' summary) 80:35050 35J65 (53A10)
- (with Gidas, Basilis; Ni, Wei Ming) Symmetry and related properties via the maximum principle. *Comm. Math. Phys.* 68 (1979), no. 3, 209-243. (E. M. Saak) 80:35043 35J25 (35B50)
- Nirmala, K. Complementary graphs and total chromatic numbers. *Proceedings of the Symposium on Graph Theory* (Indian Statist. Inst., Calcutta, 1976), pp. 227-245, ISI Lecture Notes, 4, Macmillan of India, New Delhi, 1979. (Author's summary) 80:05068 05C35
- Nirmala Kumari Amma, K. Pseudocomplements in groupoids. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 2, 209-219. (Phullendu Das) 80:20077 20L05
- Nisbet, R. M. (with Gurney, W. S. C.; Pettipiece, M. A.) Environmental fluctuations and the theory of the ecological niche. *J. Theoret. Biol.* 75 (1978), no. 2, 223-237. (Authors' summary) 80:92054 92A15
- (with Gurney, W. S. C.) Ecological stability and social hierarchy. *Theoret. Population Biol.* 16 (1979), no. 1, 48-80. (Authors' summary) 80:92019 92A15
- Nishi, Akihito A note on Pólya's urn model. (Japanese) *J. Fac. Ed. Saga Univ. Part I* No. 26 (1978), 87-92. (T. Kawata) 80:60001 60-01 (60C05)
- An elementary proof of Johnson-Dulmage-Mendelsohn's refinement of Birkhoff's theorem on doubly stochastic matrices. *Canad. Math. Bull.* 22 (1979), no. 1, 81-86. (R. A. Brualdi) 80:15022 15A51 (05C30)
- Nishida, Goro The transfer homomorphism in equivariant generalized cohomology theories. *J. Math. Kyoto Univ.* 18 (1978), no. 3, 435-451. (R. Paul Beem) 80:55006 55N20
- On a characterization of finite groups of  $p$ -rank 1. *J. Math. Kyoto Univ.* 18 (1978), no. 3, 543-556. (Shichirō Oka) 80:55014 55Q10 (20D10, 55R35)
- Nishida, Kenji Construction of correctors. *J. Algebra* 54 (1978), no. 2, 316-328. (Toyonori Kato) 80:16047 16A89 (16A90)
- Nishida, Takashi A note on a theorem of Nirenberg. *J. Differential Geom.* 12 (1977), no. 4, 629-633 (1978). (J. Christina) 80:58013 58E05 (35A10)
- The initial value problem of the Boltzmann equation and its fluid dynamical limit at the level of compressible Euler equation. *Nonlinear evolution equations* (Proc. Sympos., Univ. Wisconsin, Madison, Wis., 1977), pp. 29-57, Publ. Math. Res. Center Univ. Wisconsin, 40, Academic Press, New York, 1978. (Reinhard Illner) 80:76046 76P05 (45K05)
- (with Mimura, Masayasu) On a certain semilinear parabolic system related to the Lotka-Volterra ecological model. *Publ. Res. Inst. Math. Sci.* 14 (1978), no. 2, 269-282. (Lu-San Chen) 80:35077 35K45 (92A15)
- Nishida, Toshiro (with Ueshima, Yasumasa; Yoneyama, Kanji) Two-stage tandem queue with two types of customers. *Tech. Rep. Osaka Univ.* 28 (1978), no. 1430-1458, 343-349. (Authors' summary) 80:60087 60K25
- (with Namekata, Tsuneyuki; Tabata, Yoshio) A sequential allocation problem with two kinds of targets. (Japanese summary) *J. Oper. Res. Soc. Japan* 22 (1979), no. 1, 16-28. (Richard F. Serfozo) 80:90146 90C39 (90D20)
- (with Yanagawa, Noboru) A graphical decomposition of the stochastic network. (Japanese summary) *J. Oper. Res. Soc. Japan* 22 (1979), no. 2, 85-94. (Authors' summary) 80:90039 90B15
- (with Ishii, Hiroaki; Shiode, Syogo; Iguchi, Katsuro) An algorithm for a partially chance-constrained E-model. (Japanese summary) *J. Oper. Res. Soc. Japan* 22 (1979), no. 3, 233-256. (Authors' summary) 80:90108 90C15
- (with Ichimori, Tetsuo; Ishii, Hiroaki) A minimax flow problem. *Math. Japon.* 24 (1979/80), no. 1, 65-71. (Authors' summary) 80:90060 90B10
- (with Hiramatsu, Toshiaki) Commutative tandem queue with correlated two servers. *Math. Japon.* 24 (1979/80), no. 1, 73-80. (Martin J. Fischer) 80:60097 60K25
- (with Ishii, Hiroaki; Daino, Akira) Fractional set covering problems. *Tech. Rep. Osaka Univ.* 29 (1979), no. 1492-1516, 319-326. (Authors' summary) 80:90078 90C30
- Nishihara, Masaru (with Kajiwara, Joji) Charakterisierung der Steinschen Teilgebiete durch Okasches Prinzip in zwei-dimensionalen Steinschen Mannigfaltigkeiten. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 33 (1979), no. 1, 71-76. (A. Hirschowitz) 80:32031 32E10
- Nishijima, Kazuhiko (with Okawa, Masanori) The Becchi-Rouet-Stora transformation for the gravitational field. *Progr. Theoret. Phys.* 60 (1978), no. 1, 272-283. (Shin-ichi Kitamura) 80:83027 83C35 (35A30)
- (with Okawa, Masanori) Renormalization in a symmetry-broken theory. *Progr. Theoret. Phys.* 61 (1979), no. 6, 1822-1836. (R. Delbourgo) 80:81079 81E15
- Nishikawa, Mitsuru Exponential image in the real special linear group. *Bull. Fukuoka Univ. Ed. III* 28 (1978), 1-6. (N. N. Šapovalov) 80:22011 22E20
- Nishikawa, Yoshikazu (with Okudaira, Masashi) A time-decomposition algorithm for the solution of multiple-target problems. *Mem. Fac. Engrg. Kyoto Univ.* 40 (1978), no. 2, 62-77. (From the summary) 80:93085 93C15
- (with Ojika, Takeo; Okudaira, Masashi) A time-decomposition algorithm for a stiff linear two-point boundary-value problem and its application to a nonlinear optimal control problem. *J. Optim. Theory Appl.* 27 (1979), no. 2, 231-248. (Gerard G. L. Meyer) 80:93040 93B40
- Nishimori, Toshiyuki Ends of leaves of codimension-one foliations. *Tôhoku Math. J. (2)* 31 (1979), no. 1, 1-22. (D. B. Fuks) 80:57014 57R30
- Nishimoto, Katsuyuki Fractional differentiation of products. *J. College Engrg. Nihon Univ. Ser. B* 20 (1979), 1-7. (E. R. Love) 80:26008 26A33 (30E99, 44A99)
- Fractional differentiation of the logarithmic function. *J. College Engrg. Nihon Univ. Ser. B* 20 (1979), 9-18. (E. R. Love) 80:26009 26A33 (30E99, 44A99)
- Nishimoto, Toshihiko On the Orr-Sommerfeld type equations. II. Connection formula. *Kôdai Math. Sem. Rep.* 29 (1977/78), no. 3, 233-249. (W. Wasow) 80:34078 34E20
- Global dispersion relation for density waves in a certain simplified model of a disk shaped galaxy. *Stud. Appl. Math.* 60 (1979), no. 1, 11-26. (William B. Heard) 80:85063 85A05 (34C99)
- Nishimura, Hirokazu Is the semantics of branching structures adequate for chronological modal logics? *J. Philos. Logic* 8 (1979), no. 4, 469-475. (Steve Kuhn) 80:03033 03B45
- Nishimura, Jun-ichi On ideal transforms of Noetherian rings. *J. Math. Kyoto Univ. B* (1979), no. 1, 41-46. (Maria Grazia Marinari) 80:13005 13B20
- Nishimura, Kazuo A further remark on the number of equilibria of an economy. *Internat. Econom. Rev.* 19 (1978), no. 3, 679-685. (Karl Shell) 80:90036 90A14
- (with Benhabib, Jess) On the uniqueness of steady states in an economy with heterogeneous capital goods. *Internat. Econom. Rev.* 20 (1979), no. 1, 59-82. (J. M. Gaffney) 80:90040 90A17 (90A10)
- (with Benhabib, Jess) The Hopf bifurcation and the existence and stability of closed orbits in multisector models of optimal economic growth. *J. Econom. Theory* 21 (1979), no. 3, 421-444. (Authors' summary) 80:90043 90A16
- Nishimura, Masafumi (with Ohta, Mitsuo; Hiromitsu, Seiji) On the stochastic behaviour for a nonstationary system of mixed model type with multi-input and multi-output. (Japanese. English summary) *Systems and Control* 23 (1979), no. 2, 45-53. (Authors' summary) 80:93137 93E20
- Nishimura, Shôichi Optimal interval for stochastic clearing systems. (Japanese summary) *J. Oper. Res. Soc. Japan* 22 (1979), no. 2, 95-105. (N. U. Prabhu) 80:90038 90B05 (90C40)
- Nishimura, Takuya (with Kanoh, Hideaki) Periodic solutions of matrix Riccati equations with detectability and stabilizability. *Internat. J. Control* 29 (1979), no. 3, 471-487. (Torbjorn Strom) 80:93075 93E20
- See also Fahmy, Moustafa M.; et al., 80:93033
- Nishino, Fumio (with Hasegawa, Akio) Thin-walled elastic members. *J. Fac. Engrg. Univ. Tokyo Ser. B* 35 (1979/80), no. 2, 109-190. (Authors' summary) 80:73048 73K05
- Nishino, Hisakazu (with Kojima, Masakazu; Arima, Naohiko) A PL homotopy for finding all the roots of a polynomial. *Math. Programming* 16 (1979), no. 1, 37-62. (T. Y. Li) 80:55003 55M25 (58C15, 65H05)
- Nishino, Hiroshi (with Fujii, Yasunori) Some phenomenological consequences of the super Higgs effect. *Z. Phys. C* 2 (1979), no. 3, 247-252. (Kishin Mariwalla) 80:83015 83C45
- Nishino, T. In memory of Prof. Kiyosi Oka. (Japanese) *Sûgaku* 30 (1978), no. 3, 269-270. (J. Kajiwara) 80:01034 01A70 (32-03)
- Nishino, Yoshio (with Ikeda, Mineo) On the symmetry of nondegenerate, selfadjoint differential operators of the second order. *Math. Japon.* 22 (1977/78), no. 4, 413-425. (Akira Asada) 80:58052 58G30 (47E05, 81C99)
- Nishishiraho, Toshihiko Saturation of trigonometric polynomial operators. *J. Approx. Theory* 24 (1978), no. 3, 208-215. (Karl Scherer) 80:42004 42A10 (41A40)
- Nishitani, Tatsuo On the Cauchy problem for weakly hyperbolic equations. *Comm. Partial Differential Equations* 3 (1978), no. 4, 319-333. (Maria Cinquini-Cibrario) 80:35078 35L30
- Nishura, Togo (with Bindschadler, David) An integral inequality. *Real Anal. Exchange* 4 (1978/79), no. 2, 162-163. (C. Vinti) 80:28001 28A05
- (with Andrus, G. F.) Fixed-points of random set-valued maps. *Nonlinear Anal.* 3 (1979), no. 1, 65-72 (1978). (Shigeru Itoh) 80:54052 54H25 (60H25)
- Two counterexamples for measurable relations. *Rocky Mountain J. Math.* 9 (1979), no. 3, 499-501. (T. Neubrunn) 80:28024 28B20
- Nishura, Yasumasa Global branching theorem for spatial patterns of a reaction-diffusion system. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 6, 201-204. (P. C. Fife) 80:35016 35B32 (92A15)
- Nishiwada, Kimimasa On local characterization of wave front sets in terms of boundary values of holomorphic functions. *Publ. Res. Inst. Math. Sci.* 14 (1978), no. 2, 309-320. (P. Schapira) 80:32023 32A40 (32E35, 46F20)
- On weak evolution operators with constant coefficients and spreading of wave packets. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 2, 41-44. (J. Christina) 80:35012 35E20 (35L25)
- Nishiyama, Noriyuki (with Miyazaki, Shigeji; Hashimoto, Fumio) An adjacent pairwise approach to the mean flow-time scheduling problem. (Japanese summary) *J. Oper. Res. Soc. Japan* 21 (1978), no. 2, 287-301. (Masafumi Sasaki) 80:90080 90B35
- Nishizeki, Takao (with Saito, Nobuji; Takamizawa, Kazuhiko) Computational complexities of obtaining programs with minimum number of GO TO statements from



- flow charts. *Systems-Comput.-Controls* 8 (1977), no. 2, 11-18 (1978). (Steven S. Muchnick) **80c:68032** 68C25 (68B05)
- (with Asano, Takao; Saito, Nobuyuki) NP-complete problems of finding a maximum cutset and of reducing graphs to bipartite graphs. *Systems-Comput.-Controls* 8 (1977), no. 4, 45-52 (1979). (Authors' summary) **80c:68164** 68E10 (68C25)
- On the relationship between the genus and the cardinality of the maximum matchings of a graph. *Discrete Math.* 25 (1979), no. 2, 149-156. (Ian Anderson) **80g:05057** 05C99 (05C10)
- Nisht, M. I. See Nish, M. I.
- Nisicenko, V. P. (with Kumar, Ajit; Rybakov, Ju. P.) Stability of charged solitons. *Internat. J. Theoret. Phys.* 18 (1979), no. 6, 425-432 (1980). (Authors' summary) **80m:81130** 81M05
- Nish, M. I. (with Belocerkovskii, S. M.) Modeling of turbulent wakes in ideal fluids. Third All-Union Seminar on Turbulent Flows, Part I. *Fluid Mech.—Soviet Res.* 7 (1978), no. 1, 102-115. (From the summary) **80j:76036** 76F99
- Nistor, Gh. (with Braier, Aneta) Estimation of the precision of the displacement vector of a construction obtained by indirect weighted measurements. (Romanian. French summary) *Bul. Inst. Politehn. Iași Sect. I* 24(28) (1978), no. 1-2, 83-86. (Authors' summary) **80a:65095** 65G05
- Nistor, I. Shock waves in nonlinear micropolar elasticity. *An. Științ. Univ. "Al. I. Cuza" Iași Sect. I a Mat. (N.S.)* 24 (1978), no. 2, 399-402. (D. R. Bland) **80f:73039** 73D99 (47H12)
- Nisiri, Paolo (with Conti, Giuseppe) A definition of asymptotic spectrum for multi-valued maps in Banach spaces. (Italian summary) *Atti Sem. Mat. Fis. Univ. Modena* 26 (1977), no. 1, 1-14 (1978). (K. Goebel) **80a:47091** 47H12
- Positive solutions of a nonlinear eigenvalue problem with discontinuous nonlinearity. *Proc. Roy. Soc. Edinburgh Sect. A* 83 (1979), no. 1-2, 133-145. (Theodore Laetsch) **80m:34016** 34B15
- Niş, Ana Ultraproducts of rings which retain factor properties. (Romanian. French summary) *Stud. Cerc. Mat.* 31 (1979), no. 2, 209-211. (A. Rosenberg) **80i:16048** 16A99 (03C20, 08B25)
- Niş, C. (with Buzescu, S.) Sur les nil sous-anneaux. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 5, 715-717. (Jean Guérindon) **80i:16015** 16A22
- Nitecki, Zbigniew A periodic attractor determined by one function. *J. Differential Equations* 29 (1978), no. 2, 214-234. (Carl P. Simon) **80c:92038** 92A15 (34C25, 58F10)
- (with Devaney, Robert L.) Shift automorphisms in the Hénon mapping. *Comm. Math. Phys.* 67 (1979), no. 2, 137-146. (Richard Cushman) **80f:58035** 58F15 (58F13)
- On the topology of the set of completely unstable flows. *Trans. Amer. Math. Soc.* 252 (1979), 147-162. (Leo Jonker) **80j:58048** 58F10 (34D10)
- Nitsche, Joachim A.  $L_\infty$ -convergence of the Ritz-method with linear finite elements for second-order elliptic boundary value problems. (Russian summary) *Complex analysis and its applications* (Russian), pp. 430-437, 670, "Nauka", Moscow, 1978. (G. E. Ciarlet) **80c:65210** 65N30
- $L_\infty$ -convergence of finite element Galerkin approximations for parabolic problems. (French summary) *RAIRO Anal. Numér.* 13 (1979), no. 1, 31-54, i. (Author's summary) **80f:65122** 65N30
- Nitsche, Johannes C. C. Contours bounding at most finitely many solutions of Plateau's problem. (Russian summary) *Complex analysis and its applications* (Russian), pp. 438-446, 670, "Nauka", Moscow, 1978. (Jean E. Taylor) **80c:53006** 53A10 (49F10)
- The higher regularity of liquid edges in aggregates of minimal surfaces. *Nachr. Akad. Wiss. Göttingen Math.-Phys. Kl. II* 1978, no. 2, 31-51. (R. N. Abdulav) **80g:49043** 49F10
- Niu, H. P. (with Lee, Charles C.) Determination of zeros of polynomials by synthetic division. *Internat. J. Comput. Math.* 7 (1979), no. 2, 131-139. (Authors' summary) **80c:65108** 65H05
- Nivas, Ram (with Gupta, V. C.) On problems relating the horizontal and complete lifts of  $q$ -structure. *Nepali Math. Sci. Rep.* 3 (1978), no. 2, 66-77. (S. C. Rastogi) **80c:53035** 53C15
- Nivat, Maurice Opérateurs sur les familles de langages. *Langages algébriques* (Proc. First Meeting, Information Theory, Bonasce, 1973), pp. 105-122, Ecole Nat. Sup. Tech. Avancées, Paris, 1978. (S. A. Greibach) **80b:68094** 68F05
- (with Courcelle, Bruno) The algebraic semantics of recursive program schemes. *Mathematical foundations of computer science, 1978* (Proc. Seventh Sympos., Zakopane, 1978), pp. 16-30, *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (Andrea Maggiolo-Schettini) **80g:68016** 68B10
- Sur les ensembles de mots infinis engendrés par une grammaire algébrique. (English summary) *RAIRO Inform. Théor.* 12 (1978), no. 3, 259-278, v. (Author's summary) **80d:68093** 68F05
- (with Book, Ronald V.) Linear languages and the intersection closures of classes of languages. *SIAM J. Comput.* 7 (1978), no. 2, 167-177. (S. A. Greibach) **80a:68077** 68F05
- See also *Langages algébriques*, **80a:68003**
- Niven, Ivan Convex polygons that cannot tile the plane. *Amer. Math. Monthly* 85 (1978), no. 10, 785-792. (H. E. Debrunner) **80a:52015** 52A45
- Niwa, Masahiko Notes on K-theory of linear categories. II. *Mem. Fac. Ed. Shiga Univ. Natur. Sci.* No. 28 (1978), 9-12. (Author's summary) **80i:18013** 18F25
- Niwas, Ram (with Dube, K. K.) Almost  $r$ -contact hyperbolic structure in a product manifold. *Demonstratio Math.* 11 (1978), no. 4, 887-897 (1979). (Kam Ping Mok) **80g:53027** 53C15
- Nixdorf, K. An application to the differential equations of the sound ray. *Numerical treatment of differential equations in applications* (Proc. Meeting, Math. Res. Center, Oberwolfach, 1977), pp. 105-118, *Lecture Notes in Math.*, 679, Springer, Berlin, 1978. (Rainer Picard) **80d:76079** 76Q05 (65L99)
- Nixon, D. The transonic integral equation method with curved shock waves. (German summary) *Acta Mech.* 32 (1979), no. 1-3, 141-151. (Silvio Nocilla) **80b:76026** 76L05 (76B05)
- Niyogi, Sita On some special type of mappings of formal power series ring. *Bull. Calcutta Math. Soc.* 69 (1977), no. 4, 219-224. (H. Lausch) **80b:16003a** 16A05 (20N15)
- Errata: "On some special type of mappings of formal power series ring" [Bull. Calcutta Math. Soc. 69 (1977), no. 4, 219-224; MR 80b:16003a]. *Bull. Calcutta Math. Soc.* 69 (1977), no. 5, 309. (From the text) **80b:16003b** 16A05
- Nizarade, G. V. Regular systems which are not Vitali systems. (Russian. Georgian and English summaries) *Sakharish. SSR Mecn. Akad. Moambe* 90 (1978), no. 2, 289-292. (M. P. Erlov) **80d:28029** 28C10
- Niznik, L. P. An inverse scattering problem on a nonstationary potential in three-dimensional space. (Russian) *Methods of functional analysis in problems of mathematical physics* (Russian), pp. 38-62, 181, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (P. A. Mišnevskii) **80b:35145** 35P25 (35C15)
- (with Tarasov, V. G.) An inverse problem of scattering for a one-velocity transfer equation. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 6, 1307-1310. (A. G. Gibbs) **80b:35010** 85A25 (45K05, 47A40, 82A70)
- de Almeida N. Junqueira, José Luiz See de Almeida N. Junqueira, José Luiz
- N-Nagy, Frank L. (with Sano, Akira) Suboptimal regulator design of linear systems with quantized controls. *IEEE Trans. Automat. Control* 24 (1979), no. 1, 97-100. (Authors' summary) **80b:93069** 93C05
- Noag, T. (with Constantinescu, Ilie N.) Inverse problems of the theory of vibrators. (Russian) *Pril. Meh.* 15 (1979), no. 8, 116-119, 144. (Authors' summary) **80g:70083** 70D10
- Nöbauer, Wilfried Affinvollständige Moduln. *Math. Nachr.* 86 (1978), 85-96. (Elwyn H. Davis) **80j:16035** 16A64
- (with Timischl, Werner) ★Mathematische Modelle in der Biologie. Eine Einführung für Biologen, Mathematiker, Mediziner, und Pharmazeuten. Mathematik für Naturwissenschaftler. *Friedr. Vieweg & Sohn, Braunschweig*, 1979. vi+232 pp. ISBN 3-528-03068-2 (S. Levin) **80i:92003** 92A05
- Die Bedeutung der Algebra für die Entstehung des heutigen Gesellschaftssystems. *Contributions to general algebra* (Proc. Klagenfurt Conf., Klagenfurt, 1978), pp. 9-23, Heyn, Klagenfurt, 1979. (Manfred Stern) **80c:01018** 01A80
- (with Lausch, Hans) Local polynomial functions on factor rings of the integers. *J. Austral. Math. Soc. Ser. A* 27 (1979), no. 2, 232-238. (A. Yaqub) **80g:08008** 08A40 (13B25)
- On semigroups and groups of local polynomial functions. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 2, 214-218. (I. S. Ponizovskii) **80a:20068** 20N20 (13B25, 20B99)
- See also *Contributions to general algebra*, **80d:90007**
- Nöbeling, Georg ★Integralsätze der Analysis. de Gruyter Lehrbuch. *Walter de Gruyter, Berlin-New York*, 1979. 117 pp. ISBN 3-11-002001-7 (George Virsik) **80i:50002** 58-01 (26B20, 58A10)
- Nobels, Photis (with Nanopoulos, Constantin) Régularité et propriétés limites des fonctions aléatoires. *Séminaire de Probabilités, XII* (Univ. Strasbourg, Strasbourg, 1976/1977), pp. 567-690, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Michel Weber) **80g:60038** 60G17
- Nobili, L. (with Calvani, M.) Dressing up a Kerr naked singularity. (Italian and Russian summaries) *Nuovo Cimento B* (11) 51 (1979), no. 2, 247-261. (Pierre Hillion) **80c:83024** 83C99
- Noble, B. (with Sewell, M. J.) General estimates for linear functionals in nonlinear problems. *Proc. Roy. Soc. London Ser. A* 361 (1978), no. 1706, 293-324. (Michael F. Barnsley) **80c:49040** 49H05 (49C15)
- Noda, Kazuo On a Bayes decision procedure for a selection of a subpopulation. (Japanese. English summary) *Proc. Inst. Statist. Math.* 26 (1979), no. 2, 125-132. (Author's summary) **80b:62018** 62F07
- Noda, Ryuzaburo (with Enomoto, Hikoe; Ito, Noboru) Tight 4-designs. *Osaka J. Math.* 16 (1979), no. 1, 39-43. (W. M. Kantor) **80c:05026** 05B05
- Nodera, Takasi (with Takahashi, Hidetosi) Variants of the conjugate gradient algorithm. *Kyoto Math. Sem. Rep.* No. 3 (1978), 63-68. (I. Fennell Burns) **80d:65044** 65F10
- Noether, Gottfried E. Distribution-free confidence intervals. *Statist. Neerlandica* 32 (1978), no. 3, 109-122. (Paul Switzer) **80c:62059** 62G15
- Noetzel, Andrew S. Throughput in locally balanced computer system models. *Computer performance* (Proc. Internat. Sympos. Computer Performance Modeling, Measurement and Evaluation, IBM Thomas J. Watson Res. Center, Yorktown Heights, N.Y., 1977), pp. 67-82, North-Holland, Amsterdam, 1977. (Author's summary) **80g:68049** 68C15 (68A05)
- The product form queueing network model in computer system analysis. *Information linkage between applied mathematics and industry* (Proc. First Annual Workshop, Naval Postgraduate School, Monterey, Calif., 1978), pp. 599-608, Academic Press, New York, 1979. (Author's summary) **80g:90053** 90B22 (68C15, 90B15)
- Nogi, Tatsuo (with Ohwaki, Hiroshi) A consolidation problem and its solution. *Mem. Fac. Engrg. Kyoto Univ.* 40 (1978), no. 4, 342-360. (From the summary) **80d:73114** 73Q05 (35Q99, 73B99)
- The Stefan problem. (Japanese) *Sigaku* 30 (1978), no. 1, 1-11. (Lu-San Chen) **80c:35040** 35K05
- A mathematical model of spherical nucleus in the undercooling state of metal. *Publ. Res. Inst. Math. Sci.* 15 (1979), no. 1, 159-199. (Yoshi Watanabe) **80a:80004** 80A20 (35Q99)
- Nogin, M. V. Finite control of a general one-dimensional heat process. (Russian. English summary) *Vychisl. Prikl. Mat.* (Kiev) No. 35 (1978), 99-106, 166. (Vladim Komkov) **80a:93090** 93C20 (80A20)
- Nogina, E. Ju. Enumerable topological spaces. (Russian) *Z. Math. Logik Grundlagen Math.* 24 (1978), no. 2, 141-176. (V. Ja. Kreinovich) **80c:08051** 03D45 (03F65, 54D10, 54D15, 54E35)
- Nogotov, E. F. ★Applications of numerical heat transfer. Series in Thermal and Fluids Engineering. Hemisphere Publishing Corp., Washington, D.C.-London; McGraw-Hill Book Co., New York, 1978. viii+142 pp. ISBN 92-3-101399-8, 0-07-046852-4 (Vladim Komkov) **80c:80006** 80A20 (65N20)
- Noguchi, Akira (with Watanabe, Hideaki; Sakai, Kiyoshi) Solitons of the nonlinear self-dual network with saturable property. *J. Phys. Soc. Japan* 45 (1978), no. 6, 2009-2013. (Authors' summary) **80c:35106** 35Q20 (34A99, 78A40)
- Noguchi, Keiko (with Negishi, Aiko) Fixed point free involutions on 4-dimensional torus. *Sci. Rep. Tokyo Woman's Christian Univ.* No. 42-44 (1977), 476-483 (1978). (Jeffrey L. Tolleson) **80i:57018** 57S17

- Noguchi, Shuichi** (with Tanaka, Akio) Topological properties of continuous neural networks with analog neurons. *Systems-Comput.-Controls* 9 (1978), no. 1, 9-18 (1979). (From the summary) **80j:94054** 94C99 (45G10, 68G10, 92A07)
- (with Shiratori, Norio) Information transmission characteristics of ladder type computer networks. *Systems-Comput.-Controls* 9 (1978), no. 1, 54-61 (1979). (From the summary) **80j:60006** 68A05
- Canosa-Nogués, Philippe** See **Canosa-Nogués, Philippe**
- Canosa-Nogués, Pierrette** See **Canosa-Nogués, Pierrette**
- Nogura, Tsugumori** The Suslin number of power spaces. (Japanese) *Sūgaku* 29 (1977), no. 4, 363-364 (1978). (Taiguo Tani) **80b:54004** 54A25
- The subsequenceability of product spaces. *J. Math. Soc. Japan* 31 (1979), no. 2, 391-398. (K. C. Chattopadhyay) **80g:54007** 54B10 (54C25)
- Nohel, John A.** An abstract nonlinear Volterra equation. *Differential equations and applications* (Proc. Third Scheveningen Conf., Scheveningen, 1977), pp. 113-132. North-Holland Math. Studies, 31, North-Holland, Amsterdam, 1978. (R. K. Miller) **80b:45025** 45N05 (47H15)
- (with Lodge, A. S.; McLeod, J. B.) A nonlinear singularly perturbed Volterra integro-differential equation occurring in polymer rheology. *Transactions of the Twenty-Third Conference of Army Mathematicians* (Langley Res. Center, Hampton, Va., 1977), pp. 303-374, ARO Rep. 78, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1978. (Authors' summary) **80e:45008** 45J05 (73F05)
- (with Lodge, A. S.; McLeod, J. B.) A nonlinear singularly perturbed Volterra integro-differential equation occurring in polymer rheology. *Proc. Roy. Soc. Edinburgh Sect. A* 80 (1978), no. 1-2, 99-137. (V. Lakshmikantham) **80f:45017** 45J05 (73Q05)
- A nonlinear singularly perturbed Volterra functional differential equation. *Functional differential equations and approximation of fixed points* (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978), pp. 265-282, *Lecture Notes in Math.*, 730, Springer, Berlin, 1979. (T. G. Proctor) **80f:45020** 45J05 (34A10, 45E05, 73C99)
- (with Dafermos, C. M.) Energy methods for nonlinear hyperbolic Volterra integrodifferential equations. *Comm. Partial Differential Equations* 4 (1979), no. 3, 219-278. (A. Ramm) **80b:45018** 45K05
- (with Clément, Philippe) Abstract linear and nonlinear Volterra equations preserving positivity. *SIAM J. Math. Anal.* 10 (1979), no. 2, 365-388. (A. Ramm) **80b:47095** 47H99 (45N05)
- Noid, D. W.** (with Marcus, R. A.; Koszykowski, M. L.) Semiclassical studies of bound states and molecular dynamics. *Stochastic behavior in classical and quantum Hamiltonian systems* (Volta Memorial Conf., Como, 1977), pp. 283-292, *Lecture Notes in Phys.*, 93, Springer, Berlin, 1979. (Martin Kummer) **80b:81192** 81G55 (58F05, 58F14)
- (with Koszykowski, M. L.; Marcus, R. A.) Semiclassical calculation of bound states in multidimensional systems with Fermi resonance. *J. Chem. Phys.* 71 (1979), no. 7, 2864-2873. (J. S. Joel) **80b:81056** 81C99 (58F05, 58G25)
- Noiri, Takashi** On  $\delta$ -perfect functions. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 6, 488-492 (1978). (R. Engelking) **80g:54012** 54C10
- Almost-closed images of countably paracompact spaces. *Comment. Math. Prace Mat.* 28 (1977/78), no. 2, 423-426. (J. Mack) **80b:54017** 54D20 (54C10)
- On functions with strongly closed graphs. *Acta Math. Acad. Sci. Hungar.* 32 (1978), no. 1-2, 1-4. (Kim-Peu Chew) **80e:54015** 54C10
- A characterization of almost-regular spaces. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 13(33) (1978), no. 2, 335-338. (R. F. Dickman, Jr.) **80d:54018** 54D15 (54D30)
- Nojiri, Hideyuki** A model of fuzzy team decision. *Fuzzy Sets and Systems* 2 (1979), no. 3, 201-212. (Milan Mareš) **80e:90013** 90A07
- On the fuzzy team decision in a changing environment. *Fuzzy Sets and Systems* 3 (1980), no. 2, 137-150. (Author's summary) **80m:90012** 90A07 (03E72, 90A08)
- di Nola, A.** (with Ventre, Aldo G. S.) On some sequences of fuzzy sets. (French summary) *RAIRO Inform.* 13 (1979), no. 2, 199-204. (Korolien Gilezan) **80b:03076** 03E72
- Nold, Annett** Competitive overlap and coexistence. *Theoret. Population Biol.* 15 (1979), no. 2, 232-245. (J. W. Jerome) **80g:52025** 92A15
- Nolden, E.** (with Derese, I.; Stevens, P.) Observers for bilinear systems with bounded input. *Internat. J. Systems Sci.* 10 (1979), no. 6, 649-668. (Authors' summary) **80e:93033** 93B05
- Nolet, G.** (with Vlaar, N. J.) Seismic surface waves. *Modern problems in elastic wave propagation* (Proc. IUTAM Sympos., Northwestern Univ., Evanston, Ill., 1977), pp. 419-443, Wiley, New York, 1978. (I. M. Longman) **80f:86003** 86A15 (73D05)
- Noll, Walter** A general framework for problems in the statics of finite elasticity. *Contemporary developments in continuum mechanics and partial differential equations* (Proc. Internat. Sympos., Inst. Mat., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977), pp. 363-387, North-Holland Math. Studies, 30, North-Holland, Amsterdam, 1978. (Xanthippi Markenscoff) **80d:73026** 73B99 (58E07)
- (with Schäffer, Juan Jorge) Order-isomorphisms in affine spaces. *Ann. Mat. Pura Appl.* (4) 117 (1978), 243-262. (W. Benz) **80j:51015** 51G05 (51B20, 83A05)
- (with Schäffer, Juan Jorge) Corrigenda to the paper: "Orders, gauge, and distance in faceless linear cones: with examples relevant to continuum mechanics and relativity" (Arch. Rational Mech. Anal. 66 (1977), no. 4, 345-377). *Arch. Rational Mech. Anal.* 68 (1978), no. 4, 383-384. (Editors) **80b:06020** 06F20 (73B05, 83C10)
- Nollau, Volker** (with Hahnwald-Busch, Andreas) An approximation procedure for stochastic dynamic programming in countable state space. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 1, 109-117. (Peter Kall) **80j:90139** 90C39
- ★Statistische Analysen. Mathematische Methoden der Planung und Auswertung von Versuchen. With a supplement by Andreas Hahnwald-Busch. Second edition. Lehr- und Handbücher der Ingenieurwissenschaften, 37. Birkhäuser Verlag, Basel-Stuttgart, 1979. 378 pp. (loose chart). ISBN 3-7643-1019-7 (Editors) **80b:62002** 62-01
- (with Hahnwald-Busch, Andreas) An approximation procedure for stochastic dynamic programming based on clustering of state and action spaces. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 1, 121-130. (I. M. Stancu-Minasian) **80b:90113** 90C15 (90C39)
- Noite, Klaus** Zur Konvergenz des Algorithmus von Krylow und Černous'ko. III. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 2, 237-242. (Henning Esser) **80j:49033** 49D30 (90C05)
- Nomizu, Katsumi** (with Graves, Larry) Isometric immersions of Lorentzian space form. *Math. Ann.* 233 (1978), no. 2, 125-136. (H. Jacobowitz) **80b:53043** 53C50
- Kinematics and differential geometry of submanifolds. Rolling a ball with a prescribed locus of contact. *Tōhoku Math. J. (2)* 30 (1978), no. 4, 623-637. (P. Scheri) **80e:53007** 53A17 (70B10)
- ★Fundamentals of linear algebra. Second edition. Chelsea Publishing Co., New York, 1979. x+325+30 pp. ISBN 0-8284-0276-0 (Editors) **80e:15001** 15-01
- Left-invariant Lorentz metrics on Lie groups. *Osaka J. Math.* 16 (1979), no. 1, 143-150. (O. Kowalski) **80g:53048** 53C50 (53C30)
- Nomura, Kazumasa** Inner subgroups of finite groups. *Kodai Math. J.* 1 (1978), no. 3, 354-361. (P. J. Lorimer) **80e:20033** 20D99
- Nomura, Toshio** (with Furuta, Katsuhisa) On the span reachability of polynomial state-affine systems. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 630-632. (Tryn Jong Tarn) **80i:93014** 93B05
- Nomura, Yasutoshi** Some homotopy groups of real Stiefel manifolds in the metastable range. I. *Sci. Rep. College Gen. Ed. Osaka Univ.* 27 (1978), no. 1, 1-31. (J. F. Adams) **80b:57048a** 57T20 (55Q52)
- (with Furukawa, Yasukuni) Some homotopy groups of complex Stiefel manifolds  $W_{n,2}$  and  $W_{n,3}$ . II. *Sci. Rep. College Gen. Ed. Osaka Univ.* 27 (1978), no. 1, 33-48. (M. Mimura) **80b:55018** 55Q52 (57T15)
- Some homotopy groups of real Stiefel manifolds in the metastable range. II. *Sci. Rep. College Gen. Ed. Osaka Univ.* 27 (1978), no. 2, 55-97 (1979). (J. F. Adams) **80b:57048b** 57T20 (55Q52)
- Nons, Helena** Stronger topologies preserving the class of continuous functions. *Fund. Math.* 101 (1978), no. 2, 121-127. (Jerry F. Williams) **80e:54013** 54C30
- Nono, Kiyoharu** (with Sasaki, Kenji; Sugawara, Noriko) Continuation and quotient representation of meromorphic functions. *Bull. Fukuoka Univ. Ed. III* 28 (1978), 17-27. (W. R. Zame) **80k:32018** 32E10
- Nonoyama, Shigeki** (with Tarn, Tzyh Jong) An algebraic structure of discrete-time bilinear systems. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 211-221. (B. L. Osviet) **80f:93028** 93B15
- Louter-Nool, M.** See **Louter-Nool, M.**
- Noor, Ahmed K.** (with Peters, Jeanne M.) Nonlinear dynamic analysis of space trusses. *Comput. Methods Appl. Mech. Engrs.* 21 (1980), no. 2, 131-151. (Authors' summary) **80m:73055** 73K30
- Noor, K. I.** (with Noor, M. Aslam) Minimum of nonlinear functionals on convex sets. *Proceedings of the Eighth National Mathematics Conference (Arya-Mehr Univ. Tech., Tehran, 1977)*, pp. 80-89, Arya-Mehr Univ. Tech., Tehran, 1977. (H. Jarchow) **80e:49008** 49A50 (47H99)
- Noor, M. Aslam** (with Noor, K. I.) Minimum of nonlinear functionals on convex sets. *Proceedings of the Eighth National Mathematics Conference (Arya-Mehr Univ. Tech., Tehran, 1977)*, pp. 80-89, Arya-Mehr Univ. Tech., Tehran, 1977. (H. Jarchow) **80e:49008** 49A50 (47H99)
- Error analysis of generalized variational inequalities. *Proceedings of the Seventh National Mathematics Conference (Dept. Math., Azarabadegan Univ., Tabriz, 1976)*, pp. 5-12, Azarabadegan Univ., Tabriz, 1977. (H. Ratschek) **80f:49012** 49A29 (65J15)
- Norando, Tullia** The almost periodic solution of a variational inequality with an almost periodic obstacle. (Italian. English summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 111 (1977), no. 2, 366-375 (1978). (Luciano Modica) **80f:35009** 35B15 (35K10, 49A29)
- Singular perturbations for variational inequalities of parabolic type with a convex set dependent on time. (Italian. English summary) *Riv. Mat. Univ. Parma (4)* 4 (1978), 339-347 (1979). (Giovanni M. Troianello) **80j:47077** 47H15
- Norberg, Arthur L.** Simon Newcomb's early astronomical career. *Isis* 69 (1978), no. 247, 209-225. (M. Kline) **80i:01017** 01A70 (01A55)
- Norbury, J.** (with Budden, P. J.) A nonlinear elliptic eigenvalue problem. *J. Inst. Math. Appl.* 24 (1979), no. 1, 9-33. (Authors' summary) **80f:65109** 65N25 (35B32)
- Nordahl, Thomas** (with Hamilton, Howard) Semigroups whose lattice of congruences is Boolean. *Pacific J. Math.* 77 (1978), no. 1, 131-143. (E. T. Schmidt) **80d:20058** 20M14 (06A12, 20M15)
- Norden, A. P.** The theory of compositions. (Russian) *Problems in geometry*, Vol. 10 (Russian), pp. 117-145, 224, VINITI, Moscow, 1978. (Adrian C. Albu) **80m:53016** 53B15 (53B10)
- Compositions of a vector bundle. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 5(192), 138-141. (L. Tamásy) **80g:53010** 53B15
- Decompositions of a projective space. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 6(193), 98-101. (J. Vilms) **80i:53005** 53A20 (53B10)
- Multiple decompositions and the theory of distributions. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 11(198), 87-97. (J. Vilms) **80f:53014** 53B10 (53A20)
- Nordgren, Eric A.** Composition operators on Hilbert spaces. *Hilbert space operators* (Proc. Conf., Calif. State Univ., Long Beach, Calif., 1977), pp. 37-63, *Lecture Notes in Math.*, 693, Springer, Berlin, 1978. (Raj Kishor Singh) **80d:47046** 47B37 (47B38)
- (with Fong, Che Kao; Radjabipour, Mehdi; Radjavi, Heydar; Rosenthal, Peter) Extensions of Lomonosov's invariant subspace theorem. *Acta Sci. Math. (Szeged)* 41 (1979), no. 1-2, 55-62. (R. G. Bartle) **80b:47006** 47A15
- (with Hadwin, Donald W.; Radjavi, Heydar; Rosenthal, Peter) Most similarity orbits are strongly dense. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 250-252. (Lawrence Fialkow) **80i:47029** 47A65 (47A15)
- Nordhaus, E. A.** Generalizations of graphical parameters. *Theory and applications of graphs* (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976), pp. 420-425, *Lecture Notes in Math.*, 642, Springer, Berlin, 1978. (Saul Stahl) **80f:05066** 05C99
- Nordin, Ingemar** Determinism and locality in quantum mechanics. *Synthese* 42 (1979), no. 1, 71-90. (S. Gudder) **80j:81010** 81B10
- Nordman, Hans** Order convergence and order topology. *Acta Acad. Åbo. Ser. B* 39 (1979), no. 2, 6 pp. (O. Frink) **80j:46017** 46A40 (06F20)
- Nörenberg, W.** (with Ayik, S.) Transport theory of dissipative heavy-ion collisions. I. Basic



- formulation. *Z. Phys. A* **288** (1978), no. 4, 401-411. (Carlo Cercignani) **80a:82041**  
82A70 (45K05)
- Nargis, S. Herbrand's deduction-search strategies in predicate calculus. I. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* **18** (1978), no. 4, 95-100, 201. (S. Ju. Maslov) **80c:03050** 03D35 (03B10, 03Fxx)
- Norguet, François. *See Fonctions de plusieurs variables complexes*, **80c:32001**
- Nuriga, Ricardo J. Concomitant connections of geometric objects. (Spanish. English summary) *Math. Notae* **26** (1977/78), 51-61. (Elisa Udeschini Brinis) **80f:53012** 53A45
- Nurkin, S. K. The asymptotic estimate of 0-solutions of a multidimensional system. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 11, 2079-2081, 2110. (Author's summary) **80b:34012** 34A99
- Nurkin, V. I. Nonlocal algorithms for the minimization of nondifferentiable functions. (Russian. English summary) *Kibernetika (Kiev)* **1978**, no. 5, 57-60. (G. D. Mal'trovskii) **80c:65137** 65K10 (90C30)
- Norman, Alfred (with Ando, Albert; Palash, Carl) On the application of optimal control to large scale econometric models. *Applied optimal control*, pp. 147-170, *Studies in the Management Sci.*, 9, North-Holland, Amsterdam, 1978. (Authors' summary) **80c:90044** 90A19 (62P20)
- Norman, M. Frank (with Gallistel, C. R.) What can one learn from a strength-duration experiment? *J. Math. Psych.* **18** (1978), no. 1, 1-24. (J. J. Buckley) **80c:92047** 92A25
- Norman, Peter Intersections of components of the moduli space of abelian varieties. *J. Pure Appl. Algebra* **13** (1978), no. 2, 105-107. (T. Oda) **80a:14019** 14L05 (14K10)
- Normann, Dag Set recursion. *Generalized recursion theory, II (Proc. Second Sympos., Univ. Oslo, Oslo, 1977)*, pp. 303-320, *Studies in Logic and Foundations of Math.*, 94, North-Holland, Amsterdam, 1978. (Peter G. Hinman) **80j:03063** 03D60 (03D65)  
(with Stoltenberg-Hansen, Viggo) A non-adequate admissible set with a good degree-structure. *Generalized recursion theory, II (Proc. Second Sympos., Univ. Oslo, Oslo, 1977)*, pp. 321-329, *Studies in Logic and Foundations of Math.*, 94, North-Holland, Amsterdam, 1978. (Barry Cooper) **80j:03060** 03D60
- A continuous functional with noncollapsing hierarchy. *J. Symbolic Logic* **43** (1978), no. 3, 487-491. (S. S. Wainer) **80b:03063** 03D65
- Norris, D. H. (with Dang, Dac Q.) A finite element method for the solution of singular integral equations. *Comput. Math. Appl.* **4** (1978), no. 3, 219-224. (Authors' summary) **80a:65265** 65R20  
(with Balasubramanian, R.; de Vries, G.) The application of the least squares finite element method to Abel's integral equation. *Internat. J. Numer. Methods Engrg.* **14** (1979), no. 2, 201-209. (Authors' summary) **80b:65150** 65R20
- Norris, Michael J. (with Vélaz, William Yslas) A characterization of the splitting of inseparable algebraic extensions. *Amer. Math. Monthly* **85** (1978), no. 5, 338-341. (G. H. Wenzel) **80k:12018** 12F05
- Norsett, Syver P. On using the Du Fort Frankel scheme for determination of the velocity profile in turbulent boundary layer along an oscillating wall. *Numerical treatment of differential equations in applications (Proc. Meeting, Math. Res. Center, Oberwolfach, 1977)*, pp. 119-126, *Lecture Notes in Math.*, 679, Springer, Berlin, 1978. (Abha Ghoshal) **80k:76048** 76F99 (65N99)
- (with Wanner, G.; Hairer, E.) When  $I$ -stability implies  $A$ -stability. *BIT* **18** (1978), no. 4, 503. (R. Leonard Brown) **80b:65106** 65L05  
(with Wolfbrandt, Arue) Order conditions for Rosenbrock type methods. *Numer. Math.* **32** (1979), no. 1, 1-15. (H. Brunner) **80c:65153** 65L05
- Norworthy, J. R. (with Kymn, Kern O.; Okamoto, Tatsuo) Alternative computing formulas for the generalized inverse and the evaluation of their performances. *Econom. Lett.* **2** (1979), no. 1, 37-43. (Authors' summary) **80c:65049** 65F20 (65-04)
- North, Gerald R. (with Cahalan, Robert F.) A stability theorem for energy-balance climate models. *J. Atmospheric Sci.* **36** (1979), no. 7, 1178-1188. (Thomas L. Bell) **80k:86008** 86A35 (35B35, 58E07)
- Norton, Karl K. On the number of restricted prime factors of an integer. II. *Acta Math.* **143** (1979), no. 1-2, 9-38. (J. Kubilius) **80k:10072** 10K20 (10H15)
- Norton, P. N. 0-Hecke algebras. *J. Austral. Math. Soc. Ser. A* **27** (1979), no. 3, 337-357. (S. B. Conlon) **80c:16015** 16A48 (17B10)
- Nuriev, V. Alan Analytic moduli of complex vector bundles. *Indiana Univ. Math. J.* **28** (1979), no. 3, 365-387. (M. Schneider) **80d:32025** 32G13 (14D20)
- Nusall, Eva Partition relations for denumerable ordinals. *J. Combin. Theory Ser. B* **27** (1979), no. 2, 190-197. (John Hickman) **80b:04005** 04A20 (05C99)
- Nusenko, Ju. L. Approximation properties of the Riesz means of double Fourier series. (Russian) *Ukrain. Mat. Ž.* **31** (1979), no. 2, 157-165, 222. (R. L. Cooke) **80c:42007** 42B05 (42B15)
- Nushita, Kohel (with Masuda, Etsuo; Machida, Hajime) On the expected behaviors of the Dijkstra's shortest path algorithm for complete graphs. *Inform. Process. Lett.* **7** (1978), no. 5, 237-243. (From the introduction) **80c:68022** 68C05 (68-04, 68E10)
- Nusko, V. P. The mean number of characteristic level curve points of a random field on the plane. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 1, 181-184. (M. I. Jadrnko) **80m:60067** 60G60 (60G17)  
The definition of the number of excursions above fixed level by a random field. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 3, 592-596. (N. M. Zinchenko) **80i:60052** 60G17 (60G60)  
*See also* Matheron, Georges, **80f:60014**
- Nuskov, M. V. Cubature formulas on developable surfaces. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 51 (1978), 91-96, 228. (Author's summary) **80c:65040** 65D32
- Nusman, Jean-Clarence Paramétrix du problème de Cauchy pour une classe de systèmes hyperboliques symétrisables à caractéristiques involutives de multiplicité variable. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 2, A129-A132. (Author's summary) **80b:35043** 35H05 (35L55)
- Nosov, S. L. Averaging of systems of  $n+m$  variables. (Russian) *Asymptotic methods in systems theory (Russian)*, pp. 89-95, *Irkutsk. Gos. Univ., Irkutsk*, 1977. (S. D. Miluleva) **80j:34049** 34C29
- Nosov, V. R. (with Prokopov, B. I.) Overall asymptotic stability of self-tuning systems with a reference model. *Prikl. Mat. Meh.* **41** (1977), no. 5, 850-858. (Russian); translated as *J. Appl. Math. Mech.* **41** (1977), no. 5, 871-880 (1979). (Authors' summary) **80c:34060** 34D05
- Investigation of the stability and the quality of transition processes in adaptive systems with a reference model. (Russian) *VII. Internationale Konferenz über nichtlineare Schwingungen (Berlin, 1975)*, Band II, 2, pp. 173-182, *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977, 6, Akademie-Verlag, Berlin, 1978. (Vladimir Katkovnik) **80f:93058** 93D05  
(with Kolmanovskii, V. B.) Stability of stationary systems with aftereffect. *Automat. i Telemekh.* **1979**, no. 1, 9-18. (Russian); translated as *Automat. Remote Control* **40** (1979), no. 1, part 1, 4-12. (D. H. Chyung) **80m:93070** 93D99  
(with Furasov, V. D.) On the stability of discrete processes and on the convergence of some algorithms of optimization. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **19** (1979), no. 2, 316-328, 555. (Authors' summary) **80b:93115** 93D05  
*See also* Hemion, R., **80j:49001**
- Notkin, V. L. (with Ljalkenko, M. Ja.) Two-sided approximations of the Cauchy problem for second order ordinary differential equations. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 34 (1978), 98-106, 166-167. (B. I. Kvasov) **80a:65150** 65L05
- Notrut, R. Optimization of dynamical systems. *Symposium of Applied Mathematics (Delft Univ. Tech., Delft, 1978)*, pp. 42-48, *Delft Univ. Press, Delft*, 1978. (Author's summary) **80a:93091** 93C20 (49B10)
- Nougues-Sainte-Beuve, Marie-France Quelques propriétés de mesures vectorielles et applications. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 5, A323-A325. (Author's summary) **80b:46052** 46G10  
Semi-continuité inférieure de fonctionnelles intégrales. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 5, A335-A337. (Author's summary) **80c:49009** 49B05 (46G99, 49A50)
- Noual-Mehdi, Samir Queues d'arondes d'une déformation semi-universelle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 3, A199-A202. (Author's summary) **80k:32033** 32B30 (32G11)
- Nourredine, Khalil (with Habre, William) Topologies  $P$ -strictes. (English summary) *Bull. Soc. Roy. Sci. Liège* **47** (1978), no. 11-12, 311-322. (B. T. Sima) **80c:54015** 54C35 (46E25)
- Nouri-Moghadam, M. Analytic continuation, dimensional regularization technique and their ambiguities. *Proceedings of the Seventh National Mathematics Conference (Dept. Math., Azarabadegan Univ., Tabriz, 1976)*, pp. 251-262, *Azarabadegan Univ., Tabriz*, 1977. (L. L. Lee) **80c:81054** 81E15  
(with Yoshimura, Tetz) Application of Altman's contractor techniques to nonlinear integral equations for Green's functions of augmented quantum field theory. *J. Math. Phys.* **20** (1979), no. 1, 20-22. (Charles A. Nelson) **80c:81070** 81E10 (45H05)
- Nourigat, Jean-François (with Helffer, Bernard) Opérateurs hypoelliptiques sur des groupes nilpotents. *Séminaire Goulaouic-Schwartz 1977/1978: Equations aux dérivées partielles, Exp. No. 4*, 11 pp., *École Polytech., Palaiseau*, 1978. (David S. Tartakoff) **80m:58037** 58G05 (22E30, 35H05)  
(with Helffer, Bernard) Hypocoëlicité maximale pour des opérateurs polynômes de champs de vecteurs. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 16, A775-A778. (Authors' summary) **80k:35018** 35H05 (57R25, 58G05)  
(with Helffer, Bernard) Construction de paramétrix pour une nouvelle classe d'opérateurs pseudodifférentiels. *J. Differential Equations* **32** (1979), no. 1, 41-64. (David S. Tartakoff) **80c:35015** 35H05 (35S05)
- Nourse, James G. (with Smith, Dennis H.) Nonnumerical mathematical methods in the problem of stereoisomer generation. *Proceedings of Bremer Konferenz zur Chemie (Univ. Bremen, Bremen, 1978)*, Part I, *Match* No. 6 (1979), 259-279. (Authors' summary) **80j:80007** 80A30 (20H15)
- Noussair, E. S. (with Heywood, John G.; Swanson, C. A.) On the zeros of solutions of elliptic inequalities in bounded domains. *J. Differential Equations* **28** (1978), no. 3, 345-353. (L. E. Payne) **80a:35006** 35B05
- Noutheguesse, Norbert Application de la théorie de Leray au problème de Cauchy sur deux hypersurfaces caractéristiques sécantes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 20, A949-A952. (A. Haimovici) **80b:35088** 35L55 (35H05)
- Nowacki, V. *See* Nowacki, Witold
- Nova G., Lucimar Certain properties of complex differential equations with polynomial coefficients. (Spanish) *Rev. Colombiana Mat.* **12** (1978), no. 1-2, 13-58. (A. Corduneanu) **80c:34082** 34A20 (58A15)
- Novak, Ladislav A. (with Milič, Mirko M.) The anti-Lagrangian equations: a missing network description. *J. Franklin Inst.* **307** (1979), no. 3, 183-191. (Authors' summary) **80b:94036** 94C05
- Novák, M. The analogy between the nervous system of primitive living bodies and the frequency selective structures. (Russian summary) *Problems Control Inform. Theory/Problémý Upravlen. Teor. Inform.* **7** (1978), no. 4, 295-304. (H. A. Lauwerier) **80k:92011** 92A09
- Novák, Vítězslav Professor Miloš Ráb (on the occasion of his fiftieth birthday). (Czech) *Pokroky Mat. Fyz. Astronom.* **23** (1978), no. 6, 354-355. (Editors) **80c:01027** 01A70
- Nováková, Eva (with Nagy, Jozsef) Local determinacy of abstract right pseudoprocesses. (Czech and Russian summaries) *Časopis Pěst. Mat.* **104** (1979), no. 2, 113-133, 200. (Krishna M. Das) **80b:34057** 34C35 (54H20)  
(with Nagy, Jozsef) Local determinacy of symmetric pseudoprocesses. (Czech and Russian summaries) *Časopis Pěst. Mat.* **104** (1979), no. 3, 223-242, 311. (Jerzy Jaroš) **80b:35008** 93A10 (68J10)
- Novaković, M. (with Petrašinić, Lj.; Perović, N.; Đurić, M.) Solution of the "inverse"-problem of conduction of heat transfer by Runge-Kutta integration of the Fourier equation with one-side boundary values and no initial conditions. *Z. Angew. Math. Mech.* **58** (1978), no. 7, T429-T430. (From the introduction) **80a:65046** 65N99
- Novescu, Liliana (with Bulubaşa, M.) Studies on the representation of helicoidal surfaces in the Steiner projection. (Romanian. French summary) *Bul. Ştiinţ. Inst. Politehn. Cluj-Napoca* **19** (1976), 10-11 (1977). (Authors' summary) **80a:51014** 51N05
- Novello, M. (with Reboucas, M. J.) Rotating universe with successive causal and noncausal regions. *Phys. Rev. D* **(3)** **19** (1979), no. 10, 2850-2852. (Alan Barnes) **80f:83009** 83C05  
(with Salim, J. M.) Nonlinear photons in the universe. *Phys. Rev. D* **(3)** **20** (1979), no. 2, 377-383. (M. Sachs) **80j:83029** 83E05 (83F05)
- Noverraz, Philippe Notions de domaine d'holomorphie dans les espaces de Banach complexes. *Proceedings of the Eighth Brazilian Mathematical Colloquium (Poços de*

- Caldas, 1971) (Portuguese), pp. 41–47, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1977. (Editors) **80g:32009** 32A30 (46G20)
- Gaussian measure of polar sets in separable Banach spaces. *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. I (Portuguese), pp. 233–245, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (N. N. Vahanian (Vakhanian)) **80h:28015** 28C20 (46G99, 60B11)
- Topologies associated with Nachbin topology. *Advances in holomorphy (Proc. Sem. Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 609–627, *North-Holland Math. Studies*, 34, North-Holland, Amsterdam, 1979. (H. Hogbe-Nlend) **80h:46067** 46G20
- Novičkov, Ju. N. Flutter of plates and shells. (Russian) *Mechanics of solid deformable bodies*, Vol. 11 (Russian), pp. 67–122, 252, *VINITI, Moscow*, 1978. (Editors) **80e:73042** 73J10
- Novičkov, A. A. Conditions for absolute continuity of probability measures. (Russian) *Mat. Sb. (N.S.)* **107(149)** (1978), no. 3, 435–445, 464. (Dominique Lepingle) **80e:60058** 60G30
- Novičkov, B. V. Projective representations of semigroups. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 6* (1979), 474–478, 495. (I. S. Ponizovskii) **80i:20041** 20M10
- Novičkov, E. A. (with Sedov, Ju. B.) Stochastic properties of a four-vortex system. *Ž. Èksp. Teor. Fiz.* **75** (1978), no. 3, 868–876 (Russian); translated as *Soviet Phys. JETP* **48** (1978), no. 3, 440–444 (1979). (J. L. Lumley) **80g:76026** 76F99 (34F05, 35Q99, 58F13, 60G60)
- Novičkov, I. D. (with Doroljčević, A. G.; Kotok, È. V.; Poljudov, A. N.; Sigov, Ju. S.; Šandarin, S. F.) A two-dimensional model for the formation of the large-scale structure of the universe. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 83* (1978), 23 pp. (N. V. Micevič) **80c:83057** 83F05 (65P05)
- (with Doroljčević, A. G.) Space-time and physical fields inside a black hole. *Ž. Èksp. Teor. Fiz.* **74** (1978), no. 1, 3–12 (Russian); translated as *Soviet Phys. JETP* **47** (1978), no. 1, 1–6. (Authors' summary) **80e:83058** 83D05 (58D30)
- Novičkov, M. A. (with Matrosov, V. M.; Vasil'ev, S. N.; Karatuev, V. G.; Sumenkov, E. A.; Jadykin, S. A.) Machine deduction of theorems on dynamic properties with vector functions of Lyapunov. *Kibernetika (Kiev)* **1979**, no. 2, 27–36 (Russian); translated as *Cybernetics* **15** (1979), no. 2, 184–194. (Authors' summary) **80m:68062** 68G15
- Novičkov, P. S. ★Избранные труды. (Russian) [Selected works] Теория множеств и функций. Математическая логика и алгебра. [Theory of sets and functions. Mathematical logic and algebra] "Nauka", Moscow, 1979. 396 pp. (1 plate). (Esther R. Phillips) **80e:01017** 01A75 (03–03, 04A15, 28A05)
- Novičkov, S. P. (with Kričev, I. M.) Holomorphic vector bundles over Riemann surfaces and the Kadošev-Petvišvili equation. I. (Russian) *Funkcional. Anal. i Priložen.* **12** (1978), no. 4, 41–52. (M. Otelbaev) **80i:35162** 35Q20 (14F05, 32L05, 58F07)
- (with Golo, V. L.; Monastyrskii, M. I.) Solutions to the Ginzburg-Landau equations for planar textures in superfluid  $^3\text{He}$ . *Comm. Math. Phys.* **69** (1979), no. 3, 237–246. (Authors' summary) **80i:81081** 81J05
- Novičkov, V. A. (with Gupalo, Iu. P.; Rjazancev, Ju. S.) On the stabilization of unstable steady operation mode of a displacement reactor with allowance for heat release. *Prikl. Mat. Meh.* **41** (1977), no. 4, 678–687 (Russian); translated as *J. Appl. Math. Mech.* **41** (1977), no. 4, 692–701 (1978). (From the summary) **80m:93068** 93D99 (80A20)
- Novičkova, N. M. A hierarchical n-person game with controlled coalition structure. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* **1979**, no. 2, 46–55, 71. (O. N. Bondareva) **80i:90113** 90D12
- Novin-Hirbod, S. (with Munro, N.) Pole assignment using full-rank output-feedback compensators. *Internat. J. Systems Sci.* **10** (1979), no. 3, 285–306. (S. P. Bhattacharyya) **80b:93121** 93D15 (93C05)
- villameya Novos, E. See Villameya Novos, E.
- Novos, Lino Gutiérrez See Gutiérrez Novos, Lino
- Novoškov, V. M. (with Kondrat'ev, V. V.) Control synthesis for a second-order nonstationary linear system according to an asymptotic stability criterion. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1979**, no. 3, 25–28. (Authors' summary) **80j:93050** 93C05
- Novosadov, B. K. Exact calculation of molecular integrals from hydrogenlike atomic orbitals. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **19** (1979), no. 6, 1521–1531, 1629–1630. (Authors' summary) **80h:81187** 81G50
- Novoselov, V. S. Asymptotic theory of a magnetic damper. *Izv. Akad. Nauk SSSR Meh. Toerd. Tela* **13** (1978), no. 5, 25–28 (Russian); translated as *Mech. Solids* **13** (1978), no. 5, 20–23. (Ram Krishan Sharma) **80g:70009** 70M05 (34E05)
- Novosel'skii, A. V. (with Aščepkov, L. T.; Tjajulkin, A. I.) An attempt at numerical identification of dynamical systems. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 118–129, 315–316, *Irkutsk. Gos. Univ., Irkutsk*, 1976. (Authors' summary) **80j:93037** 93B30
- Novotný, Jan On the generally invariant Lagrangians for the metric field and other tensor fields. *Internat. J. Theoret. Phys.* **17** (1978), no. 9, 677–684. (H. Rund) **80j:50032** 58E30 (58F05, 83C50)
- Novotný, Mark A. Matrix products with application to classical statistical mechanics. *J. Math. Phys.* **20** (1979), no. 6, 1146–1150. (Author's summary) **80d:82019** 82A05 (15A90)
- Novožilov, V. V. (with Kadavešev, Ju. I.) Creep theory of micro-nonhomogeneous media. (Russian) *Studies in elasticity and plasticity*, No. 12 (Russian), pp. 59–71, 216, *Leningrad. Univ., Leningrad*, 1978. (Authors' summary) **80h:73004** 73B05
- See also *Studies in elasticity and plasticity*, **80d:73004** and *Control of dynamical systems*, **80d:93008**
- Novruzbekov, I. G. (with Aida-Zade, K. R.) An algorithm for the minimization of functions of a ravine structure. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1978**, no. 5, 115–120. (Authors' summary) **80e:65143** 65K99
- Novruzov, A. A. (with Musaez, S. R.) A problem of optimization of the process of drilling vertical wells. (Russian) *Questions of mathematical cybernetics and applied mathematics*, No. 3 (Russian), pp. 146–152, "Èlm", Baku, 1978. (Editors) **80h:93040c** 93C99
- The Dirichlet problem for second-order elliptic equations. (Russian) *Dokl. Akad. Nauk SSSR* **246** (1979), no. 1, 11–14. (K. Seitz) **80b:35047** 35J25
- Novruzov, G. M. Investigation of systems of semiexplicit differential equations with Volterra operators. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* **1978**, no. 6, 90–97. (Stefan Balint) **80m:34001** 34A10 (45D05)
- Novšček, William (with Sonnenschein, Hugo) Cournot and Walras equilibrium. *J. Econom. Theory* **19** (1978), no. 2, 223–266. (Gerhard Hieber) **80i:90032** 90A14
- Nový, Luboš See *Industrial revolution, education, science*, **80e:01007**
- Nowacki, Witold Coupled fields in the mechanics of solids. (Russian. English summary) *Adv. in Mech.* **1** (1978), no. 1–2, 17–44. (Editors) **80e:73069** 73U05 (35Q99)
- See also *Thermomechanics in solids*, **80e:73072**
- Nowak, Andrzej Random solutions of equations. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes* (Prague, 1978), Vol. B, pp. 77–82, *Reidel, Dordrecht*, 1978. (Arthur C. H. Lee) **80i:60060** 60H25 (47H15)
- Discounted dynamic programming on Euclidean spaces. (Polish summary) *Zastos. Mat.* **16**, no. 3, 465–473 (1979). (Z. Waksman) **80h:90157** 90C48 (90C39)
- Nowak, Miron (with Grzędziński, Janusz) Elimination of rigid-body degrees of freedom in flutter eigenvalue problem. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **17** (1979), no. 1, 57–62. (Authors' summary) **80m:73048** 73H10
- Nowak, Sławomir Some remarks concerning the fundamental dimension of the Cartesian product of two compacta. *Fund. Math.* **103** (1979), no. 1, 31–41. (Y. Kodama) **80h:55001** 55M10 (54F45, 55P55)
- Nowak, Werner-Georg Optimale Diskrepanzabschätzungen bei speziellen Dreiecksdoppelfolgen. *Anz. Österreich. Akad. Wiss. Math.-Natur. Kl.* **1978**, no. 7, 179–182. (L. Kuipers) **80i:10045** 10F40
- Die Diskrepanz der Doppelfolgen  $(cN^p - n^p)^{1/4}$  und einige Verallgemeinerungen. (English summary) *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber.* **11** **187** (1978), no. 8–10, 383–409. (I. Kátai) **80m:10029** 10F40
- Ritzpunkte in speziellen nicht-konvexen Bereichen. *Anz. Österreich. Akad. Wiss. Math.-Natur. Kl.* **116** (1979), no. 2, 43–45. (Peter Gruber) **80j:10056** 10J25 (10E99)
- Nowak, Zenon Series solution to the Dirichlet problem for the semilinear equation  $\Delta u = f$  on a disc. I. Iterative method. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **26** (1978), no. 8–9, 35–42. (A. M. I'in) **80i:35018a** 35C10
- Series solution to the Dirichlet problem for the semilinear equation  $\Delta u = f$  on a disc. II. Approximate techniques. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **26** (1978), no. 8–9, 43–50. (A. M. I'in) **80i:35018b** 35C10
- Nowakowski, Richard (with Rival, Ivan) Distributive cover-preserving sublattices of modular lattices. *Nanta Math.* **11** (1978), no. 2, 110–123. (George Hutchinson) **80f:06015** 06D99
- (with Rival, Ivan) Fixed-edge theorem for graphs with loops. *J. Graph Theory* **3** (1979), no. 4, 339–350. (C. St. J. A. Nash-Williams) **80j:05098** 05C99 (06A10)
- Nowicka, D. The solution of a system of singular integral equations with Hadamard integral. (Russian) *Problemy Mat. No. 1* (1977), 13–20. (A. S. Silbergleit) **80i:45009** 45E05
- Nowicka, Krystyna On the existence of solutions of a certain integral-functional equation. *Demonstratio Math.* **11** (1978), no. 2, 435–451. (G. S. Jordan) **80a:45002** 45D05 (34K05)
- Existence, uniqueness and successive approximations for a class of integral-functional equations. *Demonstratio Math.* **12** (1979), no. 1, 163–188. (Seppo Heikkilä) **80m:45024** 45N05
- Nowicki, Andrzej Radical irregularity of some polynomial rings. *Colloq. Math.* **40** (1978/79), no. 2, 203–206. (C. R. Fletcher) **80h:13007** 13N05 (12H05)
- Nowinski, J. L. ★Theory of thermoelasticity with applications. Monographs and Textbooks on Mechanics of Solids and Fluids: Mechanics of Surface Structures, 3. *Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn*, 1978. xv+836 pp. ISBN 90-286-0457-X (S. P. Gavelja) **80g:73063** 73U05
- Nowosad, Krzysztof A. Properties of the structure of repetitive control under high sampling frequency. (Polish. Russian and English summaries) *Arch. Automat. Telemekh.* **23** (1978), no. 3, 279–288. (From the summary) **80a:93056** 93B30
- Nowosad, Pedro Elliptic metrics on Lorentz manifolds. *Contemporary developments in continuum mechanics and partial differential equations (Proc. Internat. Sympos., Inst. Mat., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 388–395, *North-Holland Math. Studies*, 30, North-Holland, Amsterdam, 1978. (V. Wünsch) **80d:53040** 53C50
- Singular nonlinear problems arising in communication. *Proceedings of the Tenth Brazilian Mathematical Colloquium (Poços de Caldas, 1975)*, Vol. I (Portuguese), pp. 289–299, *Cons. Nec. Desenvolvimento Ci. Tec., Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (W. A. Gardner) **80g:94006** 94A05
- Noz, Marilyn E. (with Kim, Y. S.) Lorentz deformation of the Bethe-Salpeter wave function. *Hadronic J.* **2** (1979), no. 2, 460–480. (E. Kyriakopoulos) **80e:81041** 81D10
- Nozaki, Akihiro On the number of multiplications required for a matrix-vector product. *J. Inform. Process.* **1** (1978), no. 3, 125–129. (Author's summary) **80e:68116** 68C25
- A note on the complexity of approximative evaluation of polynomials. *Inform. Process. Lett.* **9** (1979), no. 2, 73–75. (Author's introduction) **80i:68036** 68C25
- Equivalence problem of non-deterministic finite automata. *J. Comput. System Sci.* **18** (1979), no. 1, 8–17. (S. Huzino) **80b:68071** 68D25
- Nozaki, Shirley A. (with Ross, Sheldon M.) Approximations in finite-capacity multi-server queues with Poisson arrivals. *J. Appl. Probab.* **15** (1978), no. 4, 826–834. (Jacqueline Loris-Teghem) **80b:60125** 60K25
- Nozdracheva, V. P. A congruence function in the vicinity of a structurally stable saddle. (Russian) *Differencial'nye Uravnenija* **15** (1979), no. 2, 252–261, 380. (R. F. Datko) **80i:34043** 34C05 (58F14)
- Successor functions in the neighborhood of a singular cycle. (Russian) *Differencial'nye Uravnenija* **15** (1979), no. 3, 405–407, 570–571. (A. A. Reinfelds) **80i:34044** 34C05 (58F14)
- Behavior of the trajectories of a three-dimensional homogeneous system in the neighborhood of a singular invariant cone. (Russian) *Differencial'nye Uravnenija* **15** (1979), no. 4, 619–628, 763. (A. A. Reinfelds) **80i:34045** 34C05 (58F14)
- Nordrin, I. V. (with Kameneckii, M. I.; Plahotiiin, A. M.) A function of the production capacity of construction-assembly organization. (Russian) *Èkonom. i Mat. Metody* **14** (1978), no. 2, 290–301. (From the introduction) **80d:90044** 90B30



- Notitzka, Frantisek See Vlach, Milan; et al., 80b:01027 and Fortschritte in der mathematischen Optimierung, 80d:90003
- Nudel'man, A. A. (with Tulub, A. V.) Extremal problems in the theory of van der Waals forces. (Russian. English summary) *Teoret. Mat. Fiz.* 39 (1979), no. 3, 359–367. (Authors' summary) 80c:81103 81G55
- Nunakura, Katsumi Closedness of  $q$ -ideals in a compact and totally disconnected semigroup. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 8, 239–242. (A. B. Paalman-de Miranda) 80i:22007 22A15
- Nunata, Shigeru On the torsion tensors  $R_{ijk}$  and  $F_{ijk}$  of Finsler spaces with a metric  $ds = (g_{ij}(x)dx^i dx^j)^{1/2} + b_i(x)dx^i$ . *Tensor (N.S.)* 32 (1978), no. 1, 27–31. (Yoshihiro Ichijyo) 80c:53029 53B40
- Nummelin, E. Uniform and ratio limit theorems for Markov renewal and semi-regenerative processes on a general state space. (French summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* 14 (1978), no. 2, 119–143. (R. L. Tweedie) 80a:60114 60K15
- A conservation property for general GI/G/1 queues with an application to tandem queues. *Adv. in Appl. Probab.* 11 (1979), no. 3, 660–672. (F. P. Kelly) 80d:60122 60K20
- Strong ratio limit theorems for  $q$ -recurrent Markov chains. *Ann. Probab.* 7 (1979), no. 4, 639–650. (R. L. Tweedie) 80c:60065 60J27
- Nunn, W. R. (with Keilson, Julian) Laguerre transformation as a tool for the numerical solution of integral equations of convolution type. *Appl. Math. Comput.* 5 (1979), no. 4, 313–359. (J. Sprekels) 80m:65088 65R10
- Nunzio, Jace W. On stress power and boundedness of flows of incompressible second-order fluids. (German summary) *Acta Mech.* 30 (1978), no. 3–4, 227–235. (P. D. S. Verma) 80c:76002 76A05
- (with Cowin, Stephen C.) A nonlinear theory of elastic materials with voids. *Arch. Rational Mech. Anal.* 72 (1979/80), no. 2, 175–201. (P. Villaggio) 80c:73010 73B99
- (with Dunwoody, J.) Nonlinear effects of temperature on simple shear flows of heat conducting viscoelastic fluids. *Phys. Fluids* 22 (1979), no. 3, 412–415. (L. N. Tao) 80c:76028 76F99 76Z99
- (with Walsh, Edward K.) A thermodynamic theory for the effects of localized heating in granular materials. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 5, 733–748. (Dominic G. B. Edelen) 80j:80003 80A20
- Nurcombe, J. R. A sequence of convergence tests. *Amer. Math. Monthly* 86 (1979), no. 8, 679–681. (S. M. Shah) 80h:40001 40A05
- Nurekenov, T. K. (with Zusanbaev, S. N.) The asymptotic stability in the first approximation of the solutions of countable systems of differential equations. (Russian) *Izv. Akad. Nauk Kazakh. SSR Ser. Fiz.-Mat.* 1978, no. 1, 77–79, 93. (Authors' summary) 80a:34061 34D05 34G20
- Theorems on the existence and uniqueness of solutions of the Cauchy problem for a nonlinear ordinary differential equation in Banach space. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 4, 629–635, 763–764. (P. Talpalanu) 80i:34106 34G20
- Nurgaliev, A. (with Bekov, A. A.) On the generalized problem of two fixed centers with a variable gravitational constant. (Russian. English summary) *Akad. Nauk Kazakh. SSR Trudy Astrfiz. Inst.* 33 (1979), 16–30, 87. (Authors' summary) 80c:70012 70F15
- Nuriev, R. M. Algorithms for parallelization of a system of de-loops over arrays. (Russian) *Vysisl. Sistemy No. 73 Voprosy Teorii i Prilozheniya Vychislitel'nykh Sistem* (1978), 138–151, 171. (Authors' summary) 80c:68062 68B20
- Nurlybaev, A. N. The neighborhood of the element in the problem of overlapping Cartesian products. (Russian) *Coding theory and the optimization of complex systems* (Russian), pp. 179–181, 243, "Nauka" Kazakh. SSR, Alma-Ata, 1977. (Authors' summary) 80d:05007 05A99 94A99
- A class of functions of three-valued logic. (Russian) *Theoretical and applied problems in mathematics and mechanics* (Russian), pp. 252–260, 315, "Nauka" Kazakh. SSR, Alma-Ata, 1977. (V. V. Gorlov) 80d:03022 03B50
- Nürnberg, Reiner On the determination of functional parameters in nonlinear evolution equations of the Navier-Stokes type. *Inverse and improperly posed problems in differential equations* (Proc. Conf., Math. Numer. Methods, Halle, 1979), pp. 189–196, Math. Research, 1, Akademie-Verlag, Berlin, 1979. (Sadakazu Aizawa) 80h:35110 35Q10 (47H15, 76D05)
- Nürnberg, Günther (with Sommer, Manfred) Weak Chebyshev subspaces and continuous selections for the metric projection. *Trans. Amer. Math. Soc.* 238 (1978), 129–138. (P. D. Morris) 80a:41027 41A50 (41A65)
- Nurtaev, A. T. (with Dobrica, V. P.; Hisamiev, N. G.) Constructive periodic abelian groups. (Russian) *Sibirsk. Mat. Z.* 19 (1978), no. 6, 1260–1265, 1437. (R. S. Pierce) 80b:20067 20K10
- Nurjanov, O. D. Periodic solutions of integro-differential equations. (Russian) *Ukrain. Mat. Z.* 30 (1978), no. 1, 120–125, 144. (S. D. Miluseva) 80d:45004 45J05
- Nurimaev, O. Propagation of stress waves in a viscoelastic medium under the action of moving loads. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazakh. SSR Ser. Fiz.-Mat.* 1979, no. 3, 25–30, 88. (Authors' summary) 80c:73037 73F15
- Nunke, Manfred (with Heller, Wolf-Dieter; Lindenberg, Henner; Schriever, Karl-Heinz) ★ Stochastische Systeme. Markoffketten, Stochastische Prozesse, Warteschlangen, de Gruyter Lehrbuch, Walter de Gruyter, Berlin-New York, 1978, 257 pp. ISBN 3-11-007624-1 (E. Arjas) 80g:60002 60-01 (60J10, 60J27, 60K25)
- Nussbaum, Michael ★ Asymptotic efficiency of estimators of a multivariate linear functional relation. *Wissenschaftliche Sitzungen zur Stochastik, 3. Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin, 1978*, 29 pp. (Jerry A. Hausman) 80c:62011 62E20 (62H12)
- Nussbaum, Roger D. Periodic solutions of special differential equations: an example in nonlinear functional analysis. *Proc. Roy. Soc. Edinburgh Sect. A* 81 (1978), no. 1–2, 131–151. (Yiannis Sficas) 80h:34097 34K15
- (with de Figueiredo, Djairo G.; Lions, Pierre-Louis) Estimations a priori pour les solutions positives de problèmes elliptiques superlinéaires. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 5, A217–A220. (Authors' summary) 80m:35013 35B45 (35J60)
- Nussbaumer, Henri J. (with Quandalle, Philippe) Fast computation of discrete Fourier transforms using polynomial transforms. *IEEE Trans. Acoust. Speech Signal Process.* 27 (1979), no. 2, 169–181. (Authors' summary) 80c:94003 94A11
- Fast polynomial algorithms for digital convolution. *IEEE Trans. Acoust. Speech Signal Process.* 28 (1980), no. 2, 205–215. (Authors' summary) 80m:94004 94A05 (65F99)
- Nussenzeig, H. M. Complex angular momentum theory of the rainbow and the glory. *J. Opt. Soc. Amer.* 69 (1979), no. 8, 1068–1079. (Authors' summary) 80c:78021 78A45
- Nute, Donald An incompleteness theorem for conditional logic. *Notre Dame J. Formal Logic* 19 (1978), no. 4, 634–636. (Robert P. McArthur) 80c:03028 03B45
- Nutall, S. N. Equally weighted quadratures with partially coinciding nodes. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 51 (1978), 97–103, 228. (Authors' summary) 80c:65060 65D32
- Nutall, G. S. Quadrature formulas of increased accuracy for the integration of Green-type functions. (Russian) *Differential and integral equations, No. 4 (Russian)*, pp. 213–229, 319, *Irkutsk. Gos. Univ., Irkutsk*, 1976. (Authors' summary) 80c:65028 65D32
- Nuttall, A. (with Kenefic, R.; Weiner, C.) A Volterra functional expansion for the logarithm of the likelihood ratio for detection of a memoryless nonlinear functional of a random process in Gaussian white noise. *J. Acoust. Soc. Amer.* 65 (1979), no. 6, 1488–1490. (Authors' summary) 80g:94003 94A05 (60G35)
- Nutzinger, H. G. Concepts of value in linear economic models. *First Symposium on Operations Research (Univ. Heidelberg, Heidelberg, 1976)*, Teil 2, pp. 717–724, *Operations Research Verfahren, XXVI, Hain, Königstein*, 1977. (James W. Friedman) 80c:90039 90A16
- Nuyan, Seyhan (with Carroll, Robert L.) Minimal order arbitrarily fast adaptive observers and identifiers. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 289–297. (Authors' summary) 80h:93158 93E12
- A lemma for the problem of exponentially convergent adaptive identification and state observation schemes. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 129–131. (Authors' summary) 80m:93025 93B30
- Nuyts, J. (with Brihaye, Y.; Fairlie, D. B.; Yates, R. G.) Properties of the self-dual equations for an SU(n) gauge theory. *J. Math. Phys.* 19 (1978), no. 12, 2528–2532. (Authors' summary) 80c:81077 81E15 (22E70, 58A15)
- (with Bacry, H.) Pure classical SU(2) Yang-Mills theory with potentials invariant under a U(1) gauge subgroup. *Nuclear Phys. B* 151 (1979), no. 3, 469–484. (G. Vitiello) 80h:81046 81E10 (53C80)
- Nuzman, Dwayne W. (with Sandell, Nils R., Jr.) An inequality arising in robustness analysis of multivariable systems. *IEEE Trans. Automat. Control* 24 (1979), no. 3, 492–493. (Authors' summary) 80c:93107 93D15
- Nuzzo, S. (with Ferrante, G.; Zarcone, M.) Parametric excitation of charge density fluctuations in classical and quantum electron-hole plasmas. (Italian and Russian summaries) *Nuovo Cimento B* (11) 50 (1979), no. 1, 37–63. (From the summary) 80m:82039 82A45
- Nwachu, C. O. New expressions for the eigenvalues of the invariant operators of  $O(N)$  and  $Sp(2n)$ . *J. Math. Phys.* 20 (1979), no. 6, 1260–1266. (M. K. F. Wong) 80f:22019 22E70 (81C40)
- Nwokha, Olu D. I. Estimates for the inverse of a matrix and bounds for eigenvalues. *Linear Algebra Appl.* 22 (1978), 283–291. (M. Lotkin) 80c:15012 15A18
- The convergence and local minimality of bounds for transfer functions. *Internat. J. Control* 30 (1979), no. 2, 195–202. (Luciano Pandolfi) 80j:93051 93C05
- Nyberg, A. M. (with Marek, Wiktor) Extendability of ZF models in the von Neumann hierarchy to models of KM theory of classes. *Generalized recursion theory, II (Proc. Second Sympos., Univ. Oslo, Oslo, 1977)*, pp. 271–282, *Studies in Logic and Foundations of Math., 94, North-Holland, Amsterdam*, 1978. (L. Bukovský) 80f:03034 03C65 (03E99)
- Nye, J. F. Optical caustics from liquid drops under gravity: observations of the parabolic and symbolic umbilics. *Philos. Trans. Roy. Soc. London Ser. A* 292 (1979), no. 1387, 25–44 (8 plates). (I. Stewart) 80h:78002 78A05 (58C28)
- Nye, V. A. Some comments on a singular elliptic problem associated with a rectangle. *Proc. Roy. Soc. Edinburgh Sect. A* 83 (1979), no. 3–4, 283–296. (Authors' summary) 80h:65094 65N99
- Nygaard, Niels O. A  $p$ -adic proof of the nonexistence of vector fields on  $K^3$  surfaces. *Ann. of Math. (2)* 110 (1979), no. 3, 515–528. (Gerhard Pfister) 80m:14024 14J25 (14F30)
- Closedness of regular 1-forms on algebraic surfaces. *Ann. Sci. École Norm. Sup. (4)* 12 (1979), no. 1, 33–45. (M. Miyanishi) 80i:14019 14F10 (14F20, 14F40, 14J99)
- Nytkos, Peter J. Covering properties on  $e$ -scattered spaces. *Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977)*, II, *Topology Proc.* 2 (1977), no. 2, 509–542 (1978). (Michael L. Wage) 80a:54045 54D99 (54D18)
- On the product of metacompact spaces. I. Connections with hereditary compactness. *Amer. J. Math.* 100 (1978), no. 4, 829–835. (J. van der Slot) 80a:54041 54D30
- (with Davis, S. W.; Gruenhage, Gary)  $G_\delta$  sets in symmetrizable and related spaces. *General Topology Appl.* 9 (1978), no. 3, 253–261. (Daniel Tanré) 80c:54052 54E25
- The normal Moore space problem. *Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978)*, II, *Topology Proc.* 3 (1978), no. 2, 473–493 (1979). (S. A. Naimpally) 80a:54051 54E30
- Nyman, T. (with Whaples, G.) Hasse's principle for simple algebras over function fields of curves. I. Algebras of index 2 and 3; curves of genus 0 and 1. *J. Reine Angew. Math.* 299/300 (1978), 396–405. (W.-D. Geyer) 80a:14013a 14H25 (13A20)
- (with Whaples, G.) Correction to the paper: "Hasse's principle for simple algebras over function fields of curves. I" (*J. Reine Angew. Math.* 299/300 (1978), 396–405). *J. Reine Angew. Math.* 301 (1978), 211. (W.-D. Geyer) 80a:14013b 14H25 (13A20)
- (with Whaples, G.) Simple algebras over rational function fields. *Canad. J. Math.* 31 (1979), no. 4, 831–835. (K. Kiyek) 80k:12020 12A80 (12B35)
- Nysanbaev, A. (with Golovin, A.) Lenin's idea of mathematization and its significance for contemporary science. (Russian. Kazakh summary) *Vestnik Akad. Nauk Kazakh. SSR* 1979, no. 5, 13–21. (I. Ruzsa) 80m:00009 00A25
- Oakes, R. J. (with Sorba, P.) Chiral  $SU_3 \times SU_4$  breaking, axial vector current divergences and kaon PCAC. (Italian and Russian summaries) *Nuovo Cimento A* (11) 50 (1979), no. 2, 291–302. (Authors' summary) 80c:81044 81D20
- Onkley, Cletus O. (with Baker, Justine C.) The Morley trisector theorem. *Amer. Math. Monthly* 85 (1978), no. 9, 737–745. (B. Artmann) 80c:01012 01A60 (51-03)
- Öaku, Toshinori Micro-local Cauchy problems and local boundary value problems. *Proc.*

- Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 4, 136–140. (Erich Miersemann) **80d:35146** 35S10 (35S15)
- Oances, Elena** See **Frighi-Oances, Elena**
- Oates-Williams, Sheila** (with Street, Anne Penfold) The analysis of colour symmetry. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 210–222. *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (From the introduction) **80d:20021** 20H15 (05B30, 51F15)  
(with Vaughan-Lee, M. R.) Varieties that make one Cross. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 3, 368–382. (V. A. Artamonov) **80c:08006** 08B15 (17A30)  
Combinatorics—a branch of group theory? *Combinatorial mathematics, VI (Proc. Sixth Austral. Conf., Univ. New England, Armidale, 1978)*, pp. 11–20. *Lecture Notes in Math.*, 748, Springer, Berlin, 1979. (Author's summary) **80m:05053** 05C25 (20F32)
- Obada, A. S. F.** (with Abu-Sitta, A. M.; Mahran, M. H. A.) Commutation relations and the moments effects in the theory of quantum optics. (Arabic summary) *Proc. Math. Phys. Soc. Egypt No. 47* (1979), 33–40. (Authors' summary) **80k:81205** 81K05 (81D05)
- Obădănu, V.** Espaces fibrés inductifs. (Romanian summary) *An. Univ. Timișoara Ser. Științ. Mat.* 15 (1977), no. 1, 31–36 (1978). (I. Pop) **80g:55032** 55R10 (53C05)
- Obadia, J.** L'analyse en composantes explicatives. *Rev. Statist. Appl.* 26 (1978), no. 4, 5–28. (Simon Dahan) **80c:62042** 62H25 (62J05)
- Obata, Tsunehiro** (with Chiba, Jiro) Variational principle for gravitational equations of the Bianchi identity type. *Gen. Relativity Gravitation* 10 (1979), no. 7, 547–555. (Authors' summary) **80i:83030** 83C99 (53C05, 53C80)
- Obădănu-Obe, O.** See **Obădănu-Obe, O.**
- Obel, Berge** A note on mixed procedures for decomposing linear programming problems. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 4, 537–544. (Author's summary) **80d:90050** 90C05
- Oberhettinger, F.** ★Преобразование Фурье распределений и их обращения. Таблицы. (Russian) [Fourier transforms of distributions and their inverses. Tables] Translated from the English by M. S. Nikulin. "Nauka", Moscow, 1979. 248 pp. (Editors) **80j:42002** 42–01
- Oberhofer, Walter** Stabilität nichtlinearer Differenzgleichungssysteme. *Quantitative Wirtschaftsforschung*, pp. 523–534. *Mohr, Tübingen*, 1977. (Vera Winitzky de Spinadel) **80b:98026** 90A14 (39A10)
- Oberlechner, G.** (with Umezawa, M.; Zenses, Ch.) The boson transformations and the soliton solutions of the sine-Gordon equation. *Lett. Nuovo Cimento* (2) 23 (1978), no. 18, 641–649. (A. Rouet) **80g:81090** 81E99 (35Q20)
- Oberlin, Daniel M.** Linear mappings continuous in measure. *Illinois J. Math.* 22 (1978), no. 1, 49–53. (John Fournier) **80b:43007** 43A22  
A multiplier theorem for  $H^1(\mathbb{R}^n)$ . *Proc. Amer. Math. Soc.* 73 (1979), no. 1, 83–87. (Harald E. Krogstad) **80d:42007** 42B15  
Two multiplier theorems for  $H^1(U^n)$ . *Proc. Edinburgh Math. Soc.* (2) 22 (1979), no. 1, 43–47. (Sun Yung A. Chang) **80c:32013** 32A35 (42B15)
- Oberly, David J.** (with Sumner, David P.) Every connected, locally connected nontrivial graph with no induced claw is Hamiltonian. *J. Graph Theory* 3 (1979), no. 4, 351–356. (Linda Lesniak-Foster) **80j:05006** 05C45
- Obermair, G. M.** Instability of a three-body system in one dimension. (Italian summary) *Nuovo Cimento A* (11) 49 (1979), no. 3, 381–392. (Author's summary) **80c:70009** 70F07
- Obermann, P.** (with Wollenberg, Manfred) Abel wave operators. II. Wave operators for functions of operators. *J. Funct. Anal.* 30 (1978), no. 1, 48–59. (M. M. Skraginov) **80j:47011b** 47A40  
(with Wollenberg, Manfred) Abel wave operators. I. General theory. *Math. Nachr.* 85 (1978), 141–159. (M. M. Skraginov) **80j:47011a** 47A40
- Obermeyer, F.** On a new representation of aeroacoustic source distribution. I. General theory. (German and French summaries) *Acustica* 42 (1979), no. 1, 56–61. (G. Paria) **80f:76035a** 76Q05 (35C15)  
On a new representation of aeroacoustic source distribution. II. Two-dimensional model flows. (German and French summaries) *Acustica* 42 (1979), no. 1, 62–71. (G. Paria) **80f:76035b** 76Q05 (35C15)
- Obé, Chiké** Analytical theory of non-linear oscillations. VIII. Second-order conservative systems whose solutions are all oscillating with the least period  $2\pi$ . *Ann. Mat. Pura Appl.* (4) 117 (1978), 339–347. (H. C. Howard) **80d:34048** 34C25 (34A34)
- Obé, E. C.** A note on the Rayleigh polynomials. *SIAM J. Math. Anal.* 9 (1978), no. 5, 825–834. (N. Hayek Calil) **80j:33010** 33A40
- Obidina, N. I.** The existence of a trajectory going from one singular point to another. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* 1979, no. 2, 67–71, 87–88. (A. A. Reinfelds) **80f:34028** 34C05
- Obitcu, E. U.** Non-Archimedean convexity spaces. *Soochow J. Math. Natur. Sci.* 3 (1977), 61–68. (From the introduction) **80b:52002** 52A01  
On local compactness in non-Archimedean normed linear spaces. *Math. Japon.* 23 (1978), 79, no. 2, 245–247. (L. Narici) **80c:46073** 46P05 (12J25)
- Obizata, Goro** Remarks on the time moments of composite systems. *Electron. Lett.* 14 (1978), no. 16, 509–511. (Author's summary) **80b:93019** 93A99
- Obizori-Obitak, Pavlina** See **Obizori-Obitak, Pavlina**
- Obolavskii, E. I.** Some generalizations of two-dimensional problems of elasticity theory. (Russian) *Complex analysis and its applications (Russian)*, pp. 447–449, 670, "Nauka", Moscow, 1978. (V. T. Golovchan) **80a:73020** 73C99 (00A89)  
★Преобразование Фурье и его применения в теории упругости. (Russian) [The Fourier transform and its application in elasticity theory] "Mecniereba", Tbilisi, 1979. 232 pp. (Vadim Komkov) **80j:73001** 73–02
- Obolenkii, A. Ju.** (with Martinkuk, A. A.) Investigation of the stability of autonomous comparison systems. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 28* (1978), 24 pp. (A. Solomino) **80j:34059** 34D20  
(with Martinkuk, A. A.) A Poincaré-Schur algorithm in stability theory. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 11, 1980–1989, 2107. (A. Solomino) **80c:34056** 34D20 (34A25)  
Differentiability of quasiconformal mappings with Lipschitz characteristics.
- (Russian) *Mat. Fiz. No. 23* (1978), 105–111, 116. (V. G. Šereto) **80c:30021** 30C81
- Oborn, L. A.** (with Aizengendler, P. G.) Stable singular periodic solutions of nonautonomous equations. (Russian) *Differentsial'nye Uravneniya (Ryazan) No. 11* (1978), 3–15. (B. A. Šerbakov) **80a:34056** 34D05
- Obrazcov, N. N.** (with Penenko, V. V.) Implicit approximations of a higher order of accuracy for the second derivative. (Russian) *Čisl. Metody Meh. Splošn. Sredy* 9 (1978), no. 3 *Matematicheskoe Modelirovanie*, 128–136. (From the text) **80c:65026** 65D25
- Obrazcova, L. V.** Estimation of dynamical parameters. (Russian) *Control of dynamical systems (Russian)*, pp. 157–163, 318. *Leningrad. Univ., Leningrad*, 1978. (Author's summary) **80c:93115** 93E10
- Obrecht, Enrico** Semilinear parabolic equations of arbitrary order in a Banach space. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* 57 (1977), 231–246 (1978). (Sadakazu Aizawa) **80c:34048** 34G20
- Obrelimov, I. V.** (with Čumaevskii, N. A.) A method for the formation of radical oscillations. (Russian) *Dokl. Akad. Nauk SSSR* 240 (1978), no. 3, 574–577. (Editor) **80f:92004** 92A05 (34C15)
- O'Brien, D. M.** Inequalities satisfied by electromagnetic radiation fields. *Proc. Roy. Soc. Edinburgh Sect. A* 80 (1978), no. 3–4, 273–287. (Werner Kohler) **80c:78018** 78A45 (78A40)
- O'Brien, D. P.** (with Mecklenburg, W.) Gauge field masses and degenerate potentials. *Lett. Nuovo Cimento* (2) 23 (1978), no. 15, 566–570. (John Madore) **80c:81082** 81E15 (53B05)
- O'Brien, G.** (with McCrea, J. D.) Spin precession in the relativistic two-body problem. *Gen. Relativity Gravitation* 9 (1978), no. 12, 1101–1118. (A. Raychaudhuri) **80d:83032** 83C35 (58D30)  
Orbital equations in the relativistic two-body problem. *Gen. Relativity Gravitation* 10 (1979), no. 2, 129–148. (George Contopoulos) **80c:83006** 83C10 (34C99, 70F99)  
(with McCrea, J. D.) Sygne's equations of motion applied to a perfect fluid. *J. Phys. A* 12 (1979), no. 4, 503–516. (Richard Sigal) **80d:83028** 83C25 (53B50)
- O'Brien, R. E.** Perturbation of controllable systems. *SIAM J. Control Optim.* 17 (1979), no. 2, 175–179. (Author's summary) **80b:93028** 93B05
- O'Brien, R. W.** A method for the calculation of the effective transport properties of suspensions of interacting particles. *J. Fluid Mech.* 91 (1979), no. 1, 17–39. (Jakub Siemek) **80g:76005** 76A99
- O'Brien, Richard C.** (with Edelstein, Michael) Nonexpansive mappings, asymptotic regularity and successive approximations. *J. London Math. Soc.* (2) 17 (1978), no. 3, 547–554. (E. Lami Dozo) **80b:47074** 47H10  
(with Borwein, Jonathan M.) Cancellation characterizes convexity. *Nanta Math.* 11 (1978), no. 1, 100–102. (John D. Baidon) **80b:52006** 52A20
- O'Brien, Robert E., Jr.** Contraction semigroups, stabilization, and the mean ergodic theorem. *Proc. Amer. Math. Soc.* 71 (1978), no. 1, 89–94. (H. O. Fattorini) **80a:93140** 93D15  
Weakly stable operators. *J. Math. Anal. Appl.* 70 (1979), no. 1, 170–179. (Marshall Slemrod) **80f:93062** 93D15 (65J10)
- O'Brien, S. J.** (with Gail, Mitchell H.; Weiss, George H.; Mantel, N.) A solution to the generalized birthday problem with application to allozyme screening for cell culture contamination. *J. Appl. Probab.* 16 (1979), no. 2, 242–251. (Authors' summary) **80d:92011** 92A09
- O'Bryan, Thomas E.** (with Tortorella, Michael) Estimation of the prior distribution by best approximation in uniformly convex function spaces. *Bull. Inst. Math. Acad. Sinica* 7 (1979), no. 1, 69–85. (Eswar G. Phadia) **80d:62008** 62C12 (62G05)  
Rates of convergence in a modified empirical Bayes estimation problem involving Poisson distributions. *Comm. Statist. A—Theory Methods* 8 (1979), no. 2, 167–174. (Glen Meeden) **80i:62007** 62C12  
(with Susarla, V.) Empirical Bayes interval estimates involving uniform distributions. *Comm. Statist. A—Theory Methods* 8 (1979), no. 4, 385–397. (R. S. Singh) **80b:62011** 62C12 (62F15)
- Obtulowicz, Adam** (with Sokolnicki, Krzysztof) On the algebraic theory of Boolean algebras. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astron. Phys.* 26 (1978), no. 6, 483–487. (Gavin Wraith) **80a:1802a** 18C10 (06E05)
- Obuhov, A. M.** Structure and questions of the modeling of quadratically nonlinear systems. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* 19 (1978), no. 4, 109–116. (J. S. Joel) **80j:34033** 34C20 (35Q20, 70K99)  
(with Višik, S. M.) Symmetrizable and Hamiltonian systems. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 3, 502–511, 691. (J. S. Joel) **80f:34039** 34C20 (35Q20, 58F05)
- Obuhov, Ju. N.** (with Krečēt, V. G.; Ponomarev, V. N.) Torsion, sectional curvature and the structure of a space-time. (Russian) *Gravitacija i Teor. Otnositel'nosti* No. 14-15 (1978), 121–127. (Kishore Marathe) **80d:83077** 83D05 (53B30)
- O'Callaghan, Liam** (with Comfort, W. Wistar) Spaces  $Y$  homeomorphic to  $\beta Y \setminus Y$ . *Math. Z.* 163 (1978), no. 2, 103–110. (L. Gillman) **80b:54026** 54D35
- O'Carroll, Michael L.** Applications of functional analysis to the spectral analysis and scattering of quantum mechanical systems. *Proceedings of the Eighth Brazilian Mathematical Colloquium (Poços de Caldas, 1971)* (Portuguese), pp. 31–39. *Inst. Mat. Pura Apl., Rio de Janeiro*, 1977. (Vadim Komkov) **80a:81095** 81F15 (46N05, 47A40)  
On the inverse scattering problem for linear evolution equations. *Contemporary developments in continuum mechanics and partial differential equations (Proc. Internat. Sympos., Inst. Mat., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 102–111. *North-Holland Math. Studies*, 30, North-Holland, Amsterdam, 1978. (J. R. Schulenberger) **80b:35057** 35P25 (47A40)
- Occorsio, Mario Rosario** (with Mastroianni, Giuseppe) A generalization of the Bernstein operator. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) 44 (1977), 151–169 (1978). (D. D. Stancu) **80a:41019** 41A35 (41A10, 41A25)
- Ochanine, Serge** Formules "à la Hirzebruch" pour les invariants de Kervaire généralisés. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 9, A487–A490. (Author's summary) **80a:55055** 55R50 (57R20)
- Ochiai, Mitsuyuki** Homeomorphisms on a three-dimensional handle. *J. Math. Soc. Japan* 30 (1978), no. 4, 697–702. (A. Černavskii) **80j:57009** 57N10  
(with Homma, Tatsuo) On relations of Heegaard diagrams and knots. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 2, 383–393. (Wilbur Whitten) **80b:57009** 57N10 (57M25)



- Dehn's surgery along 2-bridge knots. *Yokohama Math. J.* 26 (1978), no. 1, 69-75. (Wilbur Whitten) **80d:57004** 57M25
- A counterexample to a conjecture of Whitehead and Volodin-Kuznetsov-Fomenko. *J. Math. Soc. Japan* 31 (1979), no. 4, 687-691. (J. S. Birman) **80j:57012** 57N12 (57M40, 68C05)
- Ochs, Wilhelm (with Spohn, Herbert) A characterization of the Segal entropy. *Rep. Math. Phys.* 14 (1978), no. 1, 75-87. (Mary Beth Ruskai) **80a:46039** 46L10
- When does a projective system of state operators have a projective limit? *J. Math. Phys.* 20 (1979), no. 9, 1842-1847. (S. Gudder) **80g:46058** 46M05 (47B99, 82A05)
- Ocken, Stanley Perturbing embeddings in codimension two. *Pacific J. Math.* 81 (1979), no. 1, 197-205. (J. P. E. Hodgson) **80h:57028** 57Q35 (57Q45)
- Ockendon, J. R. (with Collinge, I. R.) Transition through resonance of a Duffing oscillator. *SIAM J. Appl. Math.* 37 (1979), no. 2, 350-357. (G. Bojadziev) **80i:34087** 34E10
- Ockham, William of See Weidemann, Hermann, **80m:03006**
- O'Connor, A. J. (with Gates, D. J.; Westcott, Mark) Partitioning the union of disks in plant competition models. *Proc. Roy. Soc. London Ser. A* 367 (1979), no. 1728, 59-79. (John Cantwell) **80i:52013** 52A45 (92A17)
- O'Connor, Brian T. (with Huang, Thomas S.) Stability of general two-dimensional recursive digital filters. *IEEE Trans. Acoust. Speech Signal Process.* 26 (1978), no. 6, 550-560. (N. U. Ahmed) **80a:93168** 93E11
- O'Connor, Thomas A. Infinitely divisible distributions with unimodal Lévy spectral functions. *Ann. Probab.* 7 (1979), no. 3, 494-499. (Stephen James Wolfe) **80b:60035** 60E07
- Infinitely divisible distributions similar to class  $L$  distributions. *Z. Wahrsch. Verw. Gebiete* 50 (1979), no. 3, 265-271. (Stephen James Wolfe) **80b:60023** 60E05
- Oda, Nobuyuki Periodic families in the homotopy groups of  $SU(3)$ ,  $SU(4)$ ,  $Sp(2)$  and  $G_2$ . *Mem. Fac. Sci. Kyushu Univ. Ser. A* 32 (1978), no. 2, 277-290. (J. F. Adams) **80f:55015** 55Q25 (57T20)
- Odeh, F. (with Liniger, Werner) A perturbation calculation of the  $I-V$  characteristic of an extended Josephson junction. *J. Franklin Inst.* 307 (1979), no. 4, 245-262. (Authors' summary) **80d:78020** 78A30 (81J05)
- Oden, J. Tinsley The classical variational principles of mechanics. *Energy methods in finite element analysis*, pp. 1-31, Wiley, Chichester, 1979. (Vadim Komkov) **80c:73002** 73-02 (49H05)
- Existence theorems for a class of problems in nonlinear elasticity. *J. Math. Anal. Appl.* 69 (1979), no. 1, 51-83. (C.-C. Wang) **80e:73019** 73C50 (35Q99, 47H15)
- (with Reddy, C. T.) Finite element approximations of a class of highly nonlinear boundary-value problems in finite elasticity. *Numer. Funct. Anal. Optim.* 1 (1979), no. 1, 1-55. (S. J. Sackett) **80d:73036** 73C50 (73K25)
- Offredini, Piergiorgio Recursion theory on admissible ordinals. (Italian. English summary) *Boll. Un. Mat. Ital. A (5)* 15 (1978), no. 3, 495-516. (G. E. Minc) **80a:03061** 03D60
- Odinec, V. P. Minimal projections. Uniqueness conditions. (Russian) *Teor. Funktsii Funktsional. Anal. i Prilozhen.* 30 (1978), 101-108, iv. (G. J. O. Jameson) **80c:46029** 46B20 (41A65)
- Odlyzko, Andrew M. (with MacWilliams, F. Jessie; Sloane, Neil J. A.; Ward, Harold N.) Self-dual codes over  $GF(4)$ . *J. Combin. Theory Ser. A* 25 (1978), no. 3, 288-318. (Raymond Hill) **80d:94016** 94B05 (05B05)
- (with Stanley, Richard P.) Enumeration of power sums modulo a prime. *J. Number Theory* 10 (1978), no. 2, 263-272. (Graham Lord) **80c:10096** 10A20
- (with Conway, John H.; Sloane, Neil J. A.) Extremal self-dual lattices exist only in dimensions 1 to 8, 12, 14, 15, 23, and 24. *Mathematika* 25 (1978), no. 1, 36-43. (R. A. Rankin) **80d:10045** 10E20
- Nonnegative digit sets in positional number systems. *Proc. London Math. Soc.* (3) 37 (1978), no. 2, 213-229. (N. G. de Bruijn) **80m:10004** 10A30 (10K10)
- (with Guibas, Leo J.) Maximal prefix-synchronized codes. *SIAM J. Appl. Math.* 35 (1978), no. 2, 401-418. (J.-M. Goethals) **80d:94024** 94B45 (05A15)
- (with Gerasho, Allen; Gopinath, B.) Coefficient inaccuracy in transversal filtering. *Bell System Tech. J.* 58 (1979), no. 10, 2301-2316. (Authors' summary) **80m:94013** 94A12 (93E11)
- (with Erdős, Paul) On the density of odd integers of the form  $(p-1)2^k$  and related questions. *J. Number Theory* 11 (1979), no. 2, 257-263. (H.-J. Kanold) **80i:10077** 10L10
- (with Lagarias, J. C.) On computing Artin  $L$ -functions in the critical strip. *Math. Comp.* 33 (1979), no. 147, 1081-1095. (T. Metsänkylä) **80g:12010** 12A70
- Odoni, Amedeo R. (with Mirchandani, Pitu B.) Locating new passenger facilities on a transportation network. *Transportation Res. Part B* 13 (1979), no. 2, 113-122. (Jacques A. Ferland) **80f:90061** 90B15
- (with Mirchandani, Pitu B.) Locations of medians on stochastic networks. *Transportation Sci.* 13 (1979), no. 2, 85-97. (Authors' summary) **80a:90052** 90B15
- Odini, R. W. K. Representations of algebraic integers by binary quadratic forms and norm forms from full modules of extension fields. *J. Number Theory* 10 (1978), no. 3, 324-333. (J. C. Lagarias) **80b:12011** 12A75 (10H25)
- A proof by classical methods of a result of Ax on polynomial congruences modulo a prime. *Bull. London Math. Soc.* 11 (1979), no. 1, 55-58. (P. Roquette) **80i:14011** 14G10 (10B15)
- O'Donnell, William J. Two theorems concerning hexagonal numbers. *Fibonacci Quart.* 17 (1979), no. 1, 77-79. (L. C. Egan) **80d:10020** 10A35
- O'Donoghue, M. R. (with Murphy, J. A.) A two-variable generalization of the Stieltjes-type continued fraction. *J. Comput. Appl. Math.* 4 (1978), no. 3, 181-190. (Wyman Fair) **80k:40001** 40A15 (41A21)
- Odziejewicz, A. (with Lisiecki, W.) Twistor flag spaces as phase spaces of conformal particles. *Lett. Math. Phys.* 3 (1979), no. 4, 325-334. (Richard C. Swanson) **80k:58052** 58F06 (83E05)
- Oechel, Frank Wm. A general method for constructing increment-decrement life tables that agree with the data. *Theoret. Population Biol.* 16 (1979), no. 1, 13-24. (Author's summary) **80g:92026** 92A15 (62P05)
- Oehmke, Robert H. On right congruences of semigroups. *Semigroup Forum* 16 (1978), no. 4, 393-401. (D. R. LaTorre) **80a:20068** 20M05 (20M10)
- Oelschlägel, Dieter (with Süss, Herbert) Fehlerabschätzung beim Verfahren von Wolfe zur Lösung quadratischer Optimierungsprobleme mit Hilfe der Intervallarithmetik. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 3, 389-396. (Authors' summary) **80a:90109** 90C20 (65G10)
- (with Wilke, Frank) Konvexitätsuntersuchungen im Zusammenhang mit einem Diskretisierungsverfahren für Probleme der optimalen Steuerung. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* 21 (1979), no. 1, 82-87. (Authors' introduction) **80a:93039** 93C55
- (with Süss, Herbert; Schmietow, Roswitha) Die Behandlung von Aufgaben aus der Optimierung dynamischer Systeme mittels intervallanalytischer Methoden. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* 21 (1979), no. 1, 105-111. (Authors' summary) **80g:93056** 93C99 (65G10)
- Oenrawingh, H. (with Ollongren, A.) On the proof of a theorem by Chomsky-Hopcroft-Ullman. *Internat. J. Comput. Math.* 7 (1979), no. 1, 37-41. (Authors' summary) **80b:68101** 68F10
- Oettli, Karl Werner Approximate solutions of variational inequalities. *Quantitative Wirtschaftsforschung*, pp. 535-538, Mohr, Tübingen, 1977. (From the text) **80a:49008** 49A34
- See also Symposium: Operations Research, **80d:90004a**; Symposium: Operations Research, **80d:90004b**; Symposium: Operations Research, **80d:90004c**; Symposium: Operations Research, **80d:90004d** and Symposium: Operations Research, **80d:90004e**
- O'Farrell, Anthony G. Analytic capacity and equicontinuity. *Bull. London Math. Soc.* 10 (1978), no. 3, 276-279. (A. Clausen) **80d:46099** 46J15 (30E10, 30H05)
- A characterisation of harmonic functions. *Proc. Roy. Irish Acad. Sect. A* 78 (1978), no. 5, 33-36. (M. Brelot) **80b:31003** 31B05
- Rational approximation in Lipschitz norms. II. *Proc. Roy. Irish Acad. Sect. A* 79 (1979), no. 11, 103-114. (Berni Øksendal) **80m:30044** 30E10 (41A20, 46J15)
- Offel, D. N. Eigenvalue and eigenmatrix problems for a second order differential equation. *Afrika Mat.* 1, no. 2, 3-11 (1980). (William N. Everitt) **80c:34020** 34B25 (34B05)
- Offen, Walter W. (with Littell, Ramon C.; McClave, James T.) Goodness-of-fit tests for the two parameter Weibull distribution. *Comm. Statist. B—Simulation Comput.* 8 (1979), no. 3, 257-269. (Authors' summary) **80c:62025** 62G10
- Offord, A. C. John Edensor Littlewood. *Bull. Inst. Math. Appl.* 14 (1978), no. 10, 242-244. (Bruce C. Berndt) **80g:01028** 01A70
- Offray de la Mettrie, Julien See Thijsen, W. Th. M., **80a:01017**
- Oganesjan, G. U. Problems of equality and divisibility in a semigroup with a defining relation of the form  $a = ba$ . (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 3, 602-612. (L. Bokut') **80b:20070** 20M05
- A class of semigroups with a solvable word problem. (Russian) *Mat. Zametki* 24 (1978), no. 2, 259-265, 303. (G. Pollák) **80c:03055** 03D40 (20M05)
- Ogata, Akio On the number of bounded positive solutions of the exterior elliptic boundary value problems. *J. Math. Anal. Appl.* 67 (1979), no. 1, 17-34. (V. A. Kondrat'ev) **80h:35048** 35J25
- Ogata, Shigeo A unitary representation on a Hilbert space  $H_p$ . *Res. Rep. Nagasaki Tech. College* 15 (1979), no. 1-2, 1-5. (L. Corwin) **80f:22063** 22D10
- Ogata, Takashi On infinitesimal transformations of a  $P$ -Sasakian manifold. *Bull. Yamagata Univ. Natur. Sci.* 9 (1978), no. 3, 341-349. (Raymond Couty) **80c:53047** 53C25
- Ogata, Yoshihiko The asymptotic behaviour of maximum likelihood estimators for stationary point processes. *Ann. Inst. Statist. Math.* 38 (1978), no. 2, 243-261. (Bennett Eisenberg) **80a:62136** 62M09
- (with Inagaki, Nobuo) Weak convergence of maximum likelihood estimators, and its applications. (Japanese) *Sûgaku* 30 (1978), no. 3, 193-206. (Masafumi Akahira) **80c:62042** 62F12 (62E20)
- Ogawa, Hideo (with Kitahashi, Tadahiyo; Tanaka, Kokichi) Minimum deduction process by D graph deduction. *Systems-Comput.-Controls* 8 (1977), no. 6, 1-8 (1979). (Authors' summary) **80g:68119** 68G15 (03B35, 68E10)
- (with Kitahashi, Tadahiyo; Tanaka, Kokichi) Formal deduction based on a directed AND/OR graph and its completeness. *Systems-Comput.-Controls* 8 (1977), no. 6, 9-16 (1979). (Authors' summary) **80g:68120** 68G15 (03B35, 68E10)
- Ogawa, J. (with Wehrhahn, K.) On the use of the  $t$ -statistic in preliminary testing procedures for the Behrens-Fisher problem. *J. Statist. Plann. Inference* 2 (1978), no. 1, 15-25. (Chien-Pai Han) **80a:62032** 62F04
- Ogawa, Shigeoyoshi Sur le produit direct du bruit blanc par lui-même. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 5, A359-A362. (Author's summary) **80b:60058** 60G20 (60H05)
- Ogawa, Yosuke On conformally flat spaces with warped product Riemannian metric. *Natur. Sci. Rep. Ochanomizu Univ.* 29 (1978), no. 2, 117-127. (T. J. Willmore) **80f:53017** 53B20
- Ogden, R. W. Nearly isochoric elastic deformations: application to rubberlike solids. *J. Mech. Phys. Solids* 26 (1978), no. 1, 37-57. (R. D. Bhargava) **80d:73069** 73G05
- (with Haughton, D. M.) Bifurcation of rotating circular cylindrical elastic membranes. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 2, 357-376. (J. Dunwoody) **80j:73009** 73C50
- Ogibalov, P. M. See Elasticity and inelasticity, **80d:73005**
- Ogielak, A. T. Nonlocal conserved currents for two-dimensional chiral theories. *Phys. Rev. D* (3) 21 (1980), no. 2, 406-410. (Author's summary) **80k:81064** 81D15 (58F05, 81M05)
- Ogievetskii, V. I. (with Sokačev, E. S.) The supercurrent. *Jadernaja Fiz.* 28 (1978), no. 3, 825-836. (Russian); translated as *Soviet J. Nuclear Phys.* 28 (1978), no. 3, 423-428. (H. Rund) **80g:83017** 83C45 (81M05)
- (with Sokačev, E. S.) Structure of supergravity group. Symposium on Mathematical Methods in the Theory of Elementary Particles (Liblice, 1978). *Czechoslovak J. Phys.* 29 (1979), no. 1, 68-72. (Authors' summary) **80m:83011** 83C40 (22E70)
- Ogiński, Ludwik On a model of work, failure and maintenance. (Polish and Russian summaries) *Zeszyty Nauk. Politech. Łódź. Mat.* No. 10 (1978), 37-46. (R. Subramanian) **80c:90049** 90B25
- Ogiue, Koichi (with Tachibana, Shun-ichi) Les variétés riemanniennes dont l'opérateur de courbure restreint est positif sont des sphères d'homologie réelle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 1, A29-A30. (Bang-yeu Chen) **80c:53043** 53C20

- Positively curved complex submanifolds immersed in a complex projective space. *IV. Tsukuba J. Math.* 3 (1979), no. 1, 75-77. (Bang-ye Chen) **80b:53056** 53C40
- Ogunsulire, E. O. (with Sharma, C. S.) Axiomatic quantum theory and resonances. *J. Phys. A* 11 (1978), no. 11, 2159-2177. (M. J. Maczyński) **80d:81004** 81B05
- Ogura, Seiritsu Intracommunity fiscal surplus and an efficient system of land-rent. *Econom. Lett.* 3 (1979), no. 1, 97-101. (Author's summary) **80b:90043** 90A16
- Ogura, A. Griffiths transversality in crystalline cohomology. *Ann. of Math.* (2) 108 (1978), no. 2, 395-419. (Gerhard Pfister) **80d:14012** 14F30
- Ojastie, Mehmet Nannik (with Krivošev, L. E.; Leung, K. V.; Mangeron, D.) Analyse mathématique. Étude de certains systèmes intégrodifférentiels non linéaires aux opérateurs paraboliques et aux autoréglages multiples dans les limites d'intégration. (English and Spanish summaries) *Math. Notae* 26 (1977/78), 21-27. (I. Fenyő) **80g:45012** 45J05
- Activity propagation in a continuous neural network. (Russian summary) *Complex analysis and its applications (Russian)*, pp. 450-458, 670, "Nauka", Moscow, 1978. (J. D. Cowan) **80a:92029** 92A09
- Activities in a one-dimensional continuous neural network. *Arch. Math. (Brno)* 14 (1978), no. 3, 161-169. (C. V. Pao) **80a:92030** 92A09 (45K05, 65R20)
- (with Andreassen, S.; Stein, R. B.) Application of optimal multichannel filtering to simulated nerve signals. *Biol. Cybernet.* 32 (1979), no. 1, 25-33. (Authors' summary) **80f:92006** 92A09
- Activity analysis of neural networks. *Biol. Cybernet.* 34 (1979), no. 3, 159-169. (Author's summary) **80b:92007** 92A09
- Oh, Won Tai (with Pak, Jin Suk) Some characterizations in a Sasakian manifold with vanishing C-Böchner curvature tensor and its submanifolds of codimension 2. *J. Korean Math. Soc.* 15 (1978/79), no. 1, 9-23. (C. S. Houh) **80c:53058** 53C25
- O'Hagan, A. Curve fitting and optimal design for prediction. *J. Roy. Statist. Soc. Ser. B* 40 (1978), no. 1, 1-42. (Tom Leonard) **80c:62053** 62K05 (62F15, 62G05)
- Ohanesian, Michael K. (with Srihari, Sargur N.) An efficient algorithm for determining Hadamard sequence vectors. *IEEE Trans. Comput.* 28 (1979), no. 3, 243-244. (G. Robert Redinbo) **80c:94113** 94C30 (42C10)
- O'Hanlon, P. B. (with Kinsella, I. A.; Dunne, A.) Stochastic models of radioactive decay. *Amer. J. Phys.* 48 (1980), no. 2, 172-174. (Authors' introduction) **80k:81032** 81C20
- O'Hara, Patrick J. (with Rodriguez, Rene S.) Polynomials with zeros uniformly distributed on the unit circle. *Amer. Math. Monthly* 85 (1978), no. 10, 814-817. (M. Mendes France) **80b:10072** 10K05 (10L10)
- On a problem of Erdős. *Bull. London Math. Soc.* 10 (1978), no. 3, 267-269. (Christopher Smyth) **80b:10050** 10F40
- Ohara, Shinsuke (with Hada, Ichiro; Hashimoto, Kazuo) On the duality mapping of  $l^p$ . *Tokyo J. Math.* 2 (1979), no. 1, 71-97. (Alan Shuchat) **80j:46020** 46A45 (46B10)
- Ohnishi, Kazuhiro A note on the functional central limit theorem for lacunary Walsh series. *Sci. Rep. Kanazawa Univ.* 23 (1978), no. 2, 65-68. (F. Móricz) **80f:60035** 60F17 (42C10)
- Ohyan, Roger Homogénéisation par développements asymptotiques mixtes. Vibrations harmoniques d'un anneau hétérogène à structure périodique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 2, A173-A176. (Author's summary) **80c:73029** 73D99 (35Q99)
- Homogénéisation par développements asymptotiques mixtes. Calcul des vibrations de milieux élastiques à structure périodique. (English summary) *Rech. Aérospat.* 1979, no. 2, 109-118. (N. Gass) **80g:73052** 73K12 (35C20)
- Ohba, Sachio Vector measure theory. (Japanese) *Sci. Rep. Res. Inst. Engrg. Kanagawa Univ.* No. 1 (1978), 14-26. (Fumio Hiai) **80b:28012** 28B05 (46G10)
- (with Nagano, Yoshihiko) Locally convex spaces with the property (Σ). *Yokohama Math. J.* 26 (1978), no. 1, 49-53. (Barbara T. Faires) **80d:46079** 46G10 (28B05)
- Product of measures. II. (Japanese summary) *Rep. Fac. Engrg. Kanagawa Univ.* No. 17 (1979), 1-2. (Miloslav Duchoň) **80c:28025** 28B10 (28A35)
- Oh, Synchronism (with Omata, Sigeru; Soeda, Takashi) Fixed-lag smoothing estimator for a linear distributed parameter system. *Inform. and Control* 44 (1980), no. 1, 1-15. (Authors' summary) **80c:93051** 93E10
- Ohgaki, Seiko A note on envelopes of holomorphy. *Kumamoto J. Sci. (Math.)* 13 (1978/79), no. 2, 37-42. (Adib A. Fadalla) **80c:32022** 32D10
- Ohkuni, Yoshiaki (with Likins, Peter W.) Eigenvalues and eigenvectors for hybrid coordinate equations of motion for flexible spacecraft. *Celestial Mech.* 19 (1979), no. 4, 359-390. (T. K. Serazetdinov) **80j:70012** 70J99 (70M05, 93B99)
- Ohkawa, Fumiyoshi J. Orthogonality catastrophe due to local electron interaction. *Progr. Theoret. Phys.* 60 (1978), no. 1, 60-70. (Z. Janković) **80a:81096** 81F20 (58F06)
- Ohkouchi, Shigemasa (with Kohno, Mitsuhiro; Kohmoto, Tomonori) On full uniform simplification of even-order linear differential equations with a parameter. *Hiroshima Math. J.* 9 (1979), no. 3, 747-767. (W. Wasow) **80j:34071** 34E20 (34C20, 34E05)
- Ohkubo, Hikaru On generalized Fourier-Stieltjes transforms. *Tokyo J. Math.* 2 (1979), no. 1, 99-110. (A. L. Brodskii) **80j:42021** 42A38 (60E10)
- On the asymptotic tail behaviors of infinitely divisible distributions. *Yokohama Math. J.* 27 (1979), no. 2, 77-89. (Stephen James Wolfe) **80m:60021** 60E07
- Ohkubo, Toshiro (with Kubota, Kōji) On well-posedness of mixed problems for Maxwell's equations. II. *Hokkaido Math. J.* 7 (1978), no. 2, 308-327. (Maria Cinquini-Cibrario) **80k:35116** 35Q20 (35L50)
- Obitkov, N. M. See *Methods in continuum mechanics*, **80m:76001**
- Ohmaki, V. F. (with Boičuk, L. M.; Voroneckii, I. Ja.) Method of synthesis of two-level control systems for interconnected objects. (Russian) *Kibernet. i Vychisl. Tehn.* No. 43 (1979), 3-8, 133. (I. Randvee) **80j:93066** 93C35
- Ohmura, Mayumi On the reflectionless solutions of the modified Korteweg-de Vries equation. *J. Math. Tokushima Univ.* 12 (1978), 9-17. (Stanley H. Benton, Jr.) **80k:35118** 35Q20 (76Y05)
- The inverse scattering problem for the Dirac operator and the modified Korteweg-de Vries equation. *Osaka J. Math.* 16 (1979), no. 1, 249-269. (David J. Kaup) **80g:35117** 35Q20 (35P25, 58F07)
- Ohmori, Kazumasa The discrete maximum principle for nonconforming finite element approximations to stationary convective diffusion equations. *Math. Rep. Toyama Univ.* 2 (1979), 33-52. (Reinhard Scholz) **80k:65092** 65N30
- Ohno, Katsuhisa Differential dynamic programming for solving nonlinear programming problems. (Japanese summary) *J. Oper. Res. Soc. Japan* 1978, no. 3, 371-399. (Richard F. Serfozo) **80c:90137** 90C30
- (with Mine, Hisashi; Shioyama, Tadayoshi) A new priority queue with two servers. *Opersearch* 16 (1979), no. 1, 1-22. (Authors' summary) **80g:90052** 90B22
- Ohno, Yoshiaki (with Yabuta, Kōzō) A theorem of Helson and Sarason in uniform algebras. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 4, 128-131. (H. S. Bear) **80k:46056** 46J10
- Helson-Szegő-Sarason theorem for Dirichlet algebras. *Tōhoku Math. J. (2)* 31 (1979), no. 1, 71-79. (P. J. de Paëpe) **80d:46096** 46J10
- Ohnuki, Yoshio (with Kashiwa, Taro) Coherent states of Fermi operators and the path integral. *Progr. Theoret. Phys.* 60 (1978), no. 2, 548-564. (Authors' summary) **80d:81029** 81C35 (22E45, 58D20)
- Ohniska, Jan The influence of argument delay on oscillatory properties of a second-order differential equation. (Russian summary) *Math. Slovaca* 28 (1978), no. 1, 41-56. (N. P. Bhatia) **80d:34101** 34K15
- Ohnishi, Hiroshi Characteristic classes of S-foliated vector bundles and Gelfand-Fuks cohomology. *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* 26 (1979), no. 2, 279-301. (D. R. Fuks) **80m:57024** 57R32 (58H10)
- Ohnawa, Takeo A counter example of ampleness of positive line bundles. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 5, 193-194. (Shigeo Nakano) **80c:32017** 32F30
- Ohnawa, Yasuharu (with Hayashi, Muneaki) Transient stability region of power systems using series expansion of Lyapunov functions. *Internat. J. Control* 29 (1979), no. 6, 1059-1066. (A. S. C. Sinha) **80j:93009** 93D05
- (with Kakimoto, Naoto; Hayashi, Muneaki) Construction of Lur'e type Lyapunov function with effect of magnetic flux decay. *Mem. Fac. Engrg. Kyoto Univ.* 41 (1979), no. 2, 168-186. (M. M. Konstantinov) **80g:78019** 78A55 (93D05)
- Ohshiro, Masakazu (with Nakamizo, Takayoshi) On zeroing the output of linear stochastic system. (Japanese. English summary) *Systems and Control* 23 (1979), no. 6, 323-329. (Authors' summary) **80c:93149** 93E20
- Ohsumi, K. (with Sadanaga, R.) Basic theorems of vector symmetry in crystallography. *Acta Cryst. Sect. A* 35 (1979), no. 1, 115-122. (H. W. Guggenheimer) **80k:82034** 82A60 (20H15, 51F15)
- Ohya, Haruto (with Ishii, Tadashi) Generalizations of C-embedding and their applications. *Math. Japon.* 23 (1978/79), no. 4, 349-368. (A. W. Hager) **80c:54012** 54C25 (54E18)
- Ohya, Hiroshi GERT analysis of chain sampling inspection plans. *Bull. Univ. Osaka Prefect. Ser. A* 27 (1978), no. 2, 167-174 (1979). (Author's summary) **80f:62091** 62N10
- (with Tsujitani, Masaaki; Kase, Shigeo) A preliminary test of significance for the extreme-value distribution. *Bull. Univ. Osaka Prefect. Ser. A* 27 (1978), no. 2, 187-193 (1979). (Authors' summary) **80m:62033** 62F10 (62N05)
- Ohya, Kichiro On the p-class groups of a Galois number field and its subfields. *J. Math. Soc. Japan* 30 (1978), no. 4, 763-770. (Jacques Martinet) **80c:12016** 12A65 (12A55)
- Ohya, Mitsuo (with Nishimura, Masafumi; Hiromitsu, Seiji) On the stochastic behaviour for a nonstationary system of mixed model type with multi-input and multi-output. (Japanese. English summary) *Systems and Control* 23 (1979), no. 2, 45-53. (Authors' summary) **80c:93137** 93E20
- Ohya, Yuzo Nonlinear accretive mappings in Banach spaces: the solvability and a solution algorithm. *SIAM J. Math. Anal.* 10 (1979), no. 2, 337-353. (John Alan MacBain) **80j:47082** 47H15 (47H06, 65J15, 94C05)
- Ohkake, Koichiro (with Tachikawa, Hiroyuki) Colocalization and localization in abelian categories. *J. Algebra* 56 (1979), no. 1, 1-23. (B. Stenström) **80c:18005** 18E35
- Ohkuni, Kazuhiro (with Toyoda, Toshihisa) Optimal critical values for a preliminary test in pooling means. *Austral. J. Statist.* 21 (1979), no. 2, 157-161. (Chien-Pai Han) **80m:62031** 62F10
- Ohnaka, Makoto Differentiability and boundary limits of Newtonian potentials. *Elliptische Differentialgleichungen (Meeting, Rostock, 1977)*, pp. 199-204. *Wilhelm-Pieck-Universität, Rostock*, 1978. (J. Vesely) **80j:31012** 31B99
- Area formula. *Bull. Inst. Math. Acad. Sinica* 6 (1978), no. 2, part 2, 599-636. (F. J. Almgren, Jr.) **80a:28003** 28A75 (26B15, 49F25)
- Ohnuki, Tatsuo (with Mori, Hajimu; Kuh, Ernest S.; Kashiwara, Toshinobu; Fujiwara, Toshio) One-dimensional logic gate assignment and interval graphs. *IEEE Trans. Circuits and Systems* 26 (1979), no. 9, 675-684. (Authors' summary) **80j:94050** 94C15
- Ohwaki, Hiroshi (with Nogi, Tatsuo) A consolidation problem and its solution. *Mem. Fac. Engrg. Kyoto Univ.* 40 (1978), no. 4, 342-360. (From the summary) **80d:73114** 73Q05 (35Q99, 73B99)
- Ohyanagi, Shigeki (with Higuchi, Teichi; Watanabe, Kimio) On purely elliptic singularities. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 25* (1978), 33-35. (H. B. Laufer) **80c:32017** 32C40 (14B05)
- (with Yoshinaga, Etsuo) A criterion for 2-dimensional normal singularities to be weakly elliptic. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 26* (1979), 5-7. (H. B. Laufer) **80k:32016** 32C40
- Oiglane, H. Representation of a Clifford group on the set of one-dimensional representations of the same group. (Russian) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* 27 (1978), no. 4, 451-452. **80f:20012** 20C99
- Oikarinen, Juhana Second-order definability, game quantifiers and related expressions. *Sci. Fenn. Comment. Phys.-Math.* 48 (1978), no. 1, 39-101. (K. J. Barwise) **80k:03036** 03C80 (03C70, 03C75, 03C95)
- Hierarchies of model-theoretic definability—an approach to second-order logic. *Essays on mathematical and philosophical logic (Proc. Fourth Scandinavian Logic Symp. and First Societ-Finnish Logic Conf., Jyväskylä, 1976)*, pp. 197-225. *Synthese Library*, 122, Reidel, Dordrecht, 1979. (Bernd Dahn) **80k:03048** 03C70 (03C75, 03C85)
- Applications of model theory in mathematics. (Finnish. English summary) *Arkivmedes* 31 (1979), no. 4, 216-226. (Author's summary) **80m:03070** 03C60 (03-01)
- Ohishi, Shin'ichi A method of constructing generalized soliton solutions for certain bilinear soliton equations. *J. Phys. Soc. Japan* 47 (1979), no. 4, 1341-1346. (A. Degasperis) **80m:35069** 35Q20



- Oja, Erkki** S-orthogonal projection operators as asymptotic solutions of a class of matrix differential equations. *SIAM J. Math. Anal.* 9 (1978), no. 5, 848-854. (Mark A. Alzerman) **80d:34015** 34A99 (68D90)
- (with Cooper, Leon N.; Liberman, Fishel) A theory for the acquisition and loss of neuron specificity in visual cortex. *Biol. Cybernet.* 33 (1979), no. 1, 9-28. (Uwe an der Heiden) **80i:92001** 92A05
- On the construction of projectors using products of elementary matrices. *IEEE Trans. Comput.* 28 (1979), no. 1, 65-66. (Michael Bauer) **80b:68106** 68G05
- Oja, Kiri** On cluster sets of harmonic morphisms between harmonic spaces. Dissertation, University of Helsinki, 1979. *Ann. Acad. Sci. Fenn. Ser. A I Math. Dissertationes* No. 24 (1979), i+51 pp. (Teruo Ikegami) **80k:31009** 31D05
- Ojanguren, Manuel** Formes quadratiques sur les algèbres de polynômes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 9, A695-A698. (Author's summary) **80a:15028** 15A63 (13C10, 14F05)
- Oja, S. N.** On a finite integral transform with  $q$ -dimensional Bessel function as kernel. *Indian J. Pure Appl. Math.* 8 (1977), no. 12, 1505-1510. (Author's summary) **80g:44007** 44A20
- Generalized associated Legendre transform. *Bull. Calcutta Math. Soc.* 70 (1978), no. 4, 195-201. (Aruna Srivastava) **80k:44004** 44A15
- Ojika, Takeo** (with Yokoo, Takeo) A numerical method for periodic solutions of the restricted three-body problem. (Japanese summary) Initial value adjusting method with time-scaling and artificial coupling methods. *Mem. Osaka Kyoiku Univ. III Natur. Sci. Appl. Sci.* 27 (1978/79), no. 1, 57-68. (Authors' summary) **80g:70005** 70F07 (65-01)
- (with Kasue, Y.) Initial-value adjusting method for the solution of nonlinear multipoint boundary-value problems. *J. Math. Anal. Appl.* 69 (1979), no. 2, 359-371. (Krishna M. Das) **80k:65069** 65L10 (34B10)
- (with Nishikawa, Yoshikazu; Okudaira, Masashi) A time-decomposition algorithm for a stiff linear two-point boundary-value problem and its application to a nonlinear optimal control problem. *J. Optim. Theory Appl.* 27 (1979), no. 2, 231-248. (Gerard G. L. Meyer) **80c:93040** 93B40
- Ojima, Izumi** (with Kugo, Taichiro) Manifestly covariant canonical formulation of the Yang-Mills field theories. I. General formalism. *Progr. Theoret. Phys.* 60 (1978), no. 6, 1869-1889. (Gheorghe Nenciu) **80f:81067** 81E10
- (with Nakanishi, Noboru) Proof of the exact masslessness of gravitons. *Phys. Rev. Lett.* 43 (1979), no. 2, 91-92. (Authors' summary) **80c:83026** 83C45 (49H05)
- (with Kugo, Taichiro) Manifestly covariant canonical formulation of Yang-Mills field theories. II. SU(2) Higgs-Kibble model with spontaneous symmetry breaking. *Progr. Theoret. Phys.* 61 (1979), no. 1, 294-314. (Kensuke Yoshida) **80k:81102** 81E10 (53C80)
- Oka, Kiyosi** See NISHINO, T., **80c:01034**
- Oka, Masatoshi** On stabilities of expanding endomorphisms of compact manifolds. *TRU Math.* 14 (1978), no. 1, 29-38. (Leo Jonker) **80c:58020** 58F15
- Oka, Mutsuo** On the fundamental group of the complement of certain plane curves. *J. Math. Soc. Japan* 30 (1978), no. 4, 579-597. (Richard Randell) **80d:14017** 14H20 (57M05, 57M30)
- On the bifurcation of the multiplicity and topology of the Newton boundary. *J. Math. Soc. Japan* 31 (1979), no. 3, 435-450. (I. Dolgachev) **80k:32018** 32B30 (14B05, 57R45, 58C27)
- Okabayashi, Takao** Quanta of nonabelian gauge field can be transversal? *Progr. Theoret. Phys.* 61 (1979), no. 5, 1499-1514. (John J. Sullivan) **80c:81080** 81E15
- Okabe, Katsuyuki** On some open problems in the theory of quasiconformal mappings. I. The  $L^p$ -integrability of the partial derivatives of a quasiconformal mapping. *J. Hokkaido Univ. Ed. Sect. II A* 28 (1977/78), no. 2, 65-69. (F. W. Gehring) **80c:30022** 30C60
- Okada, Masami** Intégrales de Lusin-Calderón pour les fonctions "multiharmoniques" définies sur les "multiboules". (English summary) *Bull. Sci. Math. (2)* 103 (1979), no. 3, 273-296. (Manfred Stoll) **80k:31006** 31B30 (32F05)
- Okada, Susumu** Supports of Borel measures. *J. Austral. Math. Soc. Ser. A* 27 (1979), no. 2, 221-231. (R. B. Kirk) **80f:28018** 28C15
- Okamoto, Hisao** (with Karasudani, Takashi; Nagano, Katsuhiko; Mori, Hazime) A new continued-fraction representation of the time-correlation functions of transport fluxes. *Progr. Theoret. Phys.* 61 (1979), no. 3, 850-863. (Authors' summary) **80c:82048** 82A70
- Okamoto, Kazuo** Sur la convergence de solutions formelles d'équations différentielles avec singularités de première classe. *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* 26 (1979), no. 1, 183-198. (R. Gérard) **80k:58009** 58A15 (34A25, 35C10, 58A17)
- Okamoto, Kiyosato** (with Matsushima, Hiroshi) Nonexistence of torsion free flat connections on a real semisimple Lie group. *Hiroshima Math. J.* 9 (1979), no. 1, 59-60. (Y. Matsushima) **80f:53026** 53C05 (22E60)
- Okamoto, Masahiro** (with Katsurayama, Atsuko; Tsukiji, Michiko; Ao, Yoichi; Hayashi, Katsuya) Dynamic behavior of enzymatic system realizing two-factor model. *J. Theoret. Biol.* 83 (1980), no. 1, 1-16. (Authors' summary) **80a:92004** 92A09
- Okamoto, Shichi** A difference approach to Mikusiński's operational calculus. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 10, 303-308. (L. Berg) **80c:44005** 44A55
- A simplified derivation of Mikusiński's operational calculus. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 1, 1-5. (Editors) **80b:44004** 44A40
- Okamoto, Tatsuo** (with Kymn, Kern O.; Norsworthy, J. R.) Alternative computing formulas for the generalized inverse and the evaluation of their performances. *Econom. Lett.* 2 (1979), no. 1, 37-43. (Authors' summary) **80c:65049** 65F20 (65-04)
- O'Keefe, J. P. J.** An estuarine water-quality model in an oscillating constant-volume reference frame. *Proc. Roy. Irish Acad. Sect. A* 78 (1978), no. 12, 99-118. (Author's summary) **80b:76041** 76T05 (86A05)
- Okawa, Masanori** (with Nishijima, Kazuhiko) The Becchi-Rouet-Stora transformation for the gravitational field. *Progr. Theoret. Phys.* 60 (1978), no. 1, 272-283. (Shin-ichi Kitamura) **80a:83027** 83C35 (35A30)
- (with Seo, Koichi; Sugamoto, Akio) Dual transformation in non-Abelian gauge theories. *Phys. Rev. D* (3) 19 (1979), no. 12, 3744-3753. (T. F. Morris) **80g:81048** 81E10 (53C80)
- (with Nishijima, Kazuhiko) Renormalization in a symmetry-broken theory. *Progr. Theoret. Phys.* 61 (1979), no. 6, 1822-1836. (R. Delbourgo) **80c:81079** 81E15
- Okazaki, Katsutoshi** (with Nagaya, Kosuke; Hirano, Yoshitaro) Transverse vibration of a circular plate on an eccentric annular elastic support. *Bull. JSME* 22 (1979), no. 167, 642-647. (From the summary) **80c:73050** 73K10
- Okazaki, Yoshiaki**  $L^p$ -embedding of a linear metric space. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 33 (1979), no. 2, 391-398. (M. M. Rao) **80k:46003** 46A05 (46E30)
- Oke, K. H.** (with Fyfe, D. J.) Use of residuals in Forsythe's method for polynomial curve fitting. *J. Inst. Math. Appl.* 24 (1979), no. 1, 99-108. (Authors' summary) **80c:65025** 65D10
- O'Keefe, M.** (with Wong, Pak Ken) A smallest graph of girth 5 and valency 6. *J. Combin. Theory Ser. B* 26 (1979), no. 2, 145-149. (Geoffrey Exoo) **80i:05056** 05C35
- O'Keefe, M.** A proposed rigorous definition of coordination number. *Acta Cryst. Sect. A* 35 (1979), no. 5, 772-775. (Author's summary) **80f:82045** 82A60 (52A25)
- Okoh, Frank** A splitting criterion for pairs of linear transformations. *Illinois J. Math.* 22 (1978), no. 3, 379-388. (Chih-Han Sah) **80f:16030** 16A56 (16A63)
- Direct sums and direct products of canonical pencils of matrices. *Linear Algebra Appl.* 25 (1979), 1-26. (Enzo R. Gentile) **80h:15004** 15A21 (13E15)
- Okolie, S. O.** (with Evans, David J.) A generalised sparse factorisation method for the solution of periodic tridiagonal systems. *Comput. Math. Appl.* 5 (1979), no. 3, 211-216. (Pi. Kannappan) **80g:15011** 15A23 (15A24)
- Okonek, Christian** Das  $K(\pi, 1)$ -Problem für die affinen Wurzelsysteme vom Typ  $A_n, C_n$ . *Math. Z.* 168 (1979), no. 2, 143-148. (P. Orik) **80k:32039** 32C42
- Okrasinski, W.** (with Gonczewicz, J.; Marcinkowska, H.; Tabisz, K.) On the percolation of water from a cylindrical reservoir into the surrounding soil. (Polish summary) *Zastos. Mat.* 16 (1978/79), no. 2, 249-261. (E. Ungureanu-David) **80c:76053** 76S05
- On the existence and uniqueness of nonnegative solutions of a certain nonlinear convolution equation. *Ann. Polon. Math.* 36 (1979), no. 1, 61-72. (N. K. Karapetjan) **80f:45010** 45E10
- Okseid, Bernt** The solution of a minimax problem connected to the irreducibility of polynomials. *Math. Scand.* 42 (1978), no. 2, 169-179. (Jacques Dubois) **80c:52012** 52A40 (49B40)
- Oka, Kentaro** (with Tsuchida, Yasuhiko) Back-reaction in the moving mirror effects. *Progr. Theoret. Phys.* 62 (1979), no. 6, 1756-1767. (Authors' summary) **80k:81229** 81M05
- Okubo, Susumu** Structure of semi-simple gauge groups for unified weak and electromagnetic interactions. *Hadronic J.* 1 (1978), no. 1, 77-100. (A. O. Barut) **80a:81102** 81G15 (22E70)
- Pseudo-quaternion and pseudo-octonion algebras. *Hadronic J.* 1 (1978), no. 4, 1250-1278. (M. L. Tomber) **80a:17004** 17A30 (17A20)
- Deformation of the Lie-admissible pseudo-octonion algebra into the octonion algebra. *Hadronic J.* 1 (1978), no. 5, 1383-1431. (D. Rodabaugh) **80j:17001a** 17A30
- Octonion as traceless  $3 \times 3$  matrices via a flexible Lie-admissible algebra. *Hadronic J.* 1 (1978), no. 5, 1432-1465. (D. Rodabaugh) **80j:17001b** 17A30
- Representations and classifications of compact gauge groups for unified weak and electromagnetic interactions. *Phys. Rev. D* (3) 18 (1978), no. 10, 3792-3808. (Mineo Ikeda) **80c:81119** 81G10 (22E70, 81G15)
- (with Myung, Hyo Chul) On the classification of simple flexible Lie-admissible algebras. *Hadronic J.* 2 (1979), no. 3, 504-567. (M. L. Tomber) **80i:17002** 17A30 (17A20, 17B60, 81C40)
- Quartic trace identity for exceptional Lie algebras. *J. Math. Phys.* 20 (1979), no. 4, 586-593. (C. J. Henrich) **80h:17006** 17B15 (17B20, 81G20)
- (with Tosa, Yasunari) Duffin-Kemmer formulation of gauge theories. *Phys. Rev. D* (3) 20 (1979), no. 2, 462-473. (M. Carmeli) **80f:81083** 81E15 (53C05)
- Okudaira, Masashi** (with Nishikawa, Yoshikazu) A time-decomposition algorithm for the solution of multiple-target problems. *Mem. Fac. Engrg. Kyoto Univ.* 40 (1978), no. 2, 62-77. (From the summary) **80a:93085** 93C15
- (with Ojika, Takeo; Nishikawa, Yoshikazu) A time-decomposition algorithm for a stiff linear two-point boundary-value problem and its application to a nonlinear optimal control problem. *J. Optim. Theory Appl.* 27 (1979), no. 2, 231-248. (Gerard G. L. Meyer) **80c:93040** 93B40
- Okuguchi, Koji** Technical progress, population growth and intergenerational equity in a model with many exhaustible and renewable resources. *Econom. Lett.* 3 (1979), no. 1, 57-60. (Author's summary) **80h:90044** 90A16
- Monopoly, intermediate goods and the pure theory of international trade. *Z. Nationalökonom.* 39 (1979), no. 1-2, 119-130. (From the introduction) **80m:90031** 90A15
- Okulov, N. A.** Optimal characteristic of the work of a conduction-type channel. *Magnit. Gidrodinamika* No. 1 (1978), 125-131. (Russian); translated as *Magnetohydrodynamics* 14 (1978), no. 1, 109-115. (Giulio Mattei) **80c:76062** 76W05
- Okuma, Akimichi** Some invariant statistical decision problems with squared error loss. *Bull. Kyushu Inst. Tech. Math. Natur. Sci.* No. 26 (1979), 19-24. (A. L. Rukhin) **80k:62005** 62A05 (62C05)
- Okumura, Masafumi** Compact real hypersurfaces of a complex projective space. *J. Differential Geom.* 12 (1977), no. 4, 595-598 (1978). (Lieven Vanhecke) **80h:53065** 53C40
- Normal curvature and real submanifold of the complex projective space. *Geom. Dedicata* 7 (1978), no. 4, 509-517. (J. Vanzura) **80j:53030** 53B35 (53B25)
- Compact real hypersurfaces with constant mean curvature as a complex projective space. *J. Differential Geom.* 13 (1978), no. 1, 43-50. (John Douglas Moore) **80m:53044** 53C40
- Submanifolds with  $L$ -flat normal connection of the complex projective space. *Pacific J. Math.* 78 (1978), no. 2, 447-454. (Koichi Ogue) **80a:53066** 53C40
- Okunov, V. V.** (with Janenko, N. N.; Zaharov, Ju. N.; Sokin, Ju. I.; Panickin, A. V.) Two iteration schemes for the solution of a stationary system of Navier-Stokes equations. (Russian) *Complex analysis and its applications* (Russian), pp. 638-652, 672, "Nauka", Moscow, 1978. (Muri M. Gupta) **80j:65038** 65P05 (76D05)
- Okuno, Masahiro** (with Cass, David; Zilcha, Itzhak) The role of money in supporting the Pareto optimality of competitive equilibrium in consumption-loan type models. *J. Econom. Theory* 20 (1979), no. 1, 41-80. (Hans Keiding) **80f:90026** 90A14 (90A16)
- Okuno, Yoichi** (with Yasuura, Kamenosuke) Algorithm for mode matching method

- considering edge condition. *Electron. Comm. Japan* 60 (1977), no. 11, 53–61. (Authors' summary) 80a:78024 78A45 (65R10)
- Okuyama, Akihito Note on hyperspaces consisting of compact sets. *Math. Japon.* 24 (1979/80), no. 3, 301–305. (Worthen Hunaker) 80a:54012 54B20 (54D18, 54D20)
- Okuyama, Yukihiko (with Hasegawa, Izumi) On  $H$ -projective transformations of  $H$ -projective-recurrent Kählerian manifolds. *J. Hokkaido Univ. Ed. Sect. II A* 29 (1978/79), no. 1, 5–9. (N. Prakash) 80b:33016 53B35
- Olabi, D. See Numerical analysis, 80b:65007
- Olabi, Rudolf Note on the oscillatory behavior of bounded solutions of higher order differential equation with retarded argument. *Arch. Math. (Brno)* 14 (1978), no. 3, 171–174. (A. Halanay) 80a:34076 34K15
- Olas, Andrzej The dependence of eigenvalues and eigenvectors on the parameters. (Polish) *Stability and sensitivity in mechanical systems (Lectures Qualitative Investigations in Nonlinear Discrete Systems, Jablonna, 1978)* (Polish), pp. 172–182, Ossolineum, Wrocław, 1978. (O. Pokorný) 80a:15010 15A18
- Oltros, Andrzej W. On quasiequilibrium states and range degeneracy for linear semigroup systems. *Control of distributed parameter systems (Proc. Second IFAC Symp., Coventry, 1977)*, pp. 75–84, IFAC, Düsseldorf, 1978. (Authors' summary) 80f:93068 93D99 (with Barszcz, Marek) Stability criterion for a linear differential-difference system. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 368–369. (R. K. Rathy) 80a:34053 34K20 (93D05) (with Manitius, Andrzej Z.) Finite spectrum assignment problem for systems with delays. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 541–553. (Edward W. Kamen) 80f:93038 93C05
- Olano Olcina, José Luis See Blanco Olcina, José Luis
- Oldham, Edward U. See Akcasov, E. P., 80b:70008
- Oldham, K. B. (with Spanier, J.) Fractional calculus and its applications. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 24(28) (1978), no. 3–4, 29–34. (Bertram Ross) 80a:26007 26A33
- O'Leary, Dianne P. (with Widlund, Olof) Capacitance matrix methods for the Helmholtz equation on general three-dimensional regions. *Math. Comp.* 33 (1979), no. 147, 849–879. (Steven M. Serbin) 80f:65125 65N99 (65F10) (with Stewart, G. W.; Vandergraft, James S.) Estimating the largest eigenvalue of a positive definite matrix. *Math. Comp.* 33 (1979), no. 148, 1289–1292. (Authors' summary) 80d:65048 65F15
- Olędzki, Jolanta On a generalization of the Borsuk-Ulam theorem on antipodes. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 2, 157–162. (S. Y. Hussein) 80a:55007 55M20
- Oleńska, S. N. On the properties of the solutions of certain systems of differential equations. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 2(206), 209–210. (M. K. Grammatikopoulos) 80a:34049 34C11
- Oleńska, L. N. (with Łożkin, V. M.) Elastic equilibrium of a piezoelectric cylindrical body with arbitrary anisotropy. (Russian) *Mat. Fiz. No. 24* (1978), 98–104, 123. (Authors' summary) 80d:73116 73R05
- Oleńnik, M. V. See Oleńnik, M. V.
- Oleńnik, O. A. (with Iosif'jan, G. A.) A mixed problem for a system of equations of elasticity theory and Saint-Venant's principle. (Russian) *Complex analysis and its applications (Russian)*, pp. 459–472, 670, "Nauka", Moscow, 1978. (Cornelius O. Horgan) 80g:73013a 73C10 (31A30, 35B45) On the Navier-Stokes equations in a domain with the moving boundary. *Journées d'Analyse Non Linéaire (Proc. Conf., Besançon, 1977)*, pp. 160–169, Lecture Notes in Math., 665, Springer, Berlin, 1978. (Alberto Valli) 80a:35120 35Q10 (with Kametaka, I.) Asymptotic properties and necessary conditions for the existence of solutions of second-order nonlinear elliptic equations. (Russian) *Mat. Sb. (N.S.)* 107(149) (1978), no. 4, 572–600, 639. (K. Seitz) 80g:35044 35J15 (with Iosif'jan, G. A.) Saint-Venant's principle in the plane theory of elasticity, and boundary value problems for a biharmonic equation in unbounded domains. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 5, 1154–1165, 1215. (Cornelius O. Horgan) 80g:73013a 73C10 (31A30, 35B45) (with Maksimova, N. O.) The behavior of the solutions of inhomogeneous elliptic systems in unbounded domains. (Russian) *Trudy Sem. Petrovsk. No. 3* (1978), 117–137. (Ju. V. Kostarčuk) 80a:35044 35J55 (with Kantorovič, L. V.; Kolelev, A. I.; Sobolev, S. L.) Solomon Grigor'evič Mihlin (on the occasion of his seventieth birthday). (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 2(200), 213–216. (Editors) 80a:01033 01A70 (with Iosif'jan, G. A.; Tahvelidze, I. N.) Estimates of the solutions of a biharmonic equation in the neighborhood of irregular points on the boundary or at infinity. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 3(201), 181–182. (Cornelius O. Horgan) 80b:35057 35J40 (35B45) (with Radkevič, E. V.) The method of introducing a parameter for the investigation of evolution equations. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 5(203), 7–76, 237. (L. Cattabriga) 80d:35074 35K22 (35–02) Energetic estimates analogous to the Saint-Venant principle and their applications. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977)*, pp. 328–339, Lecture Notes in Math., 703, Springer, Berlin, 1979. (Michel Cotsaftis) 80a:35007 35B45 See also All-Union Conference: Partial Differential Equations, 80f:35002
- Oleńnik, B. I. (with Medvedev, V. A.; Stepanov, B. M.; Filinov, V. N.) On the optimal discrete representation of nonstationary random processes. (Russian) *Problemy Peredači Informacii* 14 (1978), no. 2, 99–104. (Z. A. Piranavič) 80d:60057 60G35 (94A05)
- Oleńnik, V. A. (with Seisov, Ju. B.; Handovietov, M.) Sufficient second order conditions for optimality. (Russian. English summary) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* 1978, no. 5, 8–11. (M. Junusov) 80a:49020 49B05 (with Sidorov, A. S.) Observability of a class of nonlinear dynamic plants. (Russian) *Voprosy Teor. Sistem Avtomat. Upravlenija* 1978, no. 4, 3–7, 131. (Authors' summary) 80b:93035 93B07
- Oleksandriv, I. M. Some properties of the integral representation of the solutions of the Helmholtz equation. (Ukrainian. English and Russian summaries) *Visnik Kij. Univ. Ser. Mat. Meh. No. 19* (1977), 52–56, 150. (Authors' summary) 80a:35017 35C15 Solution of a boundary value problem of  $e^{\alpha y}$ -analytic functions for a half-plane with cuts. (Russian) *Mat. Fiz. No. 23* (1978), 40–43, 113. (Wolfgang Tutschke) 80a:38044 38G20 Integral representation of the solutions of the Euler-Poisson-Darboux equation. (Russian. English summary) *Vysisl. Prikl. Mat. (Kiev) No. 35* (1978), 3–7, 162. (Editors) 80b:35030 35C15 (35Q05) (with Kapl'vil, O. O.; Pahar'eva, N. O.) Integral representations of  $p$ -analytic functions and the solution of mixed problems. (Russian. English summary) *Vysisl. Prikl. Mat. (Kiev) No. 36* (1978), 3–21, 164. (C. R. Deeter) 80a:30055 30G20
- Olesen, Dorie On the Connes spectrum of simple  $C^*$ -dynamical systems. *Mathematical problems in theoretical physics (Proc. Internat. Conf., Univ. Rome, Rome, 1977)*, pp. 161–170, Lecture Notes in Phys., 80, Springer, Berlin, 1978. (Ola Bratteli) 80a:46006 46L55 (with Pedersen, Gert Kjaergård) Some  $C^*$ -dynamical systems with a single KMS state. *Math. Scand.* 42 (1978), no. 1, 111–118. (J. W. Bunce) 80a:46041 46L55
- Olesen, P. (with Nielsen, N. K.) An unstable Yang-Mills field mode. *Nuclear Phys. B* 144 (1978), no. 2–3, 376–396. (Authors' summary) 80b:81077 81E10 (22E70) (with Ambjørn, J.; Nielsen, N. K.) A hidden Higgs Lagrangian in QCD. *Nuclear Phys. B* 152 (1979), no. 1, 75–96. (P. K. Smrz) 80f:81076 81E15 (81G05)
- Olesiak, Zbigniew (with Matysiak, Stanisław) Axially symmetric problems of Boussinesq type for a heated stamp on a micropolar half-space. (Polish. Russian and English summaries) *Rozprawy Inż.* 27 (1979), no. 1, 181–190. (Authors' summary) 80b:73007 73B25
- Offe, D. B. (with Rottman, James W.) Numerical calculations of steady gravity-capillary waves using an integro-differential formulation. *J. Fluid Mech.* 94 (1979), no. 4, 777–793. (From the summary) 80f:76008 76B15
- Offhof, N. (with Taylor, J. E.) On optimal structural remodeling. *J. Optim. Theory Appl.* 27 (1979), no. 4, 571–582. (Edward J. Haug, Jr.) 80a:73048 73K99 (49B34) (with Niordson, Frithiof I.) Some problems concerning singularities of optimal beams and columns. *Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978)*, *Z. Angew. Math. Mech.* 59 (1979), no. 3, T16–T26. (Vadim Komkov) 80a:73054 73K99 (49H05)
- O'Horvák, I. L. (with Ependiev, M. B.) A kinetic equation for high-energy small-mass particles interacting with a crystal. (Russian) *Izv. Vysl. Uchebn. Zaved. Fizika* 1978, no. 10, 7–12. (V. P. Kalashnikov) 80a:82036 82A60 (45K05)
- O'Horvák, V. S. (with Nikolaev, M. V.) Analytical structure of the  $S$ -matrix for some classes of potentials. (Russian. English summary) *Teoret. Mat. Fiz.* 31 (1977), no. 2, 214–219. (Authors' summary) 80f:81097 81F15
- Olé, François (with Letac, Gérard) Les fonctions intérieures de  $\mathbb{R}_+^2 \rightarrow \mathbb{R}_+^2$ , et la préservation des lois de Cauchy. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 280 (1979), no. 3, A215–A218. (Authors' summary) 80a:60022 60E05
- Oliger, Joseph Methods for time dependent partial differential equations. *Numerical analysis (Proc. Sympos. Appl. Math., Atlanta, Ga., 1978)*, pp. 87–108, Proc. Sympos. Appl. Math., XXII, Amer. Math. Soc., Providence, R.I., 1978. (Author's introduction) 80d:65136 65P05 (65–02) Approximate methods for atmospheric and oceanographic circulation problems. *Computing methods in applied sciences and engineering (Proc. Third Internat. Symp., Versailles, 1977)*, II, pp. 171–184, Lecture Notes in Phys., 91, Springer, Berlin, 1979. (Alvin Bayliss) 80a:26003 86A10 (with Kreiss, Heinz-Otto) Stability of the Fourier method. *SIAM J. Numer. Anal.* 16 (1979), no. 3, 421–433. (Richard E. Ewing) 80a:65130 65N35 (65T05) See also Numerical analysis, 80b:65007
- Oleńnik, M. V. (with Daniljuk, I. I.) Theorem on the uniqueness of a certain nonlinear problem with free boundary. (Russian) *Boundary value problems for partial differential equations (Russian)*, pp. 21–33, 163, "Naukova Dumka", Kiev, 1978. (L. I. Rubinstein) 80f:35067 35Q99 (35R35)
- Olinyk, I. D. The queueing system  $M_1/M_1/1$  and a generalization of it. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 13 O Nekotorykh Funktsional'nykh Shtetakh. Process.* (1978), 29–35. (Dietrich Stoyan) 80a:60112 60K25
- Olinyk, N. P. (with Nagnibida, N. I.) Equivalence of some second-order differential operators in a space of entire functions. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 11, 1990–1996, 2107. (Johannes Eisechner) 80a:47039 47E05 (34A20)
- Oliver, V. I. On the relationship between the sample size and the number of variables in a linear regression model. *Comm. Statist. A—Theory Methods* 7 (1978), no. 6, 509–516. (Burt S. Holland) 80b:62079 62J05 On certain elliptic differential equations on a hypersphere and their geometric applications. *Indiana Univ. Math. J.* 28 (1979), no. 1, 35–51. (R. Osserman) 80i:53031 53C45 (53A05, 58G99)
- Oliver, Yelena See Mirkin, B. G., 80f:90004
- Olmos, A. (with Hodžev, L. Š.) Massive superpropagators in quantum localizable field theory. (Russian. Uzbek summary) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1978, no. 4, 65–72, 96. (Authors' summary) 80d:81099 81E99 (with Hodžev, L. Š.) The two-point Wightman function for exponential Lagrangians with massive scalar fields. (Russian. Uzbek summary) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1978, no. 5, 66–70. (From the text) 80a:81048 81E05 (with Hodžev, L. Š.) The structure of exponential Lagrangians in localizable quantum field theory. (Russian) *Dokl. Akad. Nauk UzSSR No. 3* (1979), 3–4. (From the text) 80a:81075 81E05 (with Hodžev, L. Š.) Retarded and advanced massive superpropagators for exponential interactions. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 2, 86–90, 102. (Authors' summary) 80a:81046 81D99
- Olimpo, G. (with Di Manzo, M.; Frisiani, A. L.) Deadlock avoidance in graph-structured task systems. *Information systems methodology (Proc. Second Conf. European Cooperation Inform., Venice, 1978)*, pp. 548–559, Lecture Notes in Comput. Sci., 65, Springer, Berlin, 1978. (Authors' summary) 80g:68006 68A05 (68E10)
- Olin, Philip Aleph-zero categorical Stone algebras. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 3, 337–347. (Stephen L. Bloom) 80a:03043 03C60 (03C35, 06D99)
- Olin, Robert F. (with Thomson, James E.) Lifting the commutant of a subnormal operator. *Canad. J. Math.* 31 (1979), no. 1, 148–156. (R. G. Douglas) 80a:47034 47B20
- Oliva, Pietro (with Caligaris, Ottavio) On the characterization of problems of the calculus of variations for functions of bounded variation. (Italian. English summary) *Boll. Un.*



- Mat. Ital. B (5) 15 (1978), no. 1, 253-271. (Ettore Santi) 80a:49073 49F99**  
(with Caligaris, Ottavio) Some remarks about Bolza and Lagrange problems in Hilbert spaces. (Italian summary) *Boll. Un. Mat. Ital. B (5) 15 (1978), no. 3, 956-967. (C. P. Ortlieb) 80a:49007 49A27*  
(with Caligaris, Ottavio) An existence theorem for Lagrange problems in Banach spaces. *J. Optim. Theory Appl.* 25 (1978), no. 1, 83-91. (Wai Leung Chan) **80a:49006 49A27**  
(with Caligaris, Ottavio) A variational approach to existence theorems for time dependent multivalued differential equations. *Boll. Un. Mat. Ital. B (5) 16 (1979), no. 2, 612-628. (J. Warga) 80j:49009 49A27*
- Ola, W. M.** Restricted three-body problem: a theorem of Poincaré-Birkhoff on the existence of periodic orbits. (Portuguese) *Proceedings of the Ninth Brazilian Mathematical Colloquium (Poços de Caldas, 1973), Vol. II (Portuguese), pp. 425-437, Inst. Mat. Pura Apl., São Paulo, 1977. (From the introduction) 80e:70010 70F07 (34C25, 58F05)*  
Examples of models in ordinary differential equations. (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977), Vol. I (Portuguese), pp. 53-66, Inst. Mat. Pura Apl., Rio de Janeiro, 1978. (J. S. Joel) 80d:34055 34C35 (58F10, 92A15)*  
Some open questions in the geometric theory of retarded functional differential equations. *Proceedings of the Tenth Brazilian Colloquium (Poços de Caldas, 1975), Vol. II (Portuguese), pp. 615-625, Cons. Nac. Desenvolvimento Ci. Tec., Inst. Mat. Pura Apl., Rio de Janeiro, 1978. (J. S. Joel) 80i:58040 58F30 (34K05)*
- Oliver, David** Supersymmetric solitons. Symposium on Mathematical Methods in the Theory of Elementary Particles (Liblice, 1978). *Czechoslovak J. Phys. B 29 (1979), no. 1, 73-80. (Marcos D. Maia) 80k:81171 81G20*  
The electric and magnetic charges as extra components of four-momentum. *Nuclear Phys. B 153 (1979), no. 1-2, 1-12. (Author's summary) 80b:81124 81M05*  
(with Sciuto, S.; Crewther, R. J.) Instantons in field theory. *Riv. Nuovo Cimento (3) 2 (1979), no. 8, 1-117. (James D. Fabrey) 80a:81105 81E10*
- de Oliveira, Antonio Marmo** (with Altman, Wolf) Coordinate transformations of physical components of tensors. *Tensor (N.S.) 32 (1978), no. 3, 332-334. (R. H. Bowman) 80a:53009 53A45 (15A72)*
- de Oliveira, G. N.** (with Dias da Silva, J. A.) Conditions for equality of decomposable symmetric tensors. II. *Linear Algebra Appl.* 28 (1979), 161-176. (R. Merris) **80a:15019 15A69 (20G20)**
- tiago de Oliveira, J.** See **Tiago de Oliveira, J.**
- de Oliveira, Jose C. F.** See **De Oliveira, Jose C. F.**
- Oliver, J.** Rounding error propagation in polynomial evaluation schemes. *J. Comput. Appl. Math.* 5 (1979), no. 2, 85-97. (Author's summary) **80c:65102 65G05**
- Oliver, Robert** Group actions on disks, integral permutation representations, and the Burnside ring. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 1, pp. 339-346, Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I., 1978. (Czes Kosniowski) 80j:57040 57S25 (20C10)*  
Subgroups generating  $D(ZG)$ . *J. Algebra* 55 (1978), no. 1, 43-57. (V. P. Snaith) **80d:18011 18F25**  
Weight systems for  $SO(3)$ -actions. *Ann. of Math. (2)* 110 (1979), no. 2, 227-241. (Czes Kosniowski) **80m:57036 57S15 (57S25)**
- Oliver Pellicer, Joaquín** Conservation of material mass in the process of the expansion of the universe. (Spanish) *Collect. Math.* 29 (1978), no. 1, 7-10. (Marcos D. Maia) **80g:83042 83F05**
- Oliveri, Enzo** (with Brimont, Jean; Lebowitz, Joel L.; Pfister, Charles E.) Nontranslation-invariant Gibbs states with coexisting phases. I. Existence of sharp interface for Widom-Rowlinson type lattice models in three dimensions. *Comm. Math. Phys.* 66 (1979), no. 1, 1-20. (K. S. Viswanathan) **80g:82023a 82A25**
- Olkin, Ingram** (with Anderson, T. W.) An extremal problem for positive definite matrices. *Linear and Multilinear Algebra* 6 (1978/79), no. 4, 257-262. (Thomas L. Markham) **80a:15007 15A15**  
(with Sobel, Milton) Admissible and minimax estimation for the multinomial distribution and for  $k$  independent binomial distributions. *Ann. Statist.* 7 (1979), no. 2, 284-290. (Arthur Cohen) **80d:62010 62C15 (62H12)**  
Matrix extensions of Liouville-Dirichlet-type integrals. *Linear Algebra Appl.* 28 (1979), 155-160. (L. Mirsky) **80i:26015 26B20 (15A15, 15A48)**
- oulou-Ollagnier, Jean** See **Moulou-Ollagnier, Jean**
- Ollerenshaw, Kathleen** Presidential address: the magic of mathematics. *Bull. Inst. Math. Appl.* 15 (1979), no. 1, 1-12. (H. S. M. Coxeter) **80j:53014 53A10 (00A05)**
- Ollin, Harold Z.** Best uniform polynomial approximation to certain rational functions. *J. Approx. Theory* 26 (1979), no. 4, 382-392. (Myron S. Henry) **80m:41005 41A10 (41A50)**
- Olofsson, A.** (with Oemarasingh, H.) On the proof of a theorem by Chomsky-Hopcroft-Ullman. *Internat. J. Comput. Math.* 7 (1979), no. 1, 37-41. (Authors' summary) **80b:68101 68F10**
- Olmos, M. I.** See **García Olmos, M. I.**
- Oltendahl, W. E.** (with Horgan, C. O.) Exponential decay estimates for a class of nonlinear Dirichlet problems. *Arch. Rational Mech. Anal.* 71 (1979), no. 3, 221-235. (J. L. Kazdan) **80i:35078 35J60 (35B40, 73C99)**
- Oluf, R.** Entropieigenschaften von Diagonalooperatoren. *Math. Nachr.* 86 (1978), 157-165. (G. M. Ustinov) **80i:47035 47B10 (47D30)**
- Ofianekil, M. A.** (with Rogov, V. B. K.) Bound states in completely integrable systems with two types of particles. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 29 (1978), no. 2, 169-177. (Mark Adler) **80e:58029 58F07 (34C05, 58F05, 81C05)**  
(with Perelomov, A. M.) Explicit solutions of classical generalized Toda models. *Invent. Math.* 54 (1979), no. 3, 261-269. (A. Morimoto) **80m:58018 58F05 (58F07)**  
(with Calogero, F.; Perelomov, A. M.) Rational solutions of the KdV equation with damping. *Let. Nuovo Cimento (2)* 24 (1979), no. 4, 97-100. (T. Kahan) **80k:35112 35Q20 (58F07)**  
(with Ahmed, Shafique; Bruschi, M.; Calogero, F.; Perelomov, A. M.) Properties of the zeros of the classical polynomials and of the Bessel functions. (Italian and Russian summaries) *Nuovo Cimento B (11) 49 (1979), no. 2, 173-199. (R. A. Askey) 80g:33018 33A65 (33A40, 70F10)*
- Ofianekil, A. Ju.** Infinite groups with cyclic subgroups. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 4, 785-787. (Richard E. Phillips) **80a:20013 20E32 (20F50)**
- Ofianekil, G. I.** Unitary representations of the infinite-dimensional classical groups  $U(p, \infty)$ ,  $SO_0(p, \infty)$ ,  $Sp(p, \infty)$ , and of the corresponding motion groups. (Russian) *Funktsional. Anal. i Prilozhen.* 12 (1978), no. 3, 32-44, 96. (J. Szmidt) **80g:22020 22E65 (22E45)**
- Olander, Geert Jan** (with Bagchi, Arunabha) A stochastic differential game as control problem with infinite-dimensional state space. *Control of distributed parameter systems (Proc. Second IFAC Sympos., Coventry, 1977), pp. 337-346, IFAC, Düsseldorf, 1978. (Authors' summary) 80e:93108 93E05 (90D05)*  
(with Lewin, J.) Conic surveillance evasion. *J. Optim. Theory Appl.* 27 (1979), no. 1, 107-125. (D. J. Wilson) **80c:90179 90D26**
- Olsen, G.** (with Lindenstrauss, J.; Sternfeld, Y.) The Poulsen simplex. (French summary) *Ann. Inst. Fourier (Grenoble)* 28 (1978), no. 1, vi, 91-114. (H. E. Lacey) **80b:46019a 46A55**  
See also **Lusky, Wolfgang, 80b:46019b**
- hanche-Olsen, Harald** See **Hanche-Olsen, Harald**
- Olsen, O. H.** (with Christiansen, P. L.) Ring-shaped quasisoliton solutions to the two- and three-dimensional sine-Gordon equation. Special issue on solitons in physics. *Phys. Scripta* 20 (1979), no. 3-4, 531-538. (Brian DeFazio) **80j:81012 81C05 (35Q20, 65P05)**  
(with Christiansen, P. L.) On dynamical two-dimensional solutions to the sine-Gordon equation. *Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978), Z. Angew. Math. Mech.* 59 (1979), no. 3, T30-T31. (From the text) **80j:81013 81C05 (35Q20)**
- Olsen, Randall J.** Note on the uniqueness of the maximum likelihood estimator for the Tobit model. *Econometrica* 46 (1978), no. 5, 1211-1215. (Jerry A. Hausman) **80c:62081 62J05 (62F10, 62P20)**
- Olshansky, M. A.** See **Ofianekil, M. A.**
- Olsen, D. M.** A note on the homomorphism theorem for hemirings. *Internat. J. Math. Math. Sci.* 1 (1978), no. 4, 439-445. (C. J. Maxson) **80a:16053 16A78**
- Olson, Loren D.** See **Algebraic geometry, 80c:14002**
- Olson, Merry D.** (with Tuann, Shih Yu) Review of computing methods for recirculating flows. *J. Comput. Phys.* 29 (1978), no. 1, 1-19. (Robert Pearson) **80g:76023 76D99 (65Nxx)**
- Olson, William H.** A Markov chain model for the kinetics of reactant isolation. *J. Appl. Probab.* 15 (1978), no. 4, 835-841. (Sang Lung Chan) **80a:80010 80A30 (60J35)**
- Olzak, Zbigniew** Remarks on manifolds admitting totally umbilical hypersurfaces. *Demonstratio Math.* 11 (1978), no. 3, 695-702. (Leopold Verstraeten) **80a:53026 53B25**
- Olteanu, Octav** Convexité et prolongement d'opérateurs linéaires. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 11, A511-A514. (S. Simona) **80d:47063 47B55 (46A40)**
- Olthoff, B. C.** (with Ribes, Luis) On prosolvable groups. *Pacific J. Math.* 77 (1978), no. 1, 183-188. (B. Hartley) **80e:20039 20E18**  
(with Ribes, Luis) On the Frattini subgroup of free products of profinite groups. *Comm. Algebra* 7 (1979), no. 3, 313-325. (A. H. M. Hoare) **80b:20037 20E18 (20F26)**
- Olshansky, A.** Unbounded multiplier operators. *J. Math. Anal. Appl.* 71 (1979), no. 2, 359-365. (Harald E. Krogstad) **80c:43004 43A22 (47D05)**
- Olshansky, V. O. S.** (with Hutter, K.) Forced vibration of a prestressed rectangular membrane: near resonance response. (German summary) *Acta Mech.* 32 (1979), no. 1-3, 63-77. (Authors' summary) **80c:73053 73K15**
- Oluyomi, M. A.** (with Tabarrok, B.) A generalized energy approach to the optimum design of plates and skeletal structures. *Comput. & Structures* 10 (1979), no. 1-2, 269-275. (Authors' summary) **80b:73038 73K10 (49B99)**
- Olver, F.** Введение в асимптотические методы и специальные функции. (Russian) [Introduction to asymptotics and special functions] Translated from the English by Ju. A. Brychkov. Edited by A. P. Prudnikov. "Nauka", Moscow, 1978. 375 pp. (Editors) **80a:41031 41A60 (33-01)**  
(with Lozano, C.) Asymptotic approximations for parabolic cylinder functions. *J. Phys. B* 11 (1978), no. 18, L531-L533. (Y. L. Luke) **80g:33007 33A30 (34E05, 41A60)**  
General connection formulae for Liouville-Green approximations in the complex plane. *Philos. Trans. Roy. Soc. London Ser. A* 289 (1978), no. 1364, 501-548. (W. Wasow) **80a:34083 34E20 (34A20)**  
See also **Crothers, D. S. F., 80g:33008**
- Olver, Peter J.** (with Shakiban, Chenzrad) A resolution of the Euler operator. *Proceedings of the Eighth National Mathematics Conference (Arya-Mehr Univ. Tech., Tehran, 1977), pp. 325-337, Arya-Mehr Univ. Tech., Tehran, 1977. (Alexander A. Pankov) 80k:58058 58F07 (35Q20, 49A50)*
- O'Malley, M. J.** (with Brown, D. R.) A fixed-point theorem for certain operator valued maps. *Proc. Amer. Math. Soc.* 74 (1979), no. 2, 254-258. (A. Ramm) **80c:47062 47H10**
- O'Malley, R. E., Jr.** Singular perturbations and optimal control. *Mathematical control theory (Proc. Conf., Australian Nat. Univ., Canberra, 1977), pp. 170-218, Lecture Notes in Math., 680, Springer, Berlin, 1978. (B. I. Anan'ev) 80a:93057 93B35*  
On singularly-perturbed initial value problems. *Applicable Anal.* 8 (1978/79), no. 1, 71-81. (B. A. Hargrave) **80d:34076 34E15**  
(with Anderson, L. R.) Singular perturbations, order reduction, and decoupling of large scale systems. *Numerical analysis of singular perturbation problems (Proc. Conf., Math. Inst., Catholic Univ., Nijmegen, 1978), pp. 317-338, Academic Press, London, 1979. (K. Killeberg) 80m:34050 34D15 (65L99)*  
A singularly-perturbed linear boundary value problem. *SIAM J. Math. Anal.* 10 (1979), no. 4, 695-708. (F. Hoppensteadt) **80a:34025 34B10**
- O'Malley, R. J.** Approximately continuous functions which are continuous almost everywhere. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 3-4, 395-402. (A. M. Bruckner) **80g:26006 26A15**
- Oman, Samuel D.** A Bayesian comparison of some estimators used in linear regression with multicollinear data. *Comm. Statist. A—Theory Methods* 7 (1978), no. 6, 517-534.

- (Tom Leonard) **90c:62082** 62J05 (62F15)  
Ratio limit theorems for hitting times and hitting places. *Indiana Univ. Math. J.* 27 (1978), no. 4, 657–670. (H. Kesten) **80a:60090** 60J15
- Omanadze, R. Š. Some generalizations of the concept of productivity of a set. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 9(196), 84–88. (A. N. Degtev) **80c:03046** 03D25
- Omarov, E. O. Solution of a certain differential equation by the method of lines. (Russian) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1978, no. 1, 79–83, 94. (Author's summary) **80a:65199** 65M20
- Omarov, T. B. (with Puškarev, O. A.) On properties of inhomogeneous cosmological Tolman models. (Russian. English summary) *Akad. Nauk Kazah. SSR Trudy Astrofiz. Inst.* 33 (1979), 3–9, 87. (Authors' summary) **80c:83043** 83F05 (85A40)
- Omata, Sigeru (with Sawaragi, Yoshikazu; Soeda, Takashi) ★ Modeling, estimation, and their applications for distributed parameter systems. Lecture Notes in Control and Information Sciences, 11. Springer-Verlag, Berlin-New York, 1978. vi+269 pp. ISBN 3-540-09142-4 (Vladimir Katkovnik) **80f:93100** 93E20 (60G35)  
(with Soeda, Takashi) Estimation problems for a linear stochastic differential equation in Hilbert space. *Proceedings of the International Symposium on Stochastic Differential Equations* (Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976), pp. 341–365, Wiley, New York, 1978. (Authors' summary) **80f:93098** 93E20 (60G35)  
(with Soeda, Takashi) Optimal estimation problems for a linear distributed parameter system. *Internat. J. Systems Sci.* 9 (1978), no. 7, 753–771. (M. Shridhar) **80b:93140** 93E10  
(with Ohe, Syunichiro; Soeda, Takashi) Fixed-lag smoothing estimator for a linear distributed parameter system. *Inform. and Control* 44 (1980), no. 1, 1–15. (Authors' summary) **80b:93051** 93E10
- Ombach, Jerzy Continuous dependence in the implicit function theorem. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* No. 21 (1979), 123–131. (Marian Fabian) **80b:58013** 58C15 (46G05)
- O'Meara, O. T. ★ Symplectic groups. Mathematical Surveys, 16. American Mathematical Society, Providence, R.I., 1978. xi+122 pp. ISBN 0-8218-1516-4 (E. A. Connors) **80a:20045** 20G05 (10C30, 20E36, 20F28)
- Omeli'janovskii, M. Ė. Einstein, the foundations of modern physics and dialectics. (Russian) *Vestnik Akad. Nauk SSSR* 1979, no. 4, 74–90. (Vadim Komkov) **80a:01018** 01A60 (00A69, 83A05)
- Omero, C. (with Gava, E.; Smaligic, A.) Classical solutions in a generally covariant model with fermions. *Lett. Nuovo Cimento* (2) 26 (1979), no. 10, 289–293. (José M. Cerveró) **80m:81063** 81E99 (81M05)  
(with Gava, E.; Jengo, R.; Percacci, R.) Classical solutions for a generally covariant  $CP^2$  non-linear  $\sigma$ -model. *Nuclear Phys. B* 151 (1979), no. 3, 457–468. (Authors' summary) **80c:81062** 81E10 (53C30)
- Omnes, R. A new geometric approach to the relativistic string. *Nuclear Phys. B* 149 (1979), no. 2, 269–284. (V. A. Golubeva) **80g:81093** 81M05 (53A10)
- Omoleja, Akin F. Spin summations in nuclear scattering problems. *Tensor (N.S.)* 32 (1978), no. 2, 199–206. (From the introduction) **80a:81098** 81F99 (22E70)
- Omori, Hideaki (with Koriyama, Akira; Maeda, Yoshiaki) On Lie algebras of vector fields on expansive sets. *Japan. J. Math. (N.S.)* 3 (1977), no. 1, 57–80. (I. Vaisman) **80a:57019** 57R25 (58A05)
- Omote, M. (with Kametuchi, S.) Para-Grassmann algebras and para-Fermi systems. *Lett. Nuovo Cimento* (2) 24 (1979), no. 10, 345–350. (Jouko Mickelsson) **80i:81023** 81D05 (58A05)  
(with Kametuchi, S.) On supergroup transformations. (Italian and Russian summaries) *Nuovo Cimento A* (11) 50 (1979), no. 1, 21–40. (Mineo Ikeda) **80b:81041** 81D99 (22E99)
- Omura, Jim K. (with Berger, Toby; Housewright, Kim B.; Tung, Sui Yin; Wolfowitz, J.) An upper bound on the rate distortion function for source coding with partial side information at the decoder. *IEEE Trans. Inform. Theory* 25 (1979), no. 6, 664–666. (Authors' summary) **80m:94034** 94A29
- Omyla, Mieczysław Boolean theories with quantifiers. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 7 (1978), no. 2, 76–83. (From the text) **80c:03030** 03B60
- Onabe, Midori On idèle class groups of imaginary quadratic fields. *Natur. Sci. Rep. Ochanomizu Univ.* 29 (1978), no. 1, 37–42. (Akira Takaku) **80d:12001** 12A25 (12A50, 12A65, 12A85)
- Onaga, Kenji (with Mayeda, Wataru) A Boolean theory of network flows and metrics and its applications to particle transmission and clustering. *Networks* 9 (1979), no. 3, 249–281. (W.-K. Chen) **80j:94051** 94C15 (90B10)  
(with Iri, Masao) Combinatorial approaches to modeling and systems analysis. (Japanese) *Systems and Control* 23 (1979), no. 1, 2–10. (Norihiko Adachi) **80g:93001** 93-02
- Onanov, G. G. (with Skubačevskii, A. L.) Differential equations with deviating arguments in stationary problems of the mechanics of deformable bodies. (Russian) *Prikl. Meh.* 15 (1979), no. 5, 39–47, 109. (Authors' summary) **80c:73055** 73K99 (35R10)
- Onoh, Tetsuya (with Niki, Hiroshi; Sawami, Hideo) A note on a practical technique for solving elliptic equations. *J. Inst. Math. Appl.* 22 (1978), no. 3, 353–359. (Authors' summary) **80a:65215** 65N20
- Ondrejka, Rudolf More on large primes. *J. Recreational Math.* 11 (1978/79), no. 2, 112–113. (H. J. Godwin) **80g:10012** 10A25
- Oneda, S. (with Hallock, H. L.) Why are there only two meson nonet structures? SU(4) provides an answer. *Phys. Rev. D* (3) 18 (1978), no. 3, 841–844. (Lionel Weiss) **80b:81108** 81G30
- Onegor, L. A. Approximate calculation of singular integrals with Hilbert type kernels. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 1(188), 81–87. (Gheorghe Micula) **80a:41030** 41A55  
Some quadrature formulas for singular integrals. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 4(191), 64–78. (Luciana Lupas) **80b:65031** 65D32
- O'Neill, Edward J. Higher order Massey products and links. *Trans. Amer. Math. Soc.* 248 (1979), no. 1, 37–66. (Donald M. Davis) **80a:55016** 55S30
- O'Neill, M. E. Distributional expansions for canonical correlations from contingency tables. *J. Roy. Statist. Soc. Ser. B* 40 (1978), no. 3, 303–312. (S. K. Katti) **80f:62021** 62E15
- (with Dorrepaal, J. M.) The existence of free eddies in a streaming Stokes flow. *Quart. J. Mech. Appl. Math.* 32 (1979), no. 2, 95–107. (William H. H. Banks) **80b:76017** 76D99  
(with Majumdar, S. R.) Asymmetric Stokes flows generated by the motion of a closed torus. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 6, 967–982. (William H. H. Banks) **80m:76040** 76D99
- O'Neill, Terence J. Normal discrimination with unclassified observations. *J. Amer. Statist. Assoc.* 73 (1978), no. 364, 821–826. (R. J. McKay) **80b:62073** 62H30
- Onesti, Natalia See Berruti Onesti, Natalia
- Oneto, Anna Conductor and true adjoints to a curve on a surface. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 1, 159–171. (Nadia Chiarli) **80k:14039** 14H20 (14B05)
- Ong, E. H. (with Saluja, Kewal K.) Minimization of Reed-Muller canonic expansion. *IEEE Trans. Comput.* 28 (1979), no. 7, 535–537. (Authors' summary) **80k:94050** 94C10
- Ong, Hock Linear transformations on matrices: the invariance of generalised permutation matrices. II. *Publ. Inst. Math. (Beograd) (N.S.)* 25(39) (1979), 116–121. (Marvin Marcus) **80b:15018** 15A69 (15A04)
- Oniani, G. A. Integral representations and boundary properties of analytic and harmonic functions in the unit disc. (Russian. Georgian and English summaries) *Sakharth. SSR Mecn. Akad. Moambe* 89 (1978), no. 2, 301–304. (P. Ju. Alekna) **80b:30037** 30E25 (31A25)  
Integral representations of analytic and 2-harmonic functions in a unique bicylinder. (Russian. Georgian and English summaries) *Sakharth. SSR Mecn. Akad. Moambe* 90 (1978), no. 2, 273–275. (P. Agranović) **80m:32006** 32A25
- Onicescu, Octav (with Botez, M. C.) A stochastic-informational approach to input-output analysis. (French and Russian summaries) *Econom. Comput. Econom. Cybernet. Stud. Res.* 12 (1978), no. 3, 19–27. (A. L. Nagar) **80c:90044** 90A19 (62P20, 90A17)  
(with Istrătescu, Vasile I.) Approximation theorems for random functions. II. (Italian summary) *Rend. Mat.* (6) 11 (1978), no. 4, 585–589 (1979). (Ju. I. Petuni) **80b:60071** 60G99 (41A10)  
(with Sofonea, Liviu) Un modèle géométrique à connexions non symétriques et quelques interprétations physiques. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 10, 1451–1465. (Carl Brans) **80m:83043** 83E10 (53B15)
- Oniščik, A. L. ★ Элементы линейной алгебры и теории групп. (Russian) [Elements of linear algebra and group theory] *Jaroslav. Gos. Univ., Yaroslavl*, 1978. 110 pp. (J. L. Brenner) **80i:15002** 15-01 (20-01)  
See also Problems of group theory and homological algebra, **80g:00006**
- Onishi, Hironori (with Goodman, Jacob Eli) Even triangulations of  $S^3$  and the coloring of graphs. *Trans. Amer. Math. Soc.* 246 (1978), 501–510. (W. Haken) **80a:05092** 05C15 (57M15)
- Onishi, Yoshimoto (with Aoki, Kazuo; Inamuro, Takaji) Slightly rarefied gas flow over a body with small accommodation coefficient. *J. Phys. Soc. Japan* 47 (1979), no. 2, 663–671. (Carlo Cercignani) **80i:76033** 76N15
- Omnewer, C. W. Differentiation of fractional order on  $p$ -groups, approximation properties. (Russian summary) *Anal. Math.* 4 (1978), no. 4, 297–302. (Philip Heywood) **80m:43010** 43A70 (26A33, 41A40, 41A65)  
Sets of divergence in the group of integers of a  $p$ -adic or  $p$ -series field. *Ann. Univ. Sci. Budapest. Eötvös Sect. Math.* 21 (1978), 13–20 (1979). (W. R. Wade) **80f:43019** 43A75  
On the definition of dyadic differentiation. *Applicable Anal.* 9 (1979), no. 4, 267–278. (W. Spletstösser) **80m:43011** 43A70 (43A75)  
Fractional differentiation and Lipschitz spaces on local fields. *Trans. Amer. Math. Soc.* 258 (1980), no. 1, 155–165. (W. Spletstösser and P. L. Butzer) **80m:43012** 43A70 (26A33)
- Ono, Akira Remarks on the Morrey-Sobolev type imbedding theorems in the strong  $\mathcal{E}^{(s)}$  spaces. *Math. Rep. Kyushu Univ.* 11 (1977/78), no. 2, 149–155. (Richard Bagby) **80f:46036** 46E35  
On isomorphism between certain strong  $\mathcal{E}^{(s)}$  spaces and the Lipschitz spaces and its applications. *Funkcial. Ekvac.* 21 (1978), no. 3, 261–270. (J. Horváth) **80i:46031** 46E35
- Ono, Hideo A study of the limits of random sequences. (Japanese) *Res. Bull. Meisei Univ.* No. 15 (1979), 17–52. (S. Ikehara) **80h:10064** 10L10 (65C20)
- Ono, Hiroakira (with Nakamura, Akira) Undecidability of the first-order arithmetic  $A[P(x), 2x, x+1]$ . *J. Comput. System Sci.* 18 (1979), no. 3, 243–253. (John P. Helm) **80k:03045** 03D35 (03D05, 03F30, 68C30)
- Ono, Takashi (with Yamaguchi, Hiroyuki) On Hasse principle for division of quadratic forms. *J. Math. Soc. Japan* 31 (1979), no. 1, 141–159. (Daniel B. Shapiro) **80c:10023** 10C05 (15A63, 15A66)
- Ono, Tamio (with Sawade, Kazuo) Addition sets with a multiplier  $g$ . (Japanese. English summary) *Bull. Nagoya Inst. Tech.* 29 (1977), 155–159. (K. Yamamoto) **80m:05017** 05B10
- Onodera, Takeshi On modules which are flat over their endomorphism rings. *Hokkaido Math. J.* 7 (1978), no. 2, 179–182. (T. Cheatham) **80a:16035** 16A50 (16A49)  
A note on linearly compact modules. *Hokkaido Math. J.* 8 (1979), no. 1, 121–125. (T. Cheatham) **80h:16023** 16A52
- Onofri, E. (with Cialfani, M.) Path integral formulation of reggeon quantum mechanics. *Nuclear Phys. B* 151 (1979), no. 1, 118–146. (Authors' summary) **80b:81109** 81G35 (28A35, 47Axx, 81C35)
- Onogi, Katsuaki (with Matsubara, Masakazu) Point-transformation analysis of relay control systems. *IEEE Trans. Automat. Control* 24 (1979), no. 5, 730–735. (Authors' summary) **80j:93085** 93C99
- Onose, Hiroshi Oscillation of a functional differential equation arising from an industrial problem. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 3, 323–329. (V. Staikos) **80b:34091** 34K15  
On fourth-order non-linear oscillations of functional differential equations. *J. London Math. Soc.* (2) 18 (1978), no. 2, 287–298. (Pavol Marušiač) **80d:34102** 34K15  
Nonlinear oscillation of fourth-order functional-differential equations. *Ann. Mat. Pura Appl.* (4) 119 (1979), 259–272. (Yiannis Sficas) **80k:34098** 34K15 (34K25)  
Forced oscillation for functional differential equations of fourth order. *Bull. Fac.*



- Sci. Ibaraki Univ. Ser. A No. 11 (1979), 57-63. (D. K. Hughes) **80a:34123** 34K15  
(with Graef, John R.; Kitamura, Yuichi; Kusano, Takashi; Spikes, Paul W.) On the nonoscillation of perturbed functional differential equations. *Pacific J. Math.* **83** (1979), no. 2, 365-373. (Yiannis Sfikas) **80m:34069** 34K15
- Omachi, Nelson** Invariance properties for ordinary differential equations: stability and instability. *Nonlinear Anal.* **2** (1978), no. 1, 69-76. (T. Yoshizawa) **80c:34053** 34D05
- Omariyev, A. T.** Model equation for the probability density in the semi-empirical theory of turbulent transport. Third All-Union Seminar on Turbulent Flows, Part I. *Fluid Mech. - Soviet Res.* **7** (1978), no. 1, 143-152. (Author's summary) **80j:76039** 76F99  
(80A20)
- Omariyev, S. P.** The symmetry groups of Majorana equations. (Russian. English summary) *Group theoretic methods in mathematical physics* (Russian), pp. 139-145, 193, 201, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (A. M. Gavrilik) **80g:81076a** 81G20 (35A30, 58G35, 81D25)  
(with Sokur, L. P.) Additional symmetry of the generalized Bargmann-Wigner equation with proper time. (Russian. English summary) *Group theoretic methods in mathematical physics* (Russian), pp. 146-151, 193, 201, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (A. M. Gavrilik) **80g:81076b** 81G20 (35A30, 58G35, 81D25)  
Poincaré-covariant countable systems of first-order differential equations. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 29* (1978), 37 pp. (Vadim Komkov) **80d:81034** 81C40
- Omariyev, A. T.** See **Omariyev, A. T.**
- Omaki, Akira** Langevin equation with multi-Poissonian noise. *J. Statist. Phys.* **19** (1978), no. 4, 325-332. (Author's introduction) **80d:82020** 82A05
- Oort, Frans** Singularities of coarse moduli schemes. *Séminaire d'Algèbre Paul Dubreil, 29ème année (Paris, 1975-1976)*, pp. 61-76, *Lecture Notes in Math.*, **586**, Springer, Berlin, 1977. (T. Oda) **80e:14002** 14D20
- Oosterhoff, J.** (with Groenboom, P.; Ruymgaart, F. H.) Large deviation theorems for empirical probability measures. *Ann. Probab.* **7** (1979), no. 4, 553-586. (P. Révész) **80i:60030** 60F10 (60B10)  
See also **Proceedings: Bicentennial Congress Wiskundig Genootschap, 80d:00016a** and **Proceedings: Bicentennial Congress Wiskundig Genootschap, 80d:00016b**
- Oueki, Kiyota** On truncated units. *TRU Math.* **14** (1978), no. 1, 1-3. (Veikko Ennola) **80e:12011** 12A45  
On some truncated units in algebraic number fields of degree  $n \geq 3$ . *Monatsh. Math.* **87** (1979), no. 4, 310-312. (Ezra Brown) **80j:12005** 12A45
- Oymec, M. G.** (with Derkač, V. P.) An axially symmetric temperature field of a semiconductor with account taken of the finite velocity of heat propagation. (Russian) *Physico-technological questions in cybernetics* (Russian), pp. 3-14, *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1978. (Vadim Komkov) **80j:80046b** 80A20
- Opatrij, J.** Total ordering problem. *SIAM J. Comput.* **8** (1979), no. 1, 111-114. (Ondrej Šýkora) **80e:68117** 68C25
- Opler, Gerhard** An algorithm for the construction of best approximations based on Kolmogorov's criterion. (German summary) *J. Approx. Theory* **23** (1978), no. 4, 299-317. (C. Dierckx) **80i:65019** 65D15  
(with Geiger, Carl) Complex Chebyshev polynomials on circular sectors. *J. Approx. Theory* **24** (1978), no. 2, 93-118. (A. S. Cavaretta) **80m:41004** 41A10  
New extremal properties for constructing conformal mappings. *Numer. Math.* **32** (1979), no. 4, 423-429. (D. Gaier) **80b:30009** 30C30 (30C70)
- Opoliev, V. I.** (with Krasnosel'skii, M. A.) A global homeomorphism theorem. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* **30** (1978), 83-85, iii. (Ju. Ju. Trokhimuk) **80g:54023** 54C56 (57N99)  
Generalization of the theory of monotone and concave operators. (Russian) *Trudy Moskov. Mat. Obšč.* **36** (1978), 237-273, 295. (J. Daneš) **80i:47074** 47H07 (46N05)  
Existence theorems in problems of system states. *Automat. i Telemekh.* **1979**, no. 3, 85-95. (Russian. English summary); translated as *Automat. Remote Control* **40** (1979), no. 3, part 1, 390-399. (Marwan Simaan) **80j:34011** 34A40 (47H10)
- Oppenheim, Irwin** Nonlinear response theory. *Correlation functions and quasiparticle interactions in condensed matter* (Proc. NATO Advanced Study Inst., Wayzata, Minn., 1977), pp. 235-258, *NATO Adv. Study Inst. Ser. B: Physics*, **35**, Plenum, New York, 1978. (From the introduction) **80e:82050** 82A70  
(with Tokuyama, Michio) Statistical-mechanical theory of Brownian motion—translational motion in an equilibrium fluid. *Phys. A* **94** (1978), no. 3-4, 501-520. (Authors' summary) **80d:82043** 82A30
- Oprij, D.** Sur les couples de connexions de Finsler compatibles avec un  $(0, 2)$ -tenseur de Finsler. *An. Univ. Timișoara Ser. Științ. Mat.* **15** (1977), no. 2, 113-132 (1978). (Hassan Akbar-Zadeh) **80e:30066** 53C60  
(with Albu, A. C.) Sur les fibrations réduites d'une G-fibration principale topologique. (Romanian summary) *An. Univ. Timișoara Ser. Științ. Mat.* **16** (1978), no. 1, 13-29 (1979). (I. Pop) **80m:55022** 55R10
- Opriș, Vasile** (with Neagu, Alexandru C.) Chern forms and  $H$ -projective curvature of complex manifolds. *An. Științ. Univ. "Al. I. Cuza" Iași Sec. I a Mat. (N.S.)* **24** (1978), no. 1, 39-46. (V. Mihova-Nehmer) **80e:53077** 53C55  
The  $d''$ -Chern classes of the complex vector bundles. *An. Științ. Univ. "Al. I. Cuza" Iași Sec. I a Mat. (N.S.)* **24** (1978), no. 2, 363-366. (Huei-Shyong Lue) **80f:53041** 53C55 (32L10, 57R20)
- Oragvelidze, T. I.** (with Kogan, Ja. A.; Litvin, V. G.) On the analysis of the capacity of a memory device on a magnetic drum. (Russian. English and Georgian summaries) *Sovetsk. Akad. Nauk Gruz. SSR* **92** (1978), no. 1, 153-156. (Authors' summary) **80g:68048** 68C15 (68H05)
- O'Raifeartaigh, Lochlainn** Broken gauge and scale invariance. *Mathematical physics and physical mathematics* (Proc. Internat. Symp., Warsaw, 1974), pp. 431-440, *Math. Phys. and Appl. Math.*, **2**, Reidel, Dordrecht, 1976. (H. Rund) **80a:81106** 81E10 (81D20)  
Static solitons in more than one dimension. *Group theoretical methods in physics* (Sixth Internat. Colloq., Tübingen, 1977), pp. 345-356, *Lecture Notes in Phys.*, **79**, Springer, Berlin, 1978. (L. Martinez Alonso) **80a:81121** 81G20 (81E99)  
Classical static gauge-field solitons in three space dimensions. *Many degrees of freedom in field theory* (Proc. Eighth Internat. Summer Inst. Theoret. Phys., Univ. Bielefeld, Bielefeld, 1976), pp. 117-145, *NATO Adv. Study Inst. Ser. B: Physics*, **30**, Plenum, New York, 1978. (From the introduction) **80e:81095** 81G15 (81E10)
- Static solitons in more than one dimension. *Mathematical problems in theoretical physics* (Proc. Internat. Conf., Univ. Rome, Rome, 1977), pp. 205-215, *Lecture Notes in Phys.*, **80**, Springer, Berlin, 1978. (V. Z. Enol'skii) **80e:81071** 81E10  
(with Parravicini, G.) Anomalous behaviour of the effective potential. *Feynman path integrals* (Proc. Internat. Colloq., Marseille, 1978), pp. 374-388, *Lecture Notes in Phys.*, **106**, Springer, Berlin, 1979. (V. E. Korepin) **80m:81032** 81C35  
(with Park, Soo Yong; Wali, Kameswar C.) Magnetic-monopole interactions. *Phys. Rev. D* **(3)** **20** (1979), no. 8, 1941-1950. (Authors' summary) **80m:81052** 81E10 (81D20)
- Orazov, Dž.** An analogue of the Darboux problem for a hyperbolic system in three-dimensional space. (Russian) *Differentsial'nye Uravnenija* **15** (1979), no. 1, 178-182, 192. (V. Rosa) **80e:35041** 35L55
- Orazov, E. T.** A class of cooperative games. (Russian) *Theoretical and applied problems in mathematics and mechanics* (Russian), pp. 260-263, 315, "Nauka" Kazakh SSR, Alma-Ata, 1977. (Author's summary) **80e:90158** 90D12
- Orazov, M. B.** (with Fainleib, A. S.) Binary additive problems with an exponential function. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Šb.* **18** (1978), no. 4, 187-198, 203. (M. I. Israilov) **80e:10070** 10J15  
The completeness of systems of elementary solutions for certain operator differential equations on the half-axis and on a segment. (Russian) *Dokl. Akad. Nauk SSSR* **245** (1979), no. 4, 788-792. (Angelo Favini) **80d:34084** 34G10
- Orbach, R.** (with Entin-Wohlman, O.) On the microscopic and Boltzmann equation approaches to nonequilibrium superconductors. *Ann. Physics* **122** (1979), no. 1, 64-73. (Authors' summary) **80h:82040** 82A70 (81J05)
- Orbán, B.** (with Vasiu, Angela; Groze, Victoria) Characterisation of the  $S$ -groups. *Papers from the National Colloquium on Geometry and Topology* (Univ. Timișoara, Timișoara, 1977), pp. 237-242, *Univ. Timișoara, Timișoara*, 1977. (Uno Kaljulaid) **80e:20085** 20M30 (08A99)  
(with Radó, F.) Nomograms with minimal global error. *Anal. Numer. Theor. Approx.* **6** (1977), no. 2, 163-170. (Zbl 384:65065) **80f:65151** 65S05
- Orbanz, Ulrich** Valuation semigroups and closed components. *Comm. Algebra* **7** (1979), no. 11, 1181-1198. (Joel Cunningham) **80j:13002** 13A18 (13B02, 13H99)
- Orbatenov, A.** Estimation of the deviation of a discrete distribution with increasing intensity from a geometric distribution. (Russian) *C. R. Acad. Bulgare Sci.* **31** (1978), no. 5, 501-504. (Viorel Gh. Vodă) **80g:62075** 62N05 (62E15)
- Ord, Keith** (with Liddell, I. G.) Linear-circular correlation coefficients: some further results. *Biometrika* **65** (1978), no. 2, 448-450. (Authors' summary) **80e:62073** 62H20
- Orde, H. L. S.** On Dirichlet's class number formula. *J. London Math. Soc.* **(2)** **18** (1978), no. 3, 409-420. (A. I. Vinogradov) **80a:10036** 10C07 (12A45)
- Ordinika, Z. P.** On the question of the dichotomy of the solutions of nonlinear systems of differential equations with lag. (Russian) *Ukrain. Mat. Ž.* **30** (1978), no. 3, 394-399, 430. (Erwin Kozakiewicz) **80a:34115** 34K20
- Ordman, Edward T.** (with Fay, Temple H.; Thomas, Barbara V. Smith) The free topological group over the rationals. *General Topology Appl.* **10** (1979), no. 1, 33-47. (M. I. Kabenjuk) **80e:22001** 22A05
- Ordynskaja, Z. P.** See **Ordinika, Z. P.**
- Ore, F. R., Jr.** (with Sterman, George) An operator approach to weighted cross sections. *Nuclear Phys. B* **165** (1980), no. 1, 93-118. (Authors' summary) **80m:81084** 81F99
- Ore, Oystein** ★Graphen und ihre Anwendungen. Translated from the English by Gisela Pollock. Klett Studienbücher Mathematik. Ernst Klett Verlag, Stuttgart, 1974. 119 pp. ISBN 3-12-983180-0 (Editors) **80m:05002** 05-01
- O'Reilly, Federico J.** (with Rincon-Gallardo, S.; Quisenberry, C. P.) Conditional probability integral transformations and goodness-of-fit tests for multivariate normal distributions. *Ann. Statist.* **7** (1979), no. 5, 1052-1057. (N. Giri) **80e:62079** 62H15
- O'Reilly, John** (with Newmann, M. M.) Minimal-order optimal estimators for discrete-time linear stochastic systems. *Recent theoretical developments in control* (Proc. Conf., Univ. Leicester, Leicester, 1976), pp. 439-464, *Academic Press, London*, 1978. (A. P. Roberts) **80e:93116** 93E10  
Minimal-order observers for discrete-time linear systems with unmeasurable disturbances. *Internat. J. Control* **29** (1979), no. 3, 429-434. (Valdas Pukkas) **80d:93024** 93B07  
Full-order observers for a class of singularly perturbed linear time-varying systems. *Internat. J. Control* **30** (1979), no. 5, 745-756. (M. G. Dmitriev) **80e:93018** 93B05  
On linear least-squares estimators for continuous-time stochastic systems. *J. Franklin Inst.* **307** (1979), no. 3, 193-202. (Author's summary) **80e:93141a** 93E10  
Erratum: "On linear least-squares estimators for continuous-time stochastic systems" (J. Franklin Inst. **307** (1979), no. 3, 193-202). *J. Franklin Inst.* **308** (1979), no. 4, 446. (Editors) **80e:93141b** 93E10  
See also **Fahmy, Mustafa M.; et al.** **80j:93080**
- O'Reilly, Thomas J.** Extended Fibonacci series and binary golden numbers. *J. Recreational Math.* **11** (1978/79), no. 4, 268-271. (A. G. Shannon) **80e:10016** 10A35
- Orel, E. N.** Approximation of the Bellman function by step functions. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **18** (1978), no. 4, 916-927, 1068. (I. V. Romanovskii) **80e:39020** 93A99
- Oren, Samuel S.** (with Morris, Peter A.) Multi-attribute decision making by sequential resource allocation. *Oper. Res.* **28** (1980), no. 1, 233-252. (Authors' summary) **80j:90000** 90A05
- Orenstein, S.** (with Rafanelli, K.) An extended particle with interacting constituents. I. Relativistic center of mass. (Italian summary) *Nuovo Cimento A* **(11)** **48** (1978), no. 2, 227-234. (Authors' summary) **80e:70019a** 70F99 (83A05)  
(with Rafanelli, K.) An extended particle with interacting constituents. II. Hamiltonian formulation. (Italian and Russian summaries) *Nuovo Cimento A* **(11)** **50** (1979), no. 4, 496-508. (Authors' summary) **80e:70019b** 70F99 (70H99, 81M05, 83C99)
- Orey, Steven** (with Fristedt, Bert) The tail  $\sigma$ -field of one-dimensional diffusions. *Stochastic analysis* (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1978), pp. 127-138, *Academic Press, New York*, 1978. (S. R. S. Varadhan) **80d:60098** 60J60
- Orfanidis, S. J.** Discrete sine-Gordon equations. *Phys. Rev. D* **(3)** **18** (1978), no. 10, 3822-3827. (Author's summary) **80d:81064** 81E05 (35Q20, 39A12, 49H05)  
Sine-Gordon equation and nonlinear  $\sigma$  model on a lattice. *Phys. Rev. D* **(3)** **18**

- (1978), no. 10, 3828-3832. (Author's summary) **80d:81065** 81E05 (35Q20, 82A67)
- Oriat, Bernard** (with Saigé, Philippe) Un essai de généralisation du "Spiegelungssatz". *J. Reine Angew. Math.* **307/308** (1979), 134-159. (J. Browkin) **80f:12007** 12A50
- Orikas, J.** (with Liszka, T.) Application of the finite difference method at arbitrary irregular grids to solution of various problems of applied mechanics. *Teoret. Prikl. Meh.* **9** (1978), no. 1, 105-111. (From the introduction) **80a:73054** 73K99 (65P05)
- Orlicz, Władysław** (with Szulca, Stanisław) On the convergence of successive approximations for nonlinear equations in function spaces. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979), no. 2, 153-156. (Ferenc Fenyves) **80h:47066** 47H10
- See also **Maciejowska, Wanda** **80a:91035**
- Orlik, Peter** Singularities and group actions. *Bull. Amer. Math. Soc. (N.S.)* **1** (1979), no. 5, 703-720. (Alan H. Durfee) **80e:57052** 57S25 (14B05, 32C40)
- Orlin, James B.** Line-digraphs, arborescences, and theorems of Tutte and Knuth. *J. Combin. Theory Ser. B* **25** (1978), no. 2, 187-198. (W. T. Tutte) **80a:05105** 05C20 (05C30)
- Orlov, Ju. F.** Wave calculus based upon wave logic. *Internat. J. Theoret. Phys.* **17** (1978), no. 8, 585-598. (Author's summary) **80e:81012** 81B05
- Group theory approach to logic—the wave logic. *Philos. Natur.* **17** (1978/79), no. 1, 120-129. (From the introduction) **80b:03024** 03B50
- Orlov, Ju. I.** (with Orlova, N. S.) An asymptotic method for the determination of the fields of diffraction of waves by convex bodies of revolution. (Russian. English summary) *Izv. Vysl. Učebn. Zaved. Radiofizika* **21** (1978), no. 7, 1011-1018. (Alexander Alenicyan) **80j:78006** 78A45 (35C20)
- Orlov, Konstantin** The general method for solving the partial differential equation of any order with unknown function depending on any number of arguments and the system of such equations. *Mat. Vesnik* **2(15)(30)** (1978), no. 4, 387-390. (E. Kreyzig) **80a:35014** 35C99
- Orlov, N. Ju.** Calculation of a self-consistent potential for a mixture of substances in the Hartree-Fock-Slater approximation. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No.* **131** (1979), 21 pp. (Author's summary) **80b:82068** 82A65
- Orlov, V. N.** Piecewise polynomial approximation in  $W_2^1$  of functions from  $W_2^1$ ,  $1 < p < 2$ . (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **18** (1978), no. 4, 935-942, 1068. (A. B. Pevnyi) **80d:65031** 65D15
- Orlov, Yu. F.** See **Orlov, Ju. F.**
- Orlova, N. S.** (with Orlov, Ju. I.) An asymptotic method for the determination of the fields of diffraction of waves by convex bodies of revolution. (Russian. English summary) *Izv. Vysl. Učebn. Zaved. Radiofizika* **21** (1978), no. 7, 1011-1018. (Alexander Alenicyan) **80j:78006** 78A45 (35C20)
- Orlova, Natal'ja** (with Timofeev, Ju. A.) On the question of applying the Bubnov-Galerkin method to the analytical investigation of heat transfer processes. (Russian. Lithuanian and English summaries) *Differencial'nye Uravnenija i Primenen.—Trudy Sem. Protsessy Optimal. Upravlenija I Sekcija No.* **22** (1978), 25-36, 75. (Authors' summary) **80e:65236** 65P05 (65N30)
- Orlovskii, D. G.** On multipliers in the spaces  $B_{p,q}^s$ . (Russian summary) *Anal. Math.* **5** (1979), no. 3, 207-218. (A. Kufner) **80a:46037** 46E35
- Orłowska, Ewa** (with Mirkowska, Grazyna) An elimination of iteration quantifiers in a certain class of algorithmic formulas. *Fund. Inform.* (4) **1** (1977/78), no. 3, 347-355 (errata insert). (G. E. Peterson) **80a:03070** 03F50 (03B35, 68C05)
- The resolution principle for  $\omega^+$ -valued logic. *Fund. Inform.* (4) **2** (1978), no. 1, 1-15. (Tōru Miyama) **80b:03025** 03B50 (68C01)
- Resolution system for  $\omega^+$ -valued logic. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **7** (1978), no. 2, 68-74. (Author's summary) **80a:03032** 03B50 (03B35)
- Orłowski, K.** (with Radzik, T.) A game of timing with  $k$  noisy and  $n$  silent actions versus one noisy action. (Polish summary) *Zastos. Mat.* **16**, no. 3, 405-414 (1979). (From the introduction) **80m:93077** 93E03
- Orsina, Gabriel** Characteristic functions in the study of a family of formal languages. I, II. (Romanian. English summary) *Bul. Univ. Braşov Ser. C* **19** (1977), 19-24, 25-29 (1978). (Author's summary) **80f:68088** 68F05
- Ormerod, Neil** A theorem on Fourier transforms of radial functions. *J. Math. Anal. Appl.* **69** (1979), no. 2, 559-562. (Stephen Gelbart) **80g:42015** 42B10
- Ormoscadi, R. N.** An inductive dimension and estimation of metric dimension. (Russian. Georgian and English summaries) *Sakharth. SSR Mecn. Akad. Moambe* **90** (1978), no. 1, 17-20. (D. Adnadjević) **80d:54048** 54F45
- $c$ -scattered and scattered mappings. (Russian. English and Georgian summaries) *Soobšč. Akad. Nauk Gruzin. SSR* **92** (1978), no. 1, 49-52. (Aleksander Błaszczak) **80m:54023** 54C10 (54D99)
- Behavior of some classes of spaces and the dimension under continuous mappings. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruzin. SSR* **92** (1978), no. 2, 289-292. (K. Sieklucki) **80b:54014** 54C10 (54D99, 54F45)
- Ornshy, Ellen** (with Huckleberry, Alan T.) Nonexistence of proper holomorphic maps between certain complex manifolds. *Manuscripta Math.* **26** (1978/79), no. 4, 371-379. (A. Hirschowitz) **80g:32045** 32H99
- Ornstein, Donald S.** Guessing the next output of a stationary process. *Israel J. Math.* **30** (1978), no. 3, 292-296. (K. Jacobs) **80b:28024** 28D05 (60G10)
- (with Gray, Robert M.) Block coding for discrete stationary  $d$ -continuous noisy channels. *IEEE Trans. Inform. Theory* **25** (1979), no. 3, 292-306. (John C. Kieffer) **80f:94011** 94A24 (94A40)
- (with Weiss, Benjamin) Ergodic theory of amenable group actions. I. The Rohlin lemma. *Bull. Amer. Math. Soc. (N.S.)* **2** (1980), no. 1, 161-164. (Douglas Lind) **80j:28031** 28D20 (49A50)
- Ornőko, Ju. B.** On the theory of expansions in the generalized eigenfunctions of selfadjoint operators. (Russian) *Ukrain. Mat. Ž.* **30** (1978), no. 1, 63-69, 141. (J. Milota) **80a:47031** 47A70 (47B15)
- Smooth approximation of selfadjoint differential operators in divergence form with measurable bounded coefficients. (Russian) *Mat. Sb. (N.S.)* **109(151)** (1979), no. 3, 418-431, 479. (V. D. Kolmanenko) **80b:35058** 35P99 (47F05)
- Shen-Orr, Chaim D. See **Shen-Orr, Chaim D.**
- Orsted, Bent** Induced representations and a new proof of the imprimitivity theorem. *J. Funct. Anal.* **31** (1979), no. 3, 355-359. (J. W. Jenkins) **80d:22007** 22D30
- Orszag, Steven A.** (with Bender, Carl M.) ★ Advanced mathematical methods for scientists and engineers. International Series in Pure and Applied Mathematics. McGraw-Hill Book Co., New York, 1978. xiv + 593 pp. ISBN 0-07-004452-X (Vadim Komkov) **80d:00030** 00A69 (34Exx)
- (with Tang, Cha Mei) Two-dimensional turbulence on the surface of a sphere. *J. Fluid Mech.* **87** (1978), no. 2, 305-319. (J. D. Atkinson) **80b:76018** 76F05 (65N99)
- Spectral methods for problems in complex geometries. *Numerical methods for partial differential equations (Proc. Adv. Sem., Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1978)*, pp. 273-305. *Publ. Math. Res. Center Univ. Wisconsin*, **42**. Academic Press, New York, 1979. (P. W. Bates) **80m:65061** 65N30 (65P05)
- (with Morf, Rudolf H.; Frisch, Uriel) Spontaneous singularity in three-dimensional, inviscid, incompressible flow. *Phys. Rev. Lett.* **44** (1980), no. 9, 572-575. (Authors' summary) **80h:76028** 76C05
- Ortega, James M.** (with Plemmons, Robert J.) Extensions of the Ostrowski-Reich theorem for SOR iterations. *Linear Algebra Appl.* **28** (1979), 177-191. (E. R. Hansen) **80b:65037** 65F10
- Ortel, Marvin** (with Belna, Charles) Extremal quasiconformal mappings: necessary conditions. *J. Analyse Math.* **33** (1978), 1-11. (H. Renelt) **80c:30019** 30C60
- Ortiz, E. L.** (with da Silva, M. R. J.) Polynomial approximations of shapes based on condensed representations of Bernstein polynomials in one and several variables. *Multivariate approximation (Sympos., Univ. Durham, Durham, 1977)*, pp. 155-167. Academic Press, London, 1978. (C. Dierckx) **80j:41012** 41A10
- On the numerical solution of nonlinear and functional differential equations with the tau method. *Numerical treatment of differential equations in applications (Proc. Meeting, Math. Res. Center, Oberwolfach, 1977)*, pp. 127-139. *Lecture Notes in Math.* **679**. Springer, Berlin, 1978. (Author's introduction) **80c:65100** 65L99
- Ortleib, Claus Peter** Dualität bei nichtkonvexen Steuerungsproblemen. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 1, pp. 465-479. *Operations Research Verfahren*, **31**. Hain, Meisenheim, 1979. (Author's summary) **80e:49014** 49B10 (90C30)
- Ortner, N.** The value of a definite integral. *Z. Angew. Math. Mech.* **58** (1978), no. 1, 163-165. (V. Ganapathy Iyer) **80c:33002** 33A30 (65D30)
- Ortner, Norbert** The initial-boundary value problem of the transverse vibrations of a homogeneous beam clamped at one end and infinitely long in one direction. I, II. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **26** (1978), no. 8-9, 389-401, 403-415. (Author's summary) **80c:73042** 73K05 (35Q20)
- Fundamentallösungen und Existenz von schwachen Lösungen linearer partieller Differentialgleichungen mit konstanten Koeffizienten. *Ann. Acad. Sci. Fenn. Ser. A I Math.* **4** (1979), no. 1, 3-30. (J. Christina) **80g:35027** 35E05
- Ortolero, P.** (with DelleDonne, M.) Critical fluctuation universality in chemically oscillatory systems: a soluble master equation. *J. Statist. Phys.* **20** (1979), no. 5, 473-486. (V. P. Milant'ev) **80f:80007** 80A30 (35B32)
- Orton, Marion** Distributions and singular integral equations of Carleman type. *Applicable Anal.* **9** (1979), no. 3, 219-231. (N. K. Karapetjan) **80k:45007** 45E10 (46F10)
- Orzalesi, C. A.** Bound and rebound states. (Italian and Russian summaries) *Nuovo Cimento A* (11) **53** (1979), no. 4, 415-439. (G. R. Allcock) **80m:81041** 81D10 (81G99)
- Orazeh, M.** (with Henderson, J.) Cotorsion modules for torsion theories. *Portugal. Math.* **36** (1977), no. 1, 33-40. (Jonathan Golan) **80b:13018** 13D30 (16A63)
- Osada, Masayuki** A generalization of a theorem of Radó-Stout to analytic functions on open Riemann surfaces. *J. Hokkaido Univ. Ed. Sect. II A* **29** (1978/79), no. 1, 1-3. (M. Goldstein) **80b:30041** 30F99
- Osadčák, V. A.** A criterion for the spreading of cracks on closed cylindrical shells. (Russian) *Dokl. Akad. Nauk SSSR* **246** (1979), no. 2, 290-293. (From the text) **80k:73060** 73L99 (73M05)
- Osaki, Shunji** (with Thomas, L. C.) An optimal ordering policy for a spare unit with lead time. *European J. Oper. Res.* **2** (1978), no. 6, 409-419. (Andor Dobó) **80a:90055** 90B05
- (with Kaio, Naoto) Optimum ordering policies with discounting when order cost depend on time. *Internat. J. Systems Sci.* **10** (1979), no. 5, 539-555. (Authors' summary) **80f:90054** 90B05
- (with Kaio, Naoto) Optimum age replacement policy with two failure modes. (French summary) *RAIRO Rech. Opér.* **13** (1979), no. 2, 205-208. (İzzet Sahin) **80e:90048** 90B25
- (with Kaio, Naoto) Extended optimum ordering policies with discounting. *Internat. J. Systems Sci.* **11** (1980), no. 2, 149-157. (Authors' summary) **80m:90043** 90B05
- Osawa, Hideo** The time-dependent streams of overflows and input-flows in the queuing system with variable arrival rate. *Rep. Univ. Electro-Comm.* **29** (1978/79), no. 2, 219-223. (Masao Mori) **80m:60098** 60K25
- Osawa, Takeo** (with Sawada, Katurō) On exactly soluble nonlinear ordinary differential equations of the Liénard type. *J. Phys. Soc. Japan* **44** (1978), no. 5, 1730-1732. (Authors' summary) **80f:34027** 34B30 (58F21)
- Osborn, J. Marshall** (with Mitchell, William J.) Prime commutative power-associative algebras with descending chain condition. *Comm. Algebra* **7** (1979), no. 5, 443-523. (C. Tsai) **80e:17001** 17A05
- (with Benkart, G. M.; Isaacs, I. M.) Lie algebras with self-centralizing ad-nilpotent elements. *J. Algebra* **57** (1979), no. 2, 279-309. (Robert Lee Wilson) **80b:17006** 17B05 (17B20)
- (with Benkart, G. M.; Isaacs, I. M.) Albert-Zassenhaus Lie algebras and isomorphisms. *J. Algebra* **57** (1979), no. 2, 310-338. (Robert Lee Wilson) **80b:17007** 17B05 (17B20)
- Osborn, John E.** (with Antman, Stuart S.) The principle of virtual work and integral laws of motion. *Arch. Rational Mech. Anal.* **69** (1979), no. 3, 231-262. (Joseph J. Rossmann) **80d:73020** 73B99
- Osborn, Sylvia L.** (with Lucchesi, Claudio L.) Candidate keys for relations. *J. Comput. System Sci.* **17** (1978), no. 2, 270-279. (W. W. Armstrong) **80f:68051** 68C25 (68B15)
- Testing for existence of a covering Boyce-Codd normal form. *Inform. Process. Lett.* **8** (1979), no. 1, 11-14. (V. V. Byč) **80g:68026** 68B15 (68C05)
- Osborn, T. A.** (with Wilk, S. F. J.) The form factor approach to  $N$ -body scattering theory. *Ann. Physics* **114** (1978), no. 1-2, 410-430. (P. Achuthan) **80c:81102** 81F10



- (with Bollé, D.) Integral bounds for  $N$ -body total cross sections. *J. Math. Phys.* **20** (1979), no. 6, 1059–1063. (Lawrence E. Thomas) **80e:81090** 81F15 (47A40, 81C10)
- (with Bollé, D.) Time delay in  $N$ -body scattering. *J. Math. Phys.* **20** (1979), no. 6, 1121–1134. (T. Sasakawa) **80g:81066** 81F10 (35C99, 47A40, 81F15)
- Osherson, Anthony (with Stuart, Allan E. G.) On the separability of the sine-Gordon equation and similar quasilinear partial differential equations. *J. Math. Phys.* **19** (1978), no. 7, 1573–1579. (Mark J. Ablowitz) **80b:35126** 35Q20 (35A30)
- Osherson, M. R. (with Jittorntrum, Krisorn) A modified barrier function method with improved rate of convergence for degenerate problems. *J. Austral. Math. Soc. Ser. B* **21** (1979/80), no. 3, 305–329. (K. H. V. Booth) **80k:65046** 65H10 (65K10)
- Osgood, Charles F. (with Yang, Chung Chun) On entire functions having prescribed asymptotic behavior along the real axis. *Bull. Calcutta Math. Soc.* **70** (1978), no. 1, 25–28. (G. Halász) **80h:30023** 30D20
- Osher, Stanley (with Majda, Andrew; McDonough, James) The Fourier method for nonsmooth initial data. *Math. Comp.* **32** (1978), no. 144, 1041–1081. (H.-O. Kreiss) **80a:65197** 65M10
- (with Majda, Andrew) A systematic approach for correcting nonlinear instabilities. The Lax-Wendroff scheme for scalar conservation laws. *Numer. Math.* **30** (1978), no. 4, 429–452. (C. Bardos) **80g:65101** 65M10
- (with Majda, Andrew) Numerical viscosity and the entropy condition. *Comm. Pure Appl. Math.* **32** (1979), no. 6, 797–838. (D. Schultz) **80j:65031** 65N05 (76D99)
- (with Deacon, Arthur G.) A finite element method for a boundary value problem of mixed type. *SIAM J. Numer. Anal.* **16** (1979), no. 5, 756–778. (Authors' summary) **80i:65116** 65N30
- Osherov, V. I. (with Karkach, S. P.) Quasiclassical dynamics of Jahn-Teller molecules. *Molecular Phys.* **36** (1978), no. 4, 1069–1084. (Authors' summary) **80a:81114** 81G55 (35Q99)
- Oshiba, Nobumori Application of the infinitesimal operators and translation of rotation. I. The lineage of dynamic equations. *Bull. JSME* **22** (1979), no. 168, 809–814. (Author's summary) **80e:70007** 70E15 (53A17, 70B10)
- Oshiro, Kiyochi (with Kutami, Mamoru) Direct sums of nonsingular indecomposable injective modules. *Math. J. Okayama Univ.* **20** (1978), no. 2, 91–99. (R. B. Warfield, Jr.) **80a:16038** 16A52
- Thin patches and semiprime FGC-rings. *Osaka J. Math.* **16** (1979), no. 1, 57–63. (T. S. Shores) **80k:13002** 13C05 (13C12)
- Ostach, Zbigniew ★Teoria drgań. (Polish) [Theory of vibrations] *Państwowe Wydawnictwo Naukowe (PWN), Warsaw*, 1978. 330 pp. (loose errata). (Vadim Komkov) **80d:70001** 70-01 (34C15, 34C29)
- Ostapenko, G. S. Dynamic equivalence near invariant manifolds. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 9, 1703–1705, 1726. (L. Reizig) **80b:58039** 58F10
- The behavior of the solutions of differential equations near invariant manifolds. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 2, 262–271, 380. (A. Morimoto) **80k:34065** 34D30 (58F10)
- Ostapov, L. P. Hydrodynamics of collisionless spherical stellar systems in a steady state. *Astronom. Zh.* **55** (1978), no. 1, 41–46. (Russian); translated as *Soviet Astronom.* **22** (1978), no. 1, 23–26. (Ram Krishan Sharma) **80d:85003** 85A15
- Ostapov, E. P. The Yukawa quantum field theory: linear  $N$ , bound, locally Fock property. (French summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* **30** (1979), no. 3, 159–192. (Author's summary) **80b:81051a** 81E10
- The Yukawa quantum field theory: the Matthews-Salam formulas. (French summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* **30** (1979), no. 3, 193–206. (Author's summary) **80b:81051b** 81E10
- Ostapov, F. L. Nonlinear differential operators that are representable in divergence form. (Russian) *Sibirsk. Mat. Zh.* **20** (1979), no. 2, 354–362, 459. (D. M. Eids) **80g:35033** 35G20
- Ostapov, I. L. (with Paščenko, V. P.; Šipilin, A. V.) The computation of flows of a nonviscous gas in channels with a strongly changing cross-section. (Russian) *Zh. Vyčisl. Mat. i Mat. Fiz.* **18** (1978), no. 4, 964–973, 1069. (Authors' summary) **80b:76027** 76N15 (65P05)
- Ostapov, Ju. V.  $p$ -adic zeta functions. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 3(207), 209–210. (Neal Koblitz) **80j:12014** 12B30 (12B40)
- Ostapov, L. V. On probabilities of large deviations for sums of independent random vectors. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **23** (1978), no. 3, 510–526. (S. A. Book) **80c:60046** 60F10 (60B12)
- Ostapov, V. Z. (with Sulikavili, R. S.) The oscillation in an elliptic orbit of a rigid body containing a spherical cavity that is entirely filled with a viscous fluid. (Russian) Questions of the theory of functions and mathematical physics. *Sakharth. SSR Mecn. Akad. Math. Inst. Šrom.* **58** (1978), 175–186. (From the introduction) **80a:70011** 70E99 (34C99)
- Ostapov, V. A. Some bases in spaces of regular functions and their application to interpolation. (Russian) *Mat. Sb. (N.S.)* **105(147)** (1978), no. 2, 238–260, 288. (M. I. Nagnibida) **80a:30005** 30B60 (30E05)
- terlikowska-Ostowska, Barbara See Terlikowska-Ostowska, Barbara
- Ostrowski, N. P. (with Levitin, E. S.; Miljutin, A. A.) Higher order conditions for local minima in problems with constraints. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 6(204), 85–148, 272. (Vadim Komkov) **80f:49001** 49A05 (93C15)
- Ostrowski, Č. The optimality of a particular control in the problem of optimizing the process of thermoconductivity. (Russian) *Mathematical methods of control of systems with distributed parameters* (Russian), pp. 29–42, 95, "Ilim", Frunze, 1978. (Author's summary) **80e:93068** 93C20 (35K05)
- Ostas, A. I. (with Kalachnikov, A. A.) Equations of earth's torsional and spheroidal oscillations with account taken of nonhydrostatic initial stresses. (Russian) *Dokl. Akad. Nauk SSSR* **245** (1979), no. 2, 343–347. (From the text) **80i:86005** 86A15
- Ostas, Kevin E. Semilattices of left reversible semigroups. *Semigroup Forum* **17** (1979), no. 2, 139–152. (T. S. Blyth) **80b:20076** 20M10
- Ostase, Tadashi (with Fujisawa, Takehisa) Inter-arrival time distributions of accepted customers in some queueing systems with finite capacity. *Rep. Univ. Electro-Comm.* **29** (1978/79), no. 2, 205–211. (Authors' summary) **80d:60130** 60K25
- Ostern, Robert (with Lawson, H. Blaine, Jr.) Non-existence, non-uniqueness and irregularity of solutions to the minimal surface system. *Acta Math.* **139** (1977), no. 1–2, 1–17. (Author's review (R.O.)) **80b:35059** 35J60 (53A10, 58E12)
- Bonnesen-style isoperimetric inequalities. *Amer. Math. Monthly* **86** (1979), no. 1, 1–29. (H. W. Guggenheimer) **80b:52013** 52A40 (35P15, 53A05, 53C45, 53C70)
- Ostapčuk, V. S. (with Ljalko, I. I.; Kudrinskii, V. Ju.) The solution of ill-conditioned systems of equations with positive definite matrices. (Russian) *Dokl. Akad. Nauk SSSR* **245** (1979), no. 3, 533–535. (Editors) **80b:65052** 65F35
- Ostapenko, N. A. Some definite integrals of Bessel functions. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **2** (1979), 14–16, 101. (É. Rieksig) **80h:33014** 33A40
- Ostapenko, V. V. A differential evasion game with several pursuers. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1978**, no. 9, 847–849, 664. (Author's summary) **80c:90168** 90D25
- A nonlinear evasion problem. (Russian. English summary) *Kibernetika (Kiev)* **1978**, no. 4, 106–112. (J. M. Skowroński) **80d:90102** 90D26
- Ostapko, Daniel L. (with Hong, Se June) Ratios of sequential digit numbers. *J. Recreational Math.* **12** (1979/80), no. 1, 28–29. (Editors) **80i:10015** 10A30
- Ostashev, V. E. (with Tatarskii, V. L.) The method of multiple forward scattering in media with random inhomogeneities. (Russian. English summary) *Izv. Vysl. Učebn. Zaved. Radiofizika* **22** (1979), no. 2, 170–179. (Authors' summary) **80g:73026** 73D25
- Ostaszewicz, Wacław Calculus of fuzzy numbers. (Polish) *Mat. Stos.* **(3)** **15** (1979), 47–60. (From the introduction) **80h:94064** 94D05 (03E72)
- hoffmann-Ostenhof, Thomas See Hoffmann-Ostenhof, Thomas
- Oster, George F. (with Mirmirani, M.) Competition, kin selection, and evolutionary stable strategies. *Theoret. Population Biol.* **13** (1978), no. 3, 304–339. (K. Gopalsamy) **80a:92053** 92A15
- (with Rocklin, S. M.) Optimization models in evolutionary biology. *Some mathematical questions in biology, X (Proc. 12th Sympos. Math. Biol., Washington, D.C., 1978)*, pp. 21–88, *Lectures on Math. in the Life Sciences*, 11, *Amer. Math. Soc., Providence, R.I.*, 1979. (S. Levin) **80g:92005** 92A10 (92-02)
- (with Perelson, Alan S.) Theoretical studies of clonal selection: minimal antibody repertoire size and reliability of self-non-self discrimination. *J. Theoret. Biol.* **81** (1979), no. 4, 645–670. (Fred L. Bookstein) **80g:92003** 92A09 (60D05)
- Osterburg, James Fixed rings of simple rings. *Comm. Algebra* **6** (1978), no. 17, 1741–1750. (W. E. Baxter) **80g:16041** 16A72 (16A19)
- The influence of the algebra of the group. *Comm. Algebra* **7** (1979), no. 13, 1377–1396. (Susan Montgomery) **80g:16042** 16A72 (16A74)
- The coefficient ring of the skew group ring. *Czechoslovak Math. J.* **29(104)** (1979), no. 1, 144–147. (S. K. Sehgal) **80g:16013** 16A26
- Osternmann, A. Hermitesche Einschrittverfahren für charakteristische Anfangswertaufgaben mit der Differentialgleichung  $u_{xx} = f(x, y, u, u_x, u_y)$ . *Z. Angew. Math. Mech.* **58** (1978), no. 2, 110–112. (H.-O. Kreiss) **80a:65193** 65M05
- Osterreicher, Ferdinand On the existence of least favourable pairs of distributions. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 391–398, *Academia, Prague*, 1978. (Rashid Ahmad) **80m:62024** 62F03 (62C20)
- On the construction of least favourable pairs of distributions. *Z. Wahrsch. Verw. Gebiete* **43** (1978), no. 1, 49–55. (P. J. Huber) **80c:62048** 62F35
- Ostervald, Konrad Gauge theories on the lattice. *New developments in quantum field theory and statistical mechanics (Proc. Cargèse Summer Inst., Cargèse, 1976)*, pp. 173–199, *NATO Adv. Study Inst. Ser. Ser. B: Physics*, 26, *Plenum, New York*, 1977. (Johan G. Belinfante) **80a:81104** 81G20 (00A89)
- (with Seiler, Erhard) Lattice gauge theories. *Mathematical problems in theoretical physics (Proc. Internat. Conf., Univ. Rome, Rome, 1977)*, pp. 26–36, *Lecture Notes in Phys.*, 80, *Springer, Berlin*, 1978. (P. Rudra) **80c:81083** 81E15 (22E70, 28Dxx, 58G35, 82A05)
- See also Gallavotti, Giovanni; et al. **80c:82021**
- Ostiana, N. M. (with Balazjuk, T. N.) Manifolds that are immersed into spaces with a projective structure. (Russian) *Problems in geometry*, Vol. 10 (Russian), pp. 75–115, 224, *VINITI, Moscow*, 1978. (L. Tamásy) **80g:53014** 53B25 (53C05)
- Ostrom, T. G. Translation planes of odd order and odd dimension. *Internat. J. Math. Math. Sci.* **2** (1979), no. 2, 187–208. (J. Yaquib) **80b:51005** 51A40 (20B25)
- (with Kallaher, Michael J.) Bol quasifields and generalized André systems. *J. Algebra* **58** (1979), no. 1, 100–116. (J. André) **80b:51015** 51J20 (12K05)
- (with Johnson, N. L.) The translation planes of order 16 that admit PSL(2, 7). *J. Combin. Theory Ser. A* **26** (1979), no. 2, 127–134. (J. L. Zemmer) **80b:51011** 51E15 (20H15)
- Ostromuhov, L. A. The characteristic function of a Weyl colligation in  $C^r$ . (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* **30** (1978), 109–112, iv. (Author's summary) **80j:47045** 47B37
- Ostrovich, D. A. (with Mogilevskii, G. L.) On a mechanical propositional calculus using Smullyan's analytical tableaux. (Russian. English summary) *Kibernetika (Kiev)* **1978**, no. 4, 43–46. (P. Štěpánek) **80b:68113** 68G15 (03B35)
- Ostrovskaja, L. D. (with Ostroverhii, M. O.) A criterion for isomorphism and groups of automorphisms of graphs. (Russian) *Graph theory (Russian)*, pp. 63–70, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1977. (A. Vancjan (RZMat 1978:12 V1035)) **80f:05049** 05C25
- Ostrovskii, M. O. (with Homenko, M. P.) Graphs of pairs of permutations. (Russian) *Graph theory (Russian)*, pp. 46–53, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1977. (A. Vancjan (RZMat 1978:11 V709)) **80f:05027** 05C10
- (with Homenko, M. P.) 2-cell imbedding of graphs into orientable 2-manifolds. (Russian) *Graph theory (Russian)*, pp. 54–62, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1977. (A. Vancjan (RZMat 1978:11 V710)) **80f:05028** 05C10
- (with Ostroverhaja, L. D.) A criterion for isomorphism and groups of automorphisms of graphs. (Russian) *Graph theory (Russian)*, pp. 63–70, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1977. (A. Vancjan (RZMat 1978:12 V1035)) **80f:05049** 05C25
- Self-dual embeddings of graphs. (Russian) *Graph theory (Russian)*, pp. 71–75, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1977. (A. Vancjan (RZMat 1978:11 V711)) **80f:05029** 05C10

- Ostrovskii, A. Ju.** (with Krasnosel'skii, M. A.; Sobolev, A. V.) Convergence of one-parameter aggregation method. *Avtomat. i Telemekh.* 1978, no. 9, 102-109 (Russian); translated as *Automat. Remote Control* 39 (1978), no. 9, part 2, 1345-1351 (1979). (A. Ramn) 80c:65061 65F10
- Ostrovskii, E. I.** (with Radjulin, V. T.) On a one-dimensional Markov process's getting beyond a curve of a special form. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 2, 100-103, 221 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 2, 77-80 (1979). (Authors' summary) 80c:60095 60J25
- (with Dmitrovskii, V. A.) Error estimation for the method of dependent experiments. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1312-1316, 1359. (V. Dupac) 80c:65007 65C05
- Ostrovskii, G. M.** (with Brusilovskii, A. M.) A decomposition method of optimizing complex systems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 3, 17-24 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 3, 13-21. (Authors' summary) 80c:93017 93A15
- Ostrovskiy, Ye. N.** See **Ostrovskii, E. I.**
- Ostrowski, A. M.** On rational approximations to an irrational number. (Italian summary) *Rend. Sem. Mat. Fis. Milano* 47 (1977), 241-256 (1979). (B. Volkmann) 80i:10046 10F40
- Ostrowski, M.** Dissipation in the Hagedorn early universe. *Acta Phys. Polon. B* 10 (1979), no. 10, 875-882. (Author's summary) 80m:23051 83F05
- Ostuda, B. A.** (with Gricjuk, N. P.) Numerical solution of some boundary value problems in potential theory by means of the self-regularization method. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev) No. 38* (1979), 75-82, 165. (Authors' summary) 80c:78012 78A30 (65P05)
- O'Sullivan, Colin T.** Newton's laws of motion: some interpretations of the formalism. *Amer. J. Phys.* 48 (1980), no. 2, 131-133. (Editors) 80c:70003 70A05 (01A55)
- O'Sullivan, M. J.** (with McKibbin, R.) Onset of convection in a layered porous medium heated from below. *J. Fluid Mech.* 96 (1980), no. 2, 375-393. (Authors' summary) 80m:76073 76S05
- Oswald, A.** On near-rings of quotients. *Proc. Edinburgh Math. Soc. (2)* 22 (1979), no. 2, 77-86. (C. J. Maxson) 80i:16047 16A76
- Oswald, P.** Ungleichungen vom Jackson-Typ für die algebraische beste Approximation in  $L_p$ . *J. Approx. Theory* 23 (1978), no. 2, 113-136. (J. G. Herriot) 80c:41010 41A17
- Ōta, Shōichi** Certain operator algebras induced by \*-derivations in  $C^*$ -algebras on an indefinite inner product space. *J. Funct. Anal.* 30 (1978), no. 2, 238-244. (L. Longdon) 80c:46051 46L05 (47B50, 47D25)
- Ōtake, Shigeo** (with Oyama, Makoto; Hamada, Toshio; Iizuka, Masaaki; Kobayashi, Tatsuhiro; Tanaka, Kaoru; Tanaka, Mitsuru; Michiaki, Yoshimasa) Elliptic problems occurring in "sangaku". (Japanese) *Sūgaku Shi Kenkyū No. 78* (1978), 1-85. (S. Hitotumatu) 80c:91001 01A27 (51-03)
- Otakur, S.** Differential equations with a multivalued right-hand side and retarded argument. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent) No. 52* (1978), 12-21, 153. (Franz Kappel) 80c:34074 34K05
- Ōtal Cinca, Javier** Centrality with respect to a class of groups and generalized associated classes. (Spanish. English summary) *Publications of the García de Galdeano Mathematics Seminar*, 25 (Spanish), pp. 21-30, Consejo Sup. Inc. Cient., Zaragoza, 1977. (F. Pérez Monasor) 80c:20049 20F14 (20F19, 20F24)
- Relatively R-closed classes of groups. (Spanish. English summary) *Publications of the García de Galdeano Mathematics Seminar*, 24 (Spanish), pp. 35-42, Consejo Sup. Inc. Cient., Zaragoza, 1977. (Author's summary) 80c:20045 20F22
- Functorial characterization of categorical duality of R- and N-closed classes. (Spanish. English summary) *Rev. Real Acad. Cienc. Exact. Fis. Natur. Madrid* 72 (1978), no. 1, 65-77. (M. L. Laplaza) 80c:18002 18A32 (18E10)
- Otiik, V. S.** (with Berezin, A. V.; Boguĭ, A. A.; Fedorov, F. I.) Boost matrix elements of unitary representations of the Lorentz group in the base  $SO(3,1) \supset SO(2,1) \supset SO(2)$ . (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 4, 864-867. (From the text) 80c:81022 81C40 (22E43)
- Ottelmer, M.** (with Amanov, T. I.) Imbedding theorems for a family of weighted spaces. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975) (Russian)*, pp. 9-11, "Nauka", Moscow, 1977. (Authors' review (RZMat 1977:10 B70)) 80c:46039 46E35
- (with Bliev, N. K.) On the theory of generalized analytic functions of I. N. Vekua. (Russian. Georgian and English summaries) *Sakharth. SSR Mecn. Akad. Moambe* 90 (1978), no. 2, 297-300. (T. Kubo) 80c:30056 30G20
- (with Kasymov, E. A.) Essential selfadjointness of a differential operator. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazakh. SSR Ser. Fiz.-Mat.* 1979, no. 1, 20-23, 90. (V. I. Hrabustovskii) 80c:47052 47E05 (34B25)
- (with Apyšev, O. D.) The spectrum of a class of differential operators and some imbedding theorems. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 4, 739-764, 966. (A. Ramn) 80c:47065 47E05 (34B25, 46E35)
- (with Lizorkin, P. I.) Imbedding and compactness theorems for Sobolev type spaces with weights. (Russian) *Mat. Sb. (N.S.)* 108(150) (1979), no. 3, 358-377, 477. (O. John) 80j:46054 46E35
- A criterion for nuclearity of the resolvent of a Sturm-Liouville operator. (Russian) *Mat. Zametki* 25 (1979), no. 4, 569-572, 636. (V. I. Hrabustovskii) 80c:34037 34B25
- (with Suvorčenkova, G. A.) A necessary and sufficient condition of boundedness and continuity for a class of Uryson operators. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 2, 428-432, 461. (J. Gishoviche) 80c:47080 47H99 (47G05)
- Ōtsu, Tōzaburō** (with Watanabe, Tadashi) Generating functions of two-time Green functions for some simple systems. *Phys. Rep. Kumamoto Univ.* 3 (1977/78), no. 2, 103-112. (Martin Costabel) 80c:81035 81C99 (35C05)
- Ōtsube, Shōji** Solutions of an algebraic differential equation of the first order in a Liouvillian extension of the coefficient field. *Osaka J. Math.* 16 (1979), no. 1, 289-293. (K. Okugawa) 80c:12027 12H05
- Otsuka, Kayo** Some remarks on formally real fields. *Tamkang J. Math.* 9 (1978), no. 1, 65-69. (W.-D. Geyer) 80c:12015 12D15
- Otsuki, Makoto** A residue formula for Chern classes associated with logarithmic connections. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 9, 295-297. (Yue Lin L. Tong) 80f:32006 32C30 (14C30)
- Otsuki, Mikio** Discrete procedures of economic planning: a unified view from feasible direction methods. *Rev. Econom. Stud.* 45 (1978), no. 1, 77-84. (From the introduction) 80i:90006 90A05 (90C50)
- Ōtsuki, Tominosuke** Certain integral equality and inequality for hypersurfaces of  $S^q(\mathbb{R})$ . *Kodai Math. J.* 1 (1978), no. 2, 237-257. (A. Aepli) 80c:53042 53C45 (52A40)
- Ott, Tamas J.** Some more results for the stable  $M/G/1$  queue in heavy traffic. *J. Appl. Probab.* 16 (1979), no. 1, 187-197. (Bruce D. Craven) 80d:60137 60K25
- Ott, Udo** Fahnentransitive Ebenen ungerader Ordnung. *Geom. Dedicata* 8 (1979), no. 2, 219-252. (J. Yaqub) 80c:51003 51A35 (20H15)
- Otte, Michael** (with Keitel, Christine) Probleme der Profession und des professionellen Wissens des Mathematiklehrers. *Math.-Phys. Semesterber.* 26 (1979), no. 2, 154-176. (R. P. Boas, Jr.) 80i:01069 01A80
- Otien, Albert** (with van Montfort, Martin A. J.) On testing a shape parameter in the presence of a location and a scale parameter. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 9 (1978), no. 1, 91-104. (G. S. Lingappaiah) 80c:62035 62F05 (62N05)
- van Otterloo, Peter J.** (with Gerbrands, Jan J.) A note on a sampling theorem for simply connected closed contours. *Inform. and Control* 39 (1978), no. 1, 87-91. (John Cantwell) 80c:53002 53-04 (53A04, 68G10)
- (with Young, Ian T.) A distribution-free geometric upper bound for the probability of error of a minimum distance classifier. *Pattern Recognition* 10 (1978), no. 4, 281-286. (Authors' summary) 80c:68121 68G10 (62H30)
- Otterson, Paul** (with Svetlichny, George) Derivative dependent infinitesimal deformations of differentiable functions. *Contemporary developments in continuum mechanics and partial differential equations (Proc. Internat. Sympos., Inst. Mat., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 466-471, North-Holland Math. Studies, 30, North-Holland, Amsterdam, 1978. (P. Ver Eecke) 80i:58049 58H05
- Otto, E.** See **Handbook: Mathematics**, 80f:00007
- Otto, Edward** Pappus'sche Eigenschaft des Linienraumes. *Demonstratio Math.* 11 (1978), no. 3, 851-852. (J. Katerňák) 80m:51003 51A30
- Otto, Wojciech** Application of the Monte Carlo method to the estimation of the parameter of a linear model of simultaneous structural equations. (Polish. Russian and English summaries) *Przegląd Statyst.* 25 (1978), no. 2, 187-204. (Author's summary) 80c:62071 62P20
- Onansafi, Abdellatif** Existence et unicité de solutions périodiques pour certains systèmes différentiels ordinaires du premier ordre fortement non linéaires. *Publ. Math. Univ. Bordeaux* 1974/75, no. 1-2, 137-144. (Editors) 80j:34041 34C25
- Oubina, Lia** Localisation d'une propriété du graphe des bases d'un matroïde binaire. (English summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 323-324, Colloques Internat. CNRS, 260, CNRS, Paris, 1978. (John H. Mason) 80j:05046 05B35 (05C99)
- Outton, D. B.** (with Wollkind, D. J.; Maurer, R. N.) A stability analysis of a prototype moving boundary problem in heat flow and diffusion. *Amer. Math. Monthly* 86 (1979), no. 3, 175-186. (D. A. Nield) 80i:80006 80A20 (35K05)
- Outcalt, David L.** (with Yaqub, Adil) Commutativity and structure theorems for rings with polynomial constraints. *Math. Japon.* 23 (1978/79), no. 2, 217-226. (Claudio Procesi) 80c:16046 16A70
- (with Yaqub, Adil) A commutativity theorem for rings with constraints involving an additive subsemigroup. *Math. Japon.* 24 (1979/80), no. 2, 195-202. (Howard E. Bell) 80c:16045 16A70
- Outwalte, C. W.** (with Thomlinson, M. M.) Numerical study of a modified BBGY integral equation for the primitive model of an electrolyte solution. *Molecular Phys.* 38 (1979), no. 3, 941-942. (Authors' summary) 80c:82031 82A50
- Outlaw, Curtis** (with Sarafyan, Diran; Derr, Leroy) Generalizations of the Euler-Maclaurin formula. *J. Math. Anal. Appl.* 67 (1979), no. 2, 542-548. (Thomas A. Atchison) 80c:65063 65D32
- Ouvrad, Jean-Yves** Martingale projection and linear filtering in Hilbert spaces. I. The theory. *SIAM J. Control Optim.* 16 (1978), no. 6, 912-937. (V. Gourishankar) 80c:93169a 93E11 (60G35, 60G44)
- Linear filtering in Hilbert spaces. II. An application to the smoothing theory for hereditary systems with observation delays. *SIAM J. Control Optim.* 16 (1978), no. 6, 938-952. (V. Gourishankar) 80c:93169b 93E11 (60G35, 60G44)
- Ouyang, Chong Zhen** Some theorems on Ricci recurrent spaces and Ricci symmetric spaces. (Chinese) *Acta Math. Sinica* 21 (1978), no. 3, 282-284. (Huei-Shyong Lue) 80c:53016 53B20
- Ovčarenko, I. E.** (with Kreĭn, M. G.) Inverse problems for  $Q$ -functions and resolvent matrices of positive Hermitian operators. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 3, 521-524. (T. Ja. Azizov) 80d:47036 47B25
- Ovčinnikov, A. A.** (with Krivnov, V. Ja.) New method in the theory of a weakly ideal one-dimensional Fermi gas. Correlation functions. *Ž. Eksp. Teoret. Fiz.* 76 (1979), no. 2, 654-669 (Russian); translated as *Soviet Phys. JETP* 49 (1979), no. 2, 328-334. (M. Martinis) 80c:81196 81H05 (82A40)
- Ovčinnikov, V. I.** Interpolation orbits of the classes  $\mathcal{E}_\infty$  in pairs of Hilbert spaces. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 1, 52-55. (A. Pietsch) 80c:47047 47D25 (46M35)
- Ovredlik, D. A.** (with Simons, F. H.) Recurrent and sweep-out sets for Markov processes. *Monatsh. Math.* 86 (1978/79), no. 4, 305-326. (Michael Lin) 80c:60082 60J05
- Oversteegen, Lex G.** Noncontractibility of continua. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 9-10, 837-840. (J. J. Charatonik) 80c:54045 54F20 (54F50)
- Fans and embeddings in the plane. *Pacific J. Math.* 83 (1979), no. 2, 495-503. (J. J. Charatonik) 80m:54052 54F50 (54C25)
- Orrut, B.** (with Hagiwara, T.) Effective potential for spontaneously broken gauge theories and gauge hierarchies. *Phys. Rev. D (3)* 20 (1979), no. 8, 1988-2005. (Authors' summary) 80m:81098 81G15 (81D20)
- Nonzero vacuums in nonabelian gauge theory and infrared divergence. *Phys. Rev. D (3)* 21 (1980), no. 2, 504-510. (Author's summary) 80c:81107 81E10
- Orszepjan, R. I.** The empty set as an  $M$ -set in a class of general orthonormal systems. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* 13 (1978), no. 4, 261-274, 353. (K. Karták) 80c:42010 42C15



- Unconditional summability in linear spaces. (Russian) Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue 2* (1979), 259–276. (R. P. Boas, Jr.) **80j:46012** 46A35 (40J05)
- Ovchinnikov, V. G. A mixed boundary value problem for nonstationary Navier-Stokes equations on the exterior of a circular cylinder. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev) No. 35* (1978), 127–130, 167. (Author's summary) **80a:65258** 65P05
- Ovchinnikov, D. A. Control of trajectories. (Russian) *Control of dynamical systems* (Russian), pp. 163–172, 318, Leningrad. Univ., Leningrad, 1978. (Claudia Simionescu) **80a:93034** 93C10 (49B10)
- Ovchinnikov, L. V. ★Групповой анализ дифференциальных уравнений. (Russian) [Group analysis of differential equations] "Nauka", Moscow, 1978. 399 pp. (J.-F. Pommeret) **80d:58072** 58G35 (00A69, 34–02, 35–02, 58H10)
- Models of two-layered "shallow water". (Russian) *Ž. Prikl. Meh. i Tehn. Fiz.* 1979, no. 2, 3–14, 180. (From the text) **80j:76016** 76C99
- Ovchinnikov, I. R. Fiberings of regular  $(n-1)$ -parameter families of  $(n-2)$ -planes in  $P_n$ . (Russian) *Geometry, No. 6* (Russian), pp. 73–79, Leningrad. Gos. Ped. Inst., Leningrad, 1977. (Vladislav Goldberg) **80g:53006** 53A20
- Ow, W. H. (with Gauthier, P. M.; Goldstein, M.) Approximation uniforme sur des parties non bornées par des fonctions essentiellement harmoniques. (English summary) *Acad. Roy. Belg. Bull. Cl. Sci. (5)* **64** (1978), no. 3, 80–82. (Kenneth O. Leland) **80j:30066** 30F15 (30E10)
- Owa, Shigeo. On the univalent functions with a quasiconformal extension. *Math. Japon.* **23** (1978/79), no. 2, 259–261. (D. M. Campbell) **80j:30017** 30C75
- Owen, David R. (with Buhite, Jack L.) An ordinary differential equation from the theory of plasticity. *Arch. Rational Mech. Anal.* **71** (1979), no. 4, 357–383. (S. C. Das) **80e:73023** 73E99 (34C25)
- Owen, Donald B. (with Drane, J. Wanzner; Seibert, Guy Burton, Jr.) The Burr distribution and quantal responses. *Statist. Hefte (N.F.)* **19** (1978), no. 3, 204–210. (Authors' summary) **80e:62113** 62P10
- Owens, D. H. ★Feedback and multivariable systems. IEE Control Engineering Series, 7. Peter Peregrinus, Ltd., Stevenage; on behalf of the Institution of Electrical Engineers (IEE), London, 1978. xi+318 pp. ISBN 0-90-604803-6 (Andrzej W. Olbrot) **80a:93001** 93-01 (93C05)
- Dynamic transformations and the calculation of multivariable root-loci. *Internat. J. Control* **28** (1978), no. 3, 333–343. (Author's summary) **80d:93049a** 93C99 (93D15)
- Multivariable root-loci and the inverse transfer-function matrix. *Internat. J. Control* **28** (1978), no. 3, 345–351. (Author's summary) **80d:93049b** 93C99 (93D15)
- Asymptotic stability of differential multipass-processes. *Electron. Lett.* **15** (1979), no. 15, 446–447. (Author's summary) **80d:93060** 93D20
- Comments on "Factorization procedure for a class of rational matrices" (Internat. J. Control **28** (1978), no. 1, 105–111) by M. J. Grimble. *Internat. J. Control* **29** (1979), no. 2, 359–360. (From the text) **80j:93011** 93A15
- A note on compensation of multivariable root loci. *Internat. J. Control* **29** (1979), no. 3, 387–391. (Author's summary) **80e:93088** 93C99
- Compensation theory for multivariable root loci. *Proc. Inst. Electr. Engrs.* **126** (1979), no. 6, 538–541. (J. O'Reilly) **80d:93050** 93C99 (93A15)
- Dyadic expansions and their applications. *Proc. Inst. Electr. Engrs.* **126** (1979), no. 6, 563–567. (P. C. Parks) **80d:93026** 93B17
- Asymptotic root loci for proper multivariable systems. *Proc. Inst. Electr. Engrs.* **126** (1979), no. 8, 788–789. (Author's summary) **80e:93107** 93D99
- (with Boland, F. M.) Bounds for the zeros of partially symmetric multivariable systems. *Proc. Inst. Electr. Engrs.* **126** (1979), no. 8, 789–790. (Authors' summary) **80e:93106** 93D99
- On the computation of optimal system asymptotic root-loci. *IEEE Trans. Automat. Control* **25** (1980), no. 1, 100–102. (Author's summary) **80m:93045** 93C45
- Owens, R. W. (with Sreedharan, V. P.) Algorithms for solving overdetermined systems of linear equations in the  $\ell_p$ -metric,  $0 < p < 1$ . *J. Approx. Theory* **24** (1978), no. 1, 1–17. (Authors' summary) **80e:65093** 65F20
- Owicki, Susan. Verifying concurrent programs with shared data classes. *Formal description of programming concepts* (Proc. IFIP Working Conf., St. Andrews, N.B., 1977), pp. 279–299, North-Holland, Amsterdam, 1978. (Author's summary) **80e:68063** 68B20
- Owings, James C., Jr. Solution of  $(\frac{r}{n}) = (\frac{r}{n})$  in terms of Fibonacci numbers. *Fibonacci Quart.* **17** (1979), no. 1, 67–69. (F. Beukers) **80b:10027** 10B25
- Oxenlin, J. On the invariance of distribution functions. *Z. Naturforsch. A* **34** (1979), no. 7, 895–896. (Author's summary) **80e:82008** 82A05
- Oxley, James G. Infinite matroids. *Proc. London Math. Soc.* (3) **37** (1978), no. 2, 259–272. (R. A. Brualdi) **80a:05061** 05B35
- On cographic regular matroids. *Discrete Math.* **25** (1979), no. 1, 89–90. (John H. Mason) **80e:05045** 05B35
- (with Welsh, D. J. A.) On some percolation results of J. M. Hammersley. *J. Appl. Probab.* **16** (1979), no. 3, 526–540. (John C. Wierman) **80b:60120** 60K35 (82A42)
- On a packing problem for infinite graphs and independence spaces. *J. Combin. Theory Ser. B* **26** (1979), no. 2, 123–130. (C. St. J. A. Nash-Williams) **80j:05047** 05B35 (05C99)
- Oxtoby, John C. (with Prasad, Vidhu S.) Homeomorphic measures in the Hilbert cube. *Pacific J. Math.* **77** (1978), no. 2, 483–497. (A. H. Stone) **80b:28006** 28A35 (28C15)
- Oya, Shinichi (with Suzuki, Hisao; Shimodaira, Kazuo; Hagino, Kōgō; Takagi, Shigeo) Memories of the days when the Society was founded. (Japanese) Special issue on the 20th anniversary of Sīgākushi Kenkyū. *Sīgākushi Kenkyū* No. 80 (1979), 76–88. (K. Inoue) **80k:01008** 01A27 (01A60)
- Oyama, Makoto (with Michiaki, Yoshimasa; Kobayashi, Tatsuhiko; Tanaka, Kaoru) On the cycloids in the old Japanese mathematics. *Karachi Math. Assoc. Riazi (Souvenir)* **1978** 32–41. (S. Hitotumatu) **80f:01004** 01A27 (51–03)
- (with Hamada, Toshio; Iizuka, Masaaki; Ōtake, Shigeo; Kobayashi, Tatsuhiko; Tanaka, Kaoru; Tanaka, Mitsuru; Michiaki, Yoshimasa) Elliptic problems occurring in "sangaku". (Japanese) *Sīgākushi Kenkyū* No. 78 (1978), 1–85. (S. Hitotumatu) **80c:01001** 01A27 (51–03)
- Oyamaguchi, Michio (with Honda, Namio) The decidability of equivalence for deterministic stateless pushdown automata. *Inform. and Control* **38** (1978), no. 3, 367–376. (Kurt Mehlhorn) **80f:68094** 68F10 (68D35)
- Oyanagi, Y. Calculation of Legendre moments from partial waves. *Let. Nuovo Cimento* (2) **23** (1978), no. 17, 634–636. (G. Vitiello) **80d:81106** 81F15 (33A45)
- van Oystaeyen, F. Graded and non-graded birational extensions. *Ring theory* (Proc. Conf., Univ. Antwerp, Antwerp, 1977), pp. 155–179, Lecture Notes in Pure and Appl. Math., 40, Dekker, New York, 1978. (Jonathan Golan) **80a:16001** 16A03 (16A08, 16A63)
- On graded rings and modules of quotients. *Comm. Algebra* **6** (1978), no. 18, 1923–1959. (Ralph W. Wilkerson) **80a:16006** 16A08
- Ring theory  $\cap$  torsion theory = useful localization. *Nieuw Arch. Wisk.* (3) **26** (1978), no. 3, 413–427. (Author's introduction) **80a:16007** 16A08 (18E40)
- (with Verschoren, A.) ★Reflectors and localization. Application to sheaf theory. Lecture Notes in Pure and Applied Mathematics, 41, Marcel Dekker, Inc., New York-Basel, 1979. vii+166 pp. ISBN 0-8247-6844-2 (J. Lambek) **80f:18012** 18F20 (18E35)
- (with Năstăsescu, Constantin) ★Graded and filtered rings and modules. Lecture Notes in Mathematics, 758, Springer-Verlag, Berlin-New York, 1979. x+148 pp. ISBN 3-540-09708-2 (Melvin Hochster) **80e:16002** 16-02 (13D99)
- (with Verschoren, A.) Relative localization; bimodules and semiprime P.I. rings. *Comm. Algebra* **7** (1979), no. 9, 955–988. (William D. Blair) **80e:16004** 16A08 (16A38)
- See also Ring theory, **80a:16001** and Ring theory, **80m:16001**
- Ozaki, T. Maximum likelihood estimation of Hawkes' self-exciting point processes. *Ann. Inst. Statist. Math.* **31** (1979), no. 1, 145–155. (Author's summary) **80d:62079** 62M09
- Ozawa, Mitsuru On the existence of prime periodic entire functions. *Kōdai Math. Sem. Rep.* **29** (1977/78), no. 3, 308–321. (D. Drasin) **80b:30022** 30D15 (30D35)
- On the zero-one set of an entire function. II. *Kōdai Math. J.* **2** (1979), no. 2, 194–199. (S. Hellerstein) **80m:30026** 30D20 (30D35)
- Ozawa, Shin (with Fujiwara, Daisuke) The Hadamard variational formula for the Green functions of some normal elliptic boundary value problems. *Proc. Japan Acad. Ser. A Math. Sci.* **54** (1978), no. 8, 215–220. (Jan Bochenek) **80d:35048** 35J40
- The eigenvalues of the Laplacian and perturbation of boundary condition. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 4, 121–124. (Alan Weinstein) **80e:35051** 35P99 (58G25)
- Ozawa, Takao On the trees realizing a symmetric gauge matrix (terminal capacity matrix). *Electron. Comm. Japan* **60** (1977), no. 9, 24–30. (Author's summary) **80f:94043** 94C15 (94A17)
- (with Kajitani, Yoji) Diagnosability of linear active networks. Special issue on automatic analog fault diagnosis. *IEEE Trans. Circuits and Systems* **26** (1979), no. 7, 485–489. (Authors' summary) **80e:94025** 94C05
- Ozeki, Kazuhiko A coordinate-free theory of eigenvalue analysis related to the method of principal components and the Karhunen-Loève expansion. *Inform. and Control* **42** (1979), no. 1, 38–59. (L. L. Campbell) **80d:62056** 62H25
- Ozgren, M. K. (with Longman, R. W.; Cooper, C. A.) Probabilistic inequality constraints in stochastic optimal control theory. *J. Math. Anal. Appl.* **66** (1978), no. 1, 237–259. (A. Friedman) **80a:93200** 93E20
- Ozguner, F. (with Donath, W. E.; Cha, C. W.) On fault simulation techniques. *J. Design Automat. Fault-Tolerant Comput.* **3** (1979), no. 2, 83–92. (Authors' summary) **80k:94036** 94C05 (68J05)
- Ozginer, Ümit (with Perkins, W. R.) Optimal control of multilevel large-scale systems. *Internat. J. Control* **28** (1978), no. 6, 967–980. (Kinio Kanai) **80b:93011** 93A15 (49B10)
- Near-optimal control of composite systems: the multi time-scale approach. *IEEE Trans. Automat. Control* **24** (1979), no. 4, 652–655. (Author's summary) **80j:93012** 93A15
- (with Sarachik, P. E.) Stabilizing feedback gains for priority-ordered multichannel linear systems. *IEEE Trans. Automat. Control* **25** (1980), no. 1, 104–106. (Authors' summary) **80m:93064** 93D15
- Oziewicz, Z. (with Ablamowicz, R.; Mozrzyk, J.; Rzewuski, Jan) Spinor space. *Rep. Math. Phys.* **14** (1978), no. 1, 89–100. (Guido Karrer) **80d:81031** 81C40 (15A66, 22E70)
- Oligova, E. P. (with Baïmakova, I. G.; Gnedenko, B. V.; Kuzičeva, Z. A.; Medvedev, F. A.; Parsin, A. N.; Rudakov, A. N.; Slavutin, E. I.; Šelina, O. B.; Jul'kevič, A. P.) ★Математика XIX века. (Russian) [XIXth century mathematics] Математическая логика. Алгебра. Теория чисел. Теория вероятностей. [Mathematical logic. Algebra. Number theory. Probability theory] Edited by A. N. Kolmogorov and A. P. Jul'kevič. "Nauka", Moscow, 1978. 255 pp. (I. Grattan-Guinness) **80i:01010** 01A55
- Paatašvili, V. A. (with Kokilašvili, V. M.) A problem of linear conjugation with measurable coefficients for a class of boundary curves. (Russian. Georgian and English summaries) *Sobbič. Akad. Nauk Gruz. SSR* **91** (1978), no. 1, 25–27. (N. K. Karapetjan) **80j:30061** 30E25 (45E05)
- Pabel, Helmut (with Barthel, Woldemar) Zur Kurventheorie in der vierdimensionalen metrischen Differentialgeometrie. *Resultate Math.* **1** (1978), no. 1, 1–41. (Walter O. Vogel) **80e:53068** 53C70
- Pablon, J. F. Beth's tableaux for relevant logic. *Notre Dame J. Formal Logic* **20** (1979), no. 4, 891–899. (Robert P. McArthur) **80a:03023** 03B45
- Pacchiarotti, N. The concept of solution and boundary theorems in abstract spaces in the absence of uniqueness. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* **26** (1977), no. 1, 142–166 (1978). (G. Sansone) **80a:47100** 47H15 (34A99)
- A comparison theorem for systems of ordinary differential equations, in the absence of uniqueness. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* **27** (1978), no. 1, 78–88 (1979). (Wadi Mahfoud) **80j:34030** 34C10
- Pace, J. Wayne (with Feathers, G.; Dotson, W. G., Jr.) A nonlinear theorem of ergodic type. *Proc. Amer. Math. Soc.* **73** (1979), no. 1, 35–36. (Gilles Fournier) **80c:47059a** 47H99
- Pačeva, Filomena Connections between several extensions of the theory of topological degree. (Italian. English summary) *Rend. Accad. Naz. XL* (5) **3** (1977/78), 209–224 (1979). (Jean Mawhin) **80j:47072** 47H10
- Pačev, U. M. (with Malyšev, A. V.) Representation of integers by positive ternary quadratic forms (a new variant of the discrete ergodic method). (Russian) *Studies in*

- number theory, 5. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **82** (1979), 33–87, 165. (W. Schwarz) **80j:10027** 10B35
- Pachl, Jan K.** (with Frolík, Zdeněk; Zahradník, Miloš) Examples of uniform measures. *Proceedings of the Conference Topology and Measure, I* (Zimowitz, 1974), Part 1, pp. 139–152, Ernst-Moritz-Arndt Univ., Greifswald, 1978. (Authors' introduction) **80e:28019** 28C15
- Disintegration and compact measures. *Math. Scand.* **43** (1978/79), no. 1, 157–168. (Wolfgang Adamski) **80d:28020** 28A50
- Measures as functionals on uniformly continuous functions. *Pacific J. Math.* **82** (1979), no. 2, 515–521. (Robert F. Wheeler) **80j:28012** 28A33 (46E27)
- Pachner, Udo** Schnitt- und Überdeckungszahlen kombinatorischer Sphären. *Geom. Dedicata* **7** (1978), no. 4, 443–453. (Hans Herda) **80c:57004** 57M15 (05C10)
- Pacholski, Leszek** See *Colloquium: Logic*, **80a:03003**
- Pachpatte, B. G.** On the behavior of solutions of a certain class of nonlinear integrodifferential equations. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **24** (1978), no. 1, 77–86. (Editors) **80g:45013** 45J05
- On some new discrete inequalities and their applications to a class of sum-difference equations. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **24** (1978), no. 2, 315–326. (K. Lajko) **80e:39008** 39C05 (39A10)
- Some problems in nonlinear differential equations with integral perturbations. *An. Univ. Bucureşti Mat.* **27** (1978), 57–64. (T. G. Hallam) **80d:34062** 34D10
- On some fundamental integral inequalities with applications. *Bul. Ştiinţ. Tehn. Inst. Politehn. "Traian Vuia" Timişoara* **23**(37) (1978), no. 1, 25–33 (1979). (S. Leela) **80j:26019** 26D15 (45J05)
- On some fundamental integrodifferential inequalities for differential equations. *Chinese J. Math.* **6** (1978), no. 1, 17–23. (James S. Muldowney) **80c:34007** 34A40 (34A10)
- (with Singare, S. M.) On some discrete generalizations of an inequality of Gronwall. *Chinese J. Math.* **6** (1978), no. 2, 121–135. (E. F. Beckenbach) **80b:26025** 26D15
- On some fundamental integro-differential inequalities and their discrete analogues. *Proc. Indian Acad. Sci. Sect. A* **87** (1978), no. 9, 201–207. (H. E. Gollwitzer) **80k:45013** 45J05 (26D10, 39A12)
- Fixed point theorems for contraction type mappings on a 2-metric space. *Proc. Nat. Acad. Sci. India Sect. A* **48** (1978), no. 2, 94–102. (Rainald Schöneberg) **80j:54039** 54H25
- Integral perturbations in the theory of nonlinear systems of differential equations. (Spanish summary) *Rev. Técn. Fac. Ingr. Univ. Zulia* **1** (1978/79), no. 1, 63–67. (Editors) **80b:45017** 45J05
- A note on some new  $n$ th order discrete inequalities. *Tamkang J. Math.* **9** (1978), no. 1, 29–34. (Paul R. Beesack) **80b:39004** 39A12 (26D15, 39A10, 39C05)
- A note on Gronwall type integrodifferential inequalities. *Tamkang J. Math.* **9** (1978), no. 2, 151–156. (I. Fenyő) **80j:26016** 26D10 (45J05)
- (with Bondge, B. K.) On Wendroff type integral inequalities in  $n$  independent variables. *Chinese J. Math.* **7** (1979), no. 1, 37–46. (Paul R. Beesack) **80j:26014** 26D10 (39C05)
- On Čirić type maps with a nonunique fixed point. *Indian J. Pure Appl. Math.* **10** (1979), no. 8, 1039–1043. (From the text) **80k:54006** 54H25
- Common fixed-point theorems for mappings satisfying rational inequalities. *Indian J. Pure Appl. Math.* **10** (1979), no. 11, 1362–1368. (L. Górniewicz) **80i:54058** 54H25
- On some new integral and integrodifferential inequalities in two independent variables and their applications. *J. Differential Equations* **33** (1979), no. 2, 249–272. (E. F. Beckenbach) **80j:26010** 26D10 (45K05)
- On a stochastic integro-differential equation in a Banach space. *J. Integral Equations* **1** (1979), no. 2, 95–110. (W. J. Padgett) **80e:60079** 60H99 (45J05, 93E15)
- (with Bondge, B. K.) On nonlinear integral inequalities of the Wendroff type. *J. Math. Anal. Appl.* **70** (1979), no. 1, 161–169. (E. F. Beckenbach) **80i:26019** 26D10
- (with Singare, S. M.) Wendroff type discrete inequalities and their applications. *J. Math. Phys.* **13** (1979), no. 2, 149–167. (Ulrich Eckhardt) **80i:65151** 65Q05
- On some  $n$ th-order differential inequalities and their discrete analogues. *Proc. Nat. Acad. Sci. India Sect. A* **49** (1979), no. 1, 7–12. (Krishna M. Das) **80j:34012** 34A40 (26D10)
- Pachter, Meir** (with Heymann, Michael; Stern, Ronald J.) Two-player control problems with subspace targets. *Differential games and control theory, II* (Proc. 2nd Conf., Univ. Rhode Island, Kingston, R.I., 1976), pp. 167–178. *Lecture Notes in Pure and Appl. Math.*, **30**, Dekker, New York, 1977. (Editors) **80a:93110** 93C99 (90D05)
- (with Stern, Ronald J.) The controllability problem for affine targets. *J. Math. Anal. Appl.* **65** (1978), no. 3, 555–564. (R. Guidorzi) **80a:93041** 93B05
- (with Jacobson, D. H.) On the reachable sets in linear systems. *Appl. Math. Optim.* **5** (1979), no. 1, 83–86. (Peter A. Cook) **80b:93029** 93B05
- (with Jacobson, D. H.) Observability with a conic observation set. *IEEE Trans. Automat. Control* **24** (1979), no. 4, 632–633. (Robert F. Brammer) **80j:93032** 93B07
- (with Jacobson, D. H.) Stabilization with conic control constraint set. *Internat. J. Control* **29** (1979), no. 1, 125–132. (Authors' summary) **80c:93108** 93D15
- (with Stern, Ronald J.) On state restrained linear-quadratic control problems. *J. Math. Anal. Appl.* **69** (1979), no. 2, 315–328. (S. P. Bhattacharyya) **80b:93038** 93C45
- (with Heymann, Michael) On the max-min pursuit game. *J. Math. Anal. Appl.* **70** (1979), no. 2, 430–444. (G. J. Olsder) **80i:90118** 90D25
- Pacholski, Zygmunt** On the radius of convexity for certain family of functions meromorphic in unit disc. *Demonstratio Math.* **12** (1979), no. 1, 281–287. (Fred Gross) **80b:30014** 30C45
- Pacilio, N.** (with Lewins, J.) Stochastic equations of particle transport scattering theory. (Italian summary) *Nuovo Cimento A* (11) **50** (1979), no. 2, 258–264. (Authors' summary) **80f:82056** 82A70
- Pachin, M. F.** Isolated periodic solutions of a class of systems with switching on the plane. (Russian) *Differentsial'nye Uravneniya (Ryazan)* No. 11 (1978), 134–137. (Stefan Balint) **80a:34044** 34C25
- Packard, Dennis J.** Preference relations. *J. Math. Psych.* **19** (1979), no. 3, 295–306. (M. M. Flood) **80i:90010** 90A06
- Paclet, Philippe** Remarques sur les espaces de Sobolev  $H^{1,p}$ . (Italian summary) *Boll. Un. Mat. Ital. B* (5) **16** (1979), no. 1, 168–177. (D. Pascali) **80b:46044** 46E35
- Paczynski, Jerzy** The functional analysis interpretation of Lyapunov stability. *Control of distributed parameter systems (Proc. Second IFAC Sympos., Coventry, 1977)*, pp. 157–162. IFAC, Düsseldorf, 1978. (Marshall Slemrod) **80c:93056** 93D05
- Norm positive-definiteness in the stability theory of feedback systems. *Systems Sci.* **4** (1978), no. 3, 241–249. (A. P. Morgan) **80c:93104** 93D10 (93D15, 93D25)
- Padawitz, Peter** (with Ehrig, Hartmut; Kreowski, Hans-Jörg) Stepwise specification and implementation of abstract data types. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978)*, pp. 205–226. *Lecture Notes in Comput. Sci.*, **62**, Springer, Berlin, 1978. (Authors' summary) **80d:68026** 68B15
- Padberg, Manfred W.** (with Grötschel, Martin) On the symmetric travelling salesman problem: theory and computation. *Optimization and operations research (Proc. Workshop, Univ. Bonn, Bonn, 1977)*, pp. 105–115. *Lecture Notes in Econom. and Math. Systems*, **157**, Springer, Berlin, 1978. (B. Tamulynas) **80a:90068** 90C05 (90C10)
- Padervinskas, V. V.**  $n$ -dimensional isogonal nets in rhomboidal isogonal nets in  $n$ -dimensional Euclidean space. (Russian. Lithuanian and English summaries) *Lietuv. Mat. Sb.* **19** (1979), no. 2, 153–160, 213. (Vladislav Goldberg) **80b:53024** 53A60
- Padgett, W. J.** (with Wei, L. J.) Estimation for the three-parameter inverse Gaussian distribution. *Comm. Statist. A—Theory Methods* **8** (1979), no. 2, 129–137. (V. Seshadri) **80i:62020** 62F10
- (with Rao, A. N. V.) Solution of a stochastic integral equation using integral contractors. *Inform. and Control* **41** (1979), no. 1, 56–66. (J. S. Milton) **80i:60066** 60H20
- (with Taylor, Robert L.) Convergence of weighted sums of independent random variables and an extension to Banach space valued random variables. *Internat. J. Math. Math. Sci.* **2** (1979), no. 2, 309–323. (Carol Alf O'Connor) **80i:60008** 60B12
- (with Lee, A. C. H.) Random contractors with random nonlinear majorant functions. *Nonlinear Anal.* **3** (1979), no. 5, 707–715. (Shigeru Itoh) **80i:60068** 60H25
- (with Lee, A. C. H.) A random nonlinear integral equation in population growth problems. *J. Integral Equations* **2** (1980), no. 1, 1–9. (C. P. Tsokos) **80k:60078** 60H20 (92A15)
- Padhye, S. M.** (with Deshpande, M. V.) Characterizations of collectively precompact and semiprecompact operators on topological vector spaces. *J. Austral. Math. Soc. Ser. A* **28** (1979), no. 2, 179–186. (Vo-Khac Khoan) **80m:47019** 47B05 (46A15)
- Padilla, Consuelo S.** (with Cruz, J. B., Jr.) Sensitivity adaptive feedback with estimation redistribution. *IEEE Trans. Automat. Control* **23** (1978), no. 3, 445–451. (Authors' summary) **80a:93201** 93E20
- Paditz, Ludwig** Über die Annäherung von Summenverteilungsfunktionen gegen unbegrenzte teilbare Verteilungsfunktionen in der Terminologie der Pseudomomente. *Wiss. Z. Tech. Univ. Dresden* **27** (1978), no. 6, 1129–1133. (J. Steinebach) **80d:60028** 60F05 (60E07)
- On moderate deviations. *Z. Wahrsch. Verw. Gebiete* **46** (1979), no. 3, 277–288. (J. Steinebach) **80d:60034** 60F10 (60F05)
- Padmanabhan, A. R.** Linear rank statistics from discrete distributions and under alternatives, indexed by a vector parameter. *J. Indian Statist. Assoc.* **15** (1977), 23–38. (Authors' summary) **80d:62037** 62G10
- Some new linear topological spaces (of operators), with trivial and nontrivial dual. *Nanta Math.* **11** (1978), no. 1, 94–99. (B. Fishel) **80k:46103** 46L10 (47D15)
- Padmanabhan, K. S.** (with Narayanan, K. A.) A brief introduction to Nevanlinna theory of meromorphic functions. *Hyperbolic complex analysis (Proc. All India Sem., Ramanujan Inst., Univ. Madras, Madras, 1977)*, pp. 1–20. *Publ. Ramanujan Inst.*, **4**, Univ. Madras, Madras, 1979. (D. Drasin) **80m:30028** 30D30
- Padmanabhan, N.** Exact solution for the unsteady motion of a viscous fluid in a porous annulus. *J. Indian Inst. Sci.* **61** (1979), no. 2, 43–49. (R. K. Gupta) **80f:76042** 76S05
- Padmanabhan, R.** (with Chandran, V. R.) Cyclic identities and associativity. *Nanta Math.* **11** (1978), no. 1, 38–41. (V. Sathyabhama) **80i:20058** 20M10 (20L05)
- (with Grätzer, George) Symmetric difference in abelian groups. *Pacific J. Math.* **74** (1978), no. 2, 339–347. (E. A. Walker) **80m:20045** 20K99
- (with Bandelt, H.-J.) A note on lattices with unique comparable complements. *Abh. Math. Sem. Univ. Hamburg* **48** (1979), 112–113. (D. Duffus) **80g:06015** 06D99
- See also Chandran, V. R., **80m:06005**
- Padovan, Joseph** On gyroscopic problems in elasticity. *Internat. J. Engrg. Sci.* **16** (1978), no. 12, 1061–1073. (Authors' summary) **80b:73019** 73D30 (65N30)
- Padva, I. G.** (with Zevin, A. A.) Inversion of the Laplace transform in problems of hereditary elasticity theory. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* **32** (1979), no. 1, 50–61, 83. (Vadim Komkov) **80f:73026** 73C99 (44A10)
- de Paeppe, P. J.** Maximality in sequences of function algebras. *Nederl. Akad. Wetensch. Indag. Math.* **41** (1979), no. 2, 163–170. (H. S. Bear) **80f:46054** 46J10
- Paes-Leme, Paulo Jorge** Ornstein-Zernike and analyticity properties for classical lattice spin systems. *Ann. Physics* **115** (1978), no. 2, 367–387. (Authors' summary) **80a:81044** 81C99 (00A89, 82A67)
- Pagan, Gordon** (with Stocks, David) Oscillation criteria for second order hyperbolic initial value problems. *Proc. Roy. Soc. Edinburgh Sect. A* **83** (1979), no. 3-4, 239–244. (Charles C. Conley) **80k:35008** 35B05 (35L10)
- Pagani, Carlo Domenico** Monte Carlo type approximation for the solution of the first boundary value problem for the "forward-backward" parabolic equation. (Italian. English summary) *Rend. Sem. Mat. Fis. Milano* **47** (1977), 205–219 (1979). (Artenio De Matteis) **80e:65010** 65C05
- Approximation of the solutions to the first boundary value problem for parabolic equations. (Italian) *Rend. Sem. Mat. Univ. Padova* **58** (1977), 215–240 (1978). (N. N. Janenko) **80m:35039** 35K20
- Approximation of the solutions to the first boundary value problem for second-order equations with positive semidefinite characteristic forms. (Italian) *Confer. Sem. Mat. Univ. Bari* No. 154 (1978), 26 pp. (G. Geymonat) **80j:35041** 35J70
- Pagano, Marcello** On periodic and multiple autoregressions. *Ann. Statist.* **6** (1978), no. 6, 1310–1317. (Melvin Hinich) **80d:62084** 62M10
- Paganoni, Luigi** (with Mangolini, Marco) Regularity theorems for a class of functional equations. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* **57** (1977), 93–105 (1978). (A. Climescu) **80b:39008** 39B30
- On uniqueness structures: some conditions and applications. (Italian summary)



- Rend. Circ. Mat. Palermo* (2) 27 (1978), no. 1, 41–52. (B. Crstici) **80b:39016** 39B70 (39B20)  
(with Guerraggio, A.) On a class of convex functions. (Italian. English summary)  
*Ric. Mat. Univ. Parma* (4) 4 (1978), 239–245 (1979). (O. T. Alas) **80b:54013** 54C10 (54C50)
- Page, Don N.** Positive-action conjecture. *Phys. Rev. D* (3) 18 (1978), no. 8, 2733–2738. (Author's summary) **80a:83061** 83D05 (58D20, 58E20)  
Green's functions for gravitational multi-instantons. *Phys. Lett. B* 85 (1979), no. 4, 369–372. (M. Carmeli) **80b:81076** 81G25 (58G10, 83C99)
- Page, S. S.** Continuous rings and rings of quotients. *Canad. Math. Bull.* 21 (1978), no. 3, 319–324. (Ralph W. Wilkerson) **80b:16017** 16A52  
Regular FPF rings. *Pacific J. Math.* 79 (1978), no. 1, 169–176. (Gertrude Ehrlich) **80d:16012** 16A30 (16A52)  
Images of injectives and universally cotorsionless modules. *Comm. Algebra* 7 (1979), no. 2, 193–201. (J. K. Luedeman) **80b:16018** 16A52
- Page, Warren** ★ Topological uniform structures. Pure and Applied Mathematics. Wiley-Interscience (John Wiley & Sons), New York, 1978. xv + 398 pp.  
ISBN 0-471-02231-4 (T. Husain) **80c:46001** 46-01 (22-01, 43-01, 46A05, 46Hxx, 54E15)
- Page, Heinz** (with Tomboulis, E.) Vacuum of the quantum Yang-Mills theory and magnetostatics. *Nuclear Phys. B* 143 (1978), no. 3, 485–502. (Tuan W. Chen) **80d:81000** 81E10
- Pager, David** The lane-tracing algorithm for constructing LR(k) parsers and ways of enhancing its efficiency. *Inform. Sci.* 12 (1977), no. 1, 19–42. (Author's summary) **80c:68211** 68F25
- Pagli, Linda** (with Luccio, Fabrizio) Power trees. *Comm. ACM* 21 (1978), no. 11, 941–947. (Stephen Soule) **80a:68018** 68B10 (68C25)  
(with Lodi, E.; Luccio, Fabrizio; Mugnai, C.) On two-dimensional data organization. I. *Fund. Inform.* (4) 2 (1978/79), no. 2, 211–226. (Authors' summary) **80c:68008** 68H05
- Paglietti, A.** Interrelation between time-rates of temperature and deformation in continuum thermodynamics. (French and German summaries) *Internat. J. Non-Linear Mech.* 13 (1978), no. 5–6, 367–370. (Author's summary) **80b:80001** 80A10  
On the mathematical formulation of the first principle of thermodynamics for non-uniform temperature processes. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 30 (1979), no. 1, 61–82. (Author's summary) **80d:80012** 80A20
- Pagurek, B.** (with Woodsie, C. M.) An algorithm for computing serial correlations of times in G/G/1 queues with rational arrival processes. *Management Sci.* 25 (1979/80), no. 1, 54–63. (Authors' summary) **80b:60119** 60K25
- Paharova, N. O.** (with Oleksandrovich, I. M.; Kapilov, O. O.) Integral representations of p-analytic functions and the solution of mixed problems. (Russian. English summary) *Vysl. Prikl. Mat. (Kiev)* No. 36 (1978), 3–21, 164. (C. R. Deeter) **80a:30055** 30G20
- Pahomov, V. F.** Information approach to the aggregation problem. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 4, 29–39 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 1, 22–31 (1979). (From the text) **80b:94013** 94A15 (93A15)
- Palme, G.** (with Pavani-Fontana, S. L.) An exact method for the evaluation of the S matrix for the Yukawa potential problem. *J. Phys. A* 11 (1978), no. 9, 1697–1714. (V. D. Kolmanenko) **80i:81051** 81F15 (44A10, 81F05)
- Palma, C. C.** Numerically stable computations for general univariate linear models. *Comm. Statist. B—Simulation Comput.* 7 (1978), no. 5, 437–453. (George P. H. Styan) **80c:62049** 62J05 (65F20, 65F25)  
Computer solution and perturbation analysis of generalized linear least squares problems. *Math. Comp.* 33 (1979), no. 145, 171–183. (Author's summary) **80b:65013** 65D10 (65F35)  
Fast numerically stable computations for generalized linear least squares problems. *SIAM J. Numer. Anal.* 16 (1979), no. 1, 165–171. (Author's summary) **80c:65034** 65D10 (65F10, 65F20)
- Pal, Minja** (with Kraemer, Helena Chmura) A central approximation to the noncentral t distribution. *Technometrics* 21 (1979), no. 3, 357–360. (Authors' summary) **80b:62030** 62E20
- Pallet, Jean-Luc** Théories complètes  $\mathcal{M}_0$ -catégoriques et non finiment modélisables. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 24, A1167–A1170. (Author's summary) **80c:03039** 03C35  
Une étude sur des structures ayant une certaine propriété de seuil pour les automorphismes élémentaires. *Z. Math. Logik Grundlagen Math.* 24 (1978), no. 1, 7–24. (L. Bukovsky) **80c:03028** 03C35  
A threshold property for intersections in a finite set. *J. Combin. Theory Ser. B* 26 (1979), no. 2, 150–153. (J. E. Graver) **80c:05005** 05A05
- Pal, C.** (with Amichay, M.; Neel, D.) Correctness proofs of syntax-directed processing descriptions by attributes. *J. Comput. System Sci.* 19 (1979), no. 1, 1–17. (Authors' summary) **80c:68009** 68B10  
See also Livercy, C., **80b:68004**
- Palma, Carlos** On a problem of moments. I. *Bull. Number Theory Related Topics* 3 (1978), no. 3, 10–13. (D. Leviatan) **80b:42010** 42A16 (30E05)
- Pal, Enayong** On the infinitesimal variations under some conditions in the Riemannian manifold and its submanifolds. *J. Korean Math. Soc.* 15 (1978/79), no. 2, 117–128. (K. Yano) **80c:53018** 53B25 (53C40)
- Pal, I. T.** (with Akuski, I. Ja.; Burcev, V. M.) A new positional characteristic of nonpositional codes and its applications. (Russian) Coding theory and the optimization of complex systems (Russian), pp. 8–16, 237, "Nauka" Kazah. SSR, Alma-Ata, 1977. (Authors' summary) **80c:68003** 68A05 (94B40)  
(with Akuski, I. Ja.; Burcev, V. M.) Computation of the positional characteristic (core) of a nonpositional code. (Russian) Coding theory and the optimization of complex systems (Russian), pp. 17–25, 237, "Nauka" Kazah. SSR, Alma-Ata, 1977. (Authors' summary) **80c:68002** 68A05  
(with Turmuhanbetov, R. N.) Construction of nonpositional codes for hypercomplex numbers. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1979, no. 5, 44–49, 90–91. (Authors' summary) **80b:94069** 94B60
- Pal, Jin Sak** (with Yano, Kentaro; Ki, U Hang) Infinitesimal variations of the Ricci tensor of a submanifold. *Kodai Math. Sem. Rep.* 29 (1977/78), no. 3, 271–284. (Huei-Shyong Lue) **80c:53056** 53C40  
(with Oh, Won Tai) Some characterizations in a Sasakian manifold with vanishing C-Bochner curvature tensor and its submanifolds of codimension 2. *J. Korean Math. Soc.* 15 (1978/79), no. 1, 9–23. (C. S. Houh) **80c:53058** 53C25  
Planar geodesic submanifolds in complex space forms. *Kodai Math. J.* 1 (1978), no. 2, 187–196. (Shigeo Akiba) **80c:53067** 53C40  
(with Yano, Kentaro; Ki, U Hang) Infinitesimal variations of invariant submanifolds of a Sasakian manifold. *Kodai Math. J.* 1 (1978), no. 2, 219–236. (Huei-Shyong Lue) **80c:53049** 53C25  
Anti-invariant submanifolds of real codimension of a complex projective space. *Kyungpook Math. J.* 18 (1978), no. 2, 263–275. (Bang-yen Chen) **80a:53067** 53C40  
(with Eun, Sang-seup) On real hypersurfaces of a quaternionic projective space. *J. Korean Math. Soc.* 16 (1979/80), no. 1, 49–62. (K. Yano) **80c:53083** 53C40 (53C55)  
(with Kwon, Young K.) Anti-holomorphic submanifolds of a Sasakian manifold with vanishing C-Bochner curvature tensor. *Kyungpook Math. J.* 19 (1979), no. 1, 23–32. (Lieven Vanhecke) **80c:53040** 53B25
- Pal, Jingyao** On the fiber-preserving maps. *Colloq. Math.* 38 (1977/78), no. 2, 223–227. (Author's introduction) **80c:55001** 55M25  
(with Golbus, Bruce F.; Kim, Soon Kyu) On the Nielsen numbers of fiber-preserving maps. Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977), I. *Topology Proc.* 2 (1977), no. 1, 125–138 (1978). (L. Górniewicz) **80c:55003** 55M20
- Pal, Namik K.** (with Tze, Hsiung Chia) Chiral solitons and current algebra. *Ann. Physics* 117 (1979), no. 1, 164–194. (David H. Sharp) **80i:81038** 81D15 (58A99, 81G25)
- Palas, Anthony G.** The characterization of series amenable to ratio tests. *Publ. Inst. Math. (Beograd) (N.S.)* 23(37) (1978), 155–162. (E. Seneta) **80m:40002** 40A05 (26A12)  
(with Phatarfod, R. M.) The limiting distribution for the infinitely deep dam with a Markovian input. *Stochastic Process. Appl.* 8 (1978), no. 2, 199–209. (Emlyn Lloyd) **80a:60126** 60K30  
Limit theorems for the simple branching process allowing immigration. I. The case of finite offspring mean. *Adv. in Appl. Probab.* 11 (1979), no. 1, 31–62. (E. Seneta) **80d:60114a** 60J80  
(with Barbour, Andrew D.) Limit theorems for the simple branching process allowing immigration. II. The case of infinite offspring mean. *Adv. in Appl. Probab.* 11 (1979), no. 1, 63–72. (E. Seneta) **80d:60114b** 60J80
- Pakhomov, V. F.** See **Pakhomov, V. F.**
- Pakhin, P. V.** The stability of nonlinear discrete systems with random parameters. (Russian. English summary) *Problemy Control Inform. Theory/Problemy Upravlen. Teor. Inform.* 7 (1978), no. 2, 73–81. (M. P. Mokljatuk) **80a:93127** 93D05  
Sufficient conditions for ergodicity and optimal stationary control in discrete stochastic systems. (Russian. English summary) *Problemy Control Inform. Theory/Problemy Upravlen. Teor. Inform.* 7 (1978), no. 4, 277–294. (Bojan Popović) **80a:93202** 93E20
- Pal, M.** Extension of measures. (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* 33 (1977), 59–62 (1978). (Detlef Plachky) **80b:28003** 28A12  
On sets of positive measure. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 14(34) (1979), no. 1, 51–54. (Author's summary) **80c:28004** 28A12
- Pal, P. C.** (with Debnath, Lokenath) Generation of SH-type waves in layered anisotropic elastic media. *Internat. J. Math. Math. Sci.* 2 (1979), no. 4, 703–716. (Authors' summary) **80m:73017** 73D15
- Pal, Satyabrata** On designs with one-way and two-way elimination of heterogeneity. *Calcutta Statist. Assoc. Bull.* 26 (1977), no. 101-104 (1978). (U. B. Paik) **80c:52054** 62K10
- Pal, T. K.** (with Maiti, M.) Extensions of Ćirić's quasicontractions. *Math. Balkanica* 6 (1976), 152–154 (1978). (Haskell Cohen) **80g:54055** 54H25  
(with Maiti, M.) Generalizations of two fixed-point theorems. *Bull. Calcutta Math. Soc.* 70 (1978), no. 2, 57–61. (Silvio Massa) **80c:54062** 54H25
- Pal, M. M.** (with Spano, P.) A cubic spline technique for a parabolic equation of higher than the second order. (Italian summary) *Boll. Un. Mat. Ital. A (5)* 15 (1978), no. 3, 560–570. (G. F. Ragetti) **80a:65194** 65M05
- Palaga, A. V.** (with Belickii, R. I.) On the problem of constructing cyclic concatenated codes. (Russian) *Akad. Nauk Ukrain. SSR. Izv. Kibernet. Preprint* No. 71 (1977), 3–17. (Authors' introduction) **80a:94030** 94B15
- Palaya, R. M.** (with Srivastava, K. N.; Choudhary, Arati) Solution of certain simultaneous multiple integral equations involving inverse Mellin transforms. *J. Indian Inst. Sci.* 60 (1978), no. 10, 199–206. (R. S. Dahiya) **80b:45004** 45F10 (73M99)  
(with Srivastava, K. N.; Choudhary, Arati) Mellin transform technique for solving Griffith crack problem at the interface of two bonded dissimilar wedges. *Indian J. Pure Appl. Math.* 10 (1979), no. 2, 147–157. (K. S. Paribar) **80d:73112** 73M05
- Palamodov, V. P.** Moduli in versal deformations of complex spaces. *Variétés analytiques compactes (Colloq., Nice, 1977)*, pp. 74–115. *Lecture Notes in Math.*, 683, Springer, Berlin, 1978. (K. Wolffhardt) **80c:32027** 32G05  
(with Magomedov, G. A.) Generalized analytic functions of several variables. (Russian) *Mat. Sb.* 106(148) (1978), no. 4, 515–543. (Wolfgang Tutschke) **80c:32005** 32A30 (30G20, 35J45)  
The tangent complex of an analytic space. (Russian) *Trudy Sem. Petrovsk.* No. 4 (1978), 173–226. (K. Wolffhardt) **80j:32019** 32C35 (32G05, 32H99)
- Palash, Carl** (with Ando, Albert; Norman, Alfred) On the application of optimal control to large scale econometric models. *Applied optimal control*, pp. 147–170. *Studies in the Management Sci.*, 9, North-Holland, Amsterdam, 1978. (Authors' summary) **80b:90044** 90A19 (62P20)
- Pal'cev, B. V.** (with Baklanovskaya, V. F.; Čečel', I. I.) Boundary value problems for the Saint-Venant system of equations on the plane. (Russian) *Ž. Vyšl. Mat. i Mat. Fiz.* 19 (1979), no. 3, 708–725, 798. (A. Radu) **80j:76019** 76C99 (35Q99)
- Pal'cev, L. A.** Kinetics of many-atom gas in the presence of a radiation field. (Russian. English summary) *Teoret. Mat. Fiz.* 41 (1979), no. 1, 124–138. (Author's summary) **80c:82046** 82A40
- Pal'čik, Ė. M.** Finite simple groups whose Sylow 2-subgroup contains a cyclic subgroup of index 16. (Russian) *Mat. Sb. (N.S.)* 109(151) (1979), no. 2, 202–228, 327. (A. A. Mahnev) **80m:20016** 20D06

- Palczewski, Andrzej** Solution of the Cauchy problem for the nonlinear Boltzmann equation. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 26 (1978), no. 8-9, 29-33. (Hans Kaper) **80g:35111** 35Q20 (82A40)
- Paldus, J.** (with Wormer, P. E. S.) Calculation of permutation matrices using graphical methods of spin algebras: explicit expressions for the Serber-coupling case. *Phys. Rev. A* (3) 18 (1978), no. 3, 827-840. (Authors' summary) **80m:81034** 81C40 (81G40)
- Sanchez-Palencia, Enrique** See **Sanchez-Palencia, Enrique**
- Paley, David** Fock-type representation of the Lie superalgebra  $A(0, 1)$ . *Internat. J. Theoret. Phys.* 17 (1978), no. 12, 985-992. (Hans Tilgner) **80m:17003** 17A70 (81C40, 81D99)
- Fixed order matrix elements of the para-Fermi operators. *Rep. Math. Phys.* 14 (1978), no. 3, 311-313. (R. Mirman) **80f:81042** 81C40 (22E60, 22E70)
- Lie algebraic aspects of quantum statistics. Para-Fermi statistics. *Rep. Math. Phys.* 14 (1978), no. 3, 315-320. (R. Mirman) **80f:81051** 81D05 (22E60, 22E70)
- A causal  $A$ -statistics. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 2, 159-161. (From the text) **80j:81063** 81E99 (17B65, 81C20)
- Lie-superalgebraic approach to the second quantization. Symposium on Mathematical Methods in the Theory of Elementary Particles (Liblice, 1978). *Czechoslovak J. Phys. B* 29 (1979), no. 1, 91-98. (Jouko Mickelson) **80k:81061** 81D05 (17A70, 17B70)
- Palls, Jacob** Rigidity of the centralizers of diffeomorphisms and structural stability of suspended foliations. *Differential topology, foliations and Gelfand-Fuks cohomology (Proc. Sympos., Pontificia Univ. Católica, Rio de Janeiro, 1976)*, pp. 114-121, *Lecture Notes in Math.*, 652, Springer, Berlin, 1978. (C. S. Hartzman) **80b:58040** 58F10 (57R30, 58F15)
- Dynamical systems. (Portuguese) *Proceedings of the Tenth Brazilian Mathematical Colloquium (Poços de Caldas, 1975)*, Vol. I (Portuguese), pp. 69-75, *Cons. Nac. Desenvolvimento Ci. Tec., Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Editors) **80d:58036** 58F10 (34C40, 34D30)
- (with Camacho, César; Kuiper, Nicolaas H.) The topology of holomorphic flows with singularity. *Inst. Hautes Études Sci. Publ. Math.* No. 48 (1978), 5-38. (C. S. Hartzman) **80f:58045** 58F10 (34A20, 58F18)
- Pallistrant, A. F.** (with Zamorzaev, A. M.; Galjarskii, È. I.) ★Цветная симметрия, ее обобщения и приложения. (Russian) [Color symmetry, its generalizations and applications] "Stitina", Kishinev, 1978. 275 pp. (J. C. Fisher) **80j:51013** 51F15 (20H15, 52A25, 82A60)
- Palli, S. S.** (with Maiti, M.) On the formulation of plane problems of elasticity in terms of dislocation layers. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* 30 (1978), no. 6, 717-741. (E. Pinney) **80k:73013** 73C35 (73C45)
- Paljutin, E. A.** Indecomposable  $\omega$ -free abelian groups. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 6, 1415-1417, 1440. (A. I. Moskalenko) **80d:20046** 20K26 (20A15)
- Palka, Bruce** (with Nákki, Raimo) Boundary regularity and the uniform convergence of quasiconformal mappings. *Comment. Math. Helv.* 54 (1979), no. 3, 458-476. (V. Mićić) **80j:30027** 30C60
- Palla, László** (with Horváth, Zsolt) Spontaneous compactification and "monopoles" in higher dimensions. *Nuclear Phys. B* 142 (1978), no. 3, 327-343. (Authors' summary) **80d:81138** 81L05 (53C05)
- Ionescu-Pallas, Nicholas** See **Ionescu-Pallas, Nicholas**
- Pallaschke, Diethard** Orlicz space techniques in prediction theory. *First Symposium on Operations Research (Univ. Heidelberg, Heidelberg, 1976)*, Teil 2, pp. 858-860, *Operations Research Verfahren, XXVI, Hain, Königstein*, 1977. (T. G. Sulaberdize) **80c:60055** 60G25 (62M20)
- Markets with countably infinitely many traders. *Appl. Math. Comput.* 4 (1978), no. 3, 201-212. (Karl Shell) **80j:90047** 90A16
- See also **Game theory and related topics**, **80j:90003**
- Palleschi, Marino** The hypersurfaces that are complete intersections on an algebraic variety. (Italian. English summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 111 (1977), no. 1, 105-112 (1978). (W. Burau) **80k:14013** 14C17
- Remarks on the regularity of the adjoint to an ample system of hypersurfaces on an algebraic variety. (Italian. English summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 111 (1977), no. 2, 437-448 (1978). (Fabrizio Catanese) **80k:14034** 14F99 (14C99)
- Pallu de la Barrière, R.** (with Costé, A.) Radon-Nikodým theorems for set-valued measures whose values are convex and closed. *Comment. Math. Prace Mat.* 20 (1977/78), no. 2, 283-309 (loose errata). (From the text) **80b:28015** 28B20 (46G10)
- (with Costé, A.) On set-valued measures with convex closed values and their set of selections. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 2 (1979), 43-57. (Michel Valadier) **80m:46041** 46G10
- Palm, Christine** (with Simões-Pereira, J. M. S.) Edge sets of hypergraphs with a  $B_q$ -like property and partition numbers of graphs. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 793-804, *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (András Frank) **80c:05105** 05C65 (05A17)
- Palm, G.** On representation and approximation of nonlinear systems. *Biol. Cybernet.* 31 (1978), no. 2, 119-124. (Andrzej W. Olbrot) **80m:45003** 45D05 (93C10)
- Palma, C.** (with Cesini, G.; Guattari, G.; Lucarini, G.) An iterative method for restoring noisy images. (French and German summaries) *Optica Acta* 25 (1978), no. 6, 501-508. (Authors' summary) **80a:94003** 94A05 (68G10, 93B30)
- Palmann, Dominik** Über die Kugelschnitte der Torusfläche des isotropen Raumes  $I_3$ . *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* 187 (1979), no. 1-3, 51-68. (E. Morgantini) **80h:51022** 51N25
- Palmer, Edgar M.** (with Harary, Frank) The probability that a point of a tree is fixed. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 3, 407-415. (Donald L. Goldsmith) **80f:05020** 05C05
- Palmer, James T.** (with Smith, Donald R.) Universal fixed messages and the Rivest-Shamir-Adleman cryptosystem. *Mathematika* 26 (1979), no. 1, 44-52. (From the introduction) **80m:94071** 94B99
- Palmer, Kenneth J.** On the existence of periodic solutions of a nonlinear vector differential equation. *J. Math. Anal. Appl.* 64 (1978), no. 2, 328-333. (S. Ahmad) **80k:34058** 34C25
- Topological equivalence and the Hopf bifurcation. *J. Math. Anal. Appl.* 66 (1978), no. 3, 586-598. (G. R. Sell) **80m:34037** 34C15 (58F14)
- The structurally stable linear systems on the half-line are those with exponential dichotomies. *J. Differential Equations* 33 (1979), no. 1, 16-25. (C. O'Leach) **80j:34062** 34D30
- A characterization of exponential dichotomy in terms of topological equivalence. *J. Math. Anal. Appl.* 69 (1979), no. 1, 8-16. (A. A. Reinfelds) **80g:34036** 34C20 (34A30, 58F10)
- A sufficient condition that a matrix have eigenvalues with non-zero real part. *Linear and Multilinear Algebra* 7 (1979), no. 1, 43-45. (E. Deutsch) **80b:15026** 15A01
- Palmer, Marion Rachel** (with Parry, William; Walters, Peter) Large sets of endomorphisms and of  $g$ -measures. The structure of attractors in dynamical system (Proc. Conf., North Dakota State Univ., Fargo, N.D., 1977), pp. 191-210, *Lecture Notes in Math.*, 668, Springer, Berlin, 1978. (Nathaniel Friedman) **80b:28025** 28D05 (58F11)
- Palmer, T. N.** Covariant conservation equations and their relation to the energy-momentum concept in general relativity. *Phys. Rev. D* (3) 18 (1978), no. 12, 4399-4407. (A. F. da F. Teixeira) **80k:83022** 83C40 (53C50)
- Momentum transfer in gravitation theory. *Gen. Relativity Gravitation* 10 (1979), no. 7, 623-629. (Andrzej Trautman) **80h:83017** 83C40 (58D30)
- Palmer, William F.** (with Pinsky, Stephen S.) Dense and dilute instanton-anti-instanton pair configurations. *Phys. Rev. D* (3) 21 (1980), no. 2, 551-552. (Authors' summary) **80k:81108** 81E10
- (with Pinsky, Stephen S.) The effect of instanton-anti-instanton interactions on current correlation functions in massless QCD. *Z. Phys. C* 3 (1980), no. 3, 209-222. (Authors' summary) **80k:81158** 81G05 (82A40)
- Palmerio, Bernadette** (with Dervieux, Alain) Hadamard's variational formula for a mixed problem and an application to a problem related to a Signorini-like variational inequality. *Numer. Funct. Anal. Optim.* 1 (1979), no. 2, 113-144. (Authors' summary) **80b:49005** 49A34 (35J99)
- Palmeri, Giuliana** An approach to the theory of some trace spaces related to the Orlicz-Sobolev spaces. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 1, 100-119. (Alberto Torchinsky) **80f:46037** 46E35
- Some contributions to the theory of Orlicz-Sobolev spaces. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) 45 (1979), 367-381. (Pavel Doktor) **80k:46038** 46E35 (46E30)
- Palmore, Julian I.** Central configurations of the  $n$ -body problem in  $E^4$ . *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 1, 21-23. (C. Marchal) **80c:70010** 70F10 (58E05, 58F05)
- Relative equilibria and the virial theorem. *Celestial Mech.* 19 (1979), no. 2, 167-171. (F. Nahon) **80k:70014** 70F15 (58E30, 58F05)
- Palotás, L. M.** (with Szolgyai, P.) Zu Fragen der Synchronisation nichtlinearer Schwingungssysteme. VII. Internationale Konferenz über nichtlineare Schwingungen (Berlin, 1975), Band II, 2, pp. 201-209, *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977, 6, Akademie-Verlag, Berlin, 1978. (L. Erbe) **80k:34046** 34C15 (70K20)
- Pálmeanu, G.** A generalization of the Stone-Weierstrass theorem for weighted spaces. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 7, 1065-1068. (C. C. White) **80d:46047** 46E10 (41A65)
- Palumbo, Annunziata** (with Giambò, Sebastiano) Sur les ondes thermiques et l'équation de transport en fluidodynamique relativiste restreinte. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 8, A479-A482. (Authors' summary) **80m:83026** 83C55
- (with Giambò, Sebastiano) Ondes hydrodynamiques et temps critique pour un fluide conducteur de chaleur en relativité restreinte. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 9, A503-A506. (Author's summary) **80m:83027** 83C55
- de Paly, T.** (with Crell, B.; Uhlmann, A.)  $H$ -Theoreme für die Fokker-Planck-Gleichung. *Wiss. Z. Karl-Marx-Univ. Leipzig Math.-Natur. Reihe* 27 (1978), no. 3, 229-234. (Authors' summary) **80d:82007** 82A05
- Pamfilos, Paris** Kennzeichnung der Sphären im  $E^{n+1}$  durch ihre Schattengrenzen. *Math. Ann.* 233 (1978), no. 3, 285-294. (K. Nomizu) **80a:53068** 53C40
- Pan, Liang Ru** Frozen-in and resistive force-free magnetic fields. (Chinese. English summary) *Acta Astronom. Sinica* 19 (1978), no. 2, 166-172. (Authors' summary) **80d:78016** 78A25
- Pan, T. T.** (with Carey, G. F.; Renka, R.) Two problems in nonlinear finite element analysis. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 467-477, Academic Press, New York, 1979. (Stephen W. Brady) **80g:65110** 65N30 (73K15, 76N10)
- Pan, V. Ya.** Strassen's algorithm is not optimal. Trilinear technique of aggregating, uniting and canceling for constructing fast algorithms for matrix operations. *19th Annual Symposium on Foundations of Computer Science (Ann Arbor, Mich., 1978)*, pp. 166-176, IEEE, Long Beach, Calif., 1978. (Author's summary) **80c:68118** 68C25 (65F30)
- Panagiotopoulos, P. D.** (with Zastrow, U.) An integral "equation" approach to the unilateral contact problem. *Z. Angew. Math. Mech.* 59 (1979), no. 8, 392-393. (M. O. Basileișvili) **80k:73073** 73T05 (49A29)
- Panaitopol, L.** Eine Eigenschaft der Funktion über die Verteilung der Primzahlen. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 2, 189-194. (R. W. K. Odoni) **80k:10058** 10H15
- Panagaden, Prakash** Positive and negative frequency decompositions in curved spacetime. *J. Math. Phys.* 20 (1979), no. 12, 2506-2510. (John Madore) **80k:81230** 81M05 (81E99)
- Pannenko, A. A.** (with Stojan, Ju. G.) ★Периодическое размещение геометрических объектов. (Russian) [Periodic placing of geometric objects] "Naukova Dumka", Kiev, 1978. 175 pp. (E. Hertel) **80a:52016** 52A45
- Panasenko, G. P.** Higher order asymptotics of the solutions of equations with rapidly oscillating coefficients. (Russian) *Dokl. Akad. Nauk SSSR* 240 (1978), no. 6, 1293-1296. (Woodford W. Zachary) **80c:35006** 35B40
- (with Landis, E. M.) A variant of a theorem of Phragmén-Lindelöf type for elliptic equations with coefficients that are periodic in all variables but one. (Russian) *Trudy Sem. Petrovsk.* No. 5 (1979), 105-136. (J. Chrestina) **80k:35027** 35J15
- Panyirci, Erdal** (with Dubes, Richard C.) Pattern recognition with continuous-parameter



- observable Markov chains. *IEEE Trans. Systems Man Cybernet.* 8 (1978), no. 8, 646-653. (Authors' summary) **80f:68101** 68G10
- Pančenko, L. F. The Riemann problem for  $n$  pairs of functions on a Riemann surface, in the case of a complex contour, in the space  $L_p^q(\Gamma)$ . (Russian) *Studies in functional analysis and differential equations (Russian)*, pp. 68-75, 79, "Štintca", Kishinev, 1978. (N. V. Rao) **80m:30049** 30E25
- (with Zvirivich, E. I.) A Riemann boundary value problem for  $n$  pairs of functions on a Riemann surface in the space  $L_p^q(\Gamma)$ . (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1978, no. 3, 71-72, 88. (V. B. Dybin) **80a:30050** 30E25 (30F99)
- Pančukov, A. M. Singular problems of the calculus of variations and asymptotic programming. (Russian) *Asymptotic methods in systems theory (Russian)*, pp. 26-32, Irkutsk. Gos. Univ., Irkutsk, 1977. (Author's summary) **80i:49006** 49A22
- See also Eliseev, S. V., **80d:93002** and *Asymptotic methods in systems theory*, **80i:00002**
- Panchapakesan, S. (with Gupta, Shanti S.) ★ Multiple decision procedures: theory and methodology of selecting and ranking populations. A Wiley Publication in Applied Statistics. Wiley Series in Probability and Mathematical Statistics. John Wiley & Sons, New York-Chichester-Brisbane, 1979. xiv + 573 pp. ISBN 0-471-05177-2 (Khurshed Alam) **80m:62028** 62F07 (62C99)
- Pančukin, A. A. Values of convolutions of Hecke-Shimura series at lattice points. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 5(203), 195-196. (Neal Koblitz) **80c:10031** 10D24
- Symmetric squares of Hecke series and their values at lattice points. (Russian) *Mat. Sb. (N.S.)* 108(150) (1979), no. 3, 393-417, 478. (K.-B. Gundlach) **80f:10035** 10D24
- Panda, Rekha. See Srivastava, Rekha
- Panda, Rekha (with Srivastava, Hari M.) A note on certain results involving a general class of polynomials. (Italian summary) *Boll. Un. Mat. Ital. A (5)* 16 (1979), no. 3, 467-474. (James M. Horner) **80c:33018** 33A65
- Pande, G. C. (with Georgantopoulos, G. A.; Goudas, C. L.) Free convection effects on the unsteady laminar boundary-layer flow past a porous limiting surface with uniform suction in stellar atmospheres. *Astrophys. and Space Sci.* 60 (1979), no. 1, 125-171. (Authors' summary) **80c:76034** 76N05
- Pande, H. D. (with Kumar, Awdhesh) General decomposition of Weyl's curvature tensor in a recurrent Finsler space. (Turkish summary) *İstanbul Üniv. Fen Fak. Mecm. Ser. A* 40 (1975), 171-176 (1978). (R. B. Misra) **80a:53035** 53B40
- Recurrent Finsler spaces of third order. *Indian J. Pure Appl. Math.* 7 (1976), no. 11, 1333-1336. (Author's summary) **80j:53033** 53B40
- (with Khan, T. A.) On generalised 2-recurrent Berwald's curvature tensor field in Finsler space. *Acta Cienc. Indica* 4 (1978), no. 1, 56-59. (Hideo Izumi) **80c:53030** 53B40
- (with Dwivedi, B. D.) On  $K_2$ -birecurrent areal space. *Acta Cienc. Indica* 4 (1978), no. 4, 421-424. (S. S. Singh) **80m:53026** 53B40
- (with Khan, T. A.) Lie derivative in special Kawaguchi space. *Indian J. Pure Appl. Math.* 9 (1978), no. 10, 1039-1047. (M. S. Al-Borney) **80c:53031** 53B15
- (with Pandey, J. P.) On generalised  $\bar{K}$ -recurrent Finsler space. *Pure Appl. Math. Sci.* 8 (1978), no. 1-2, 1-4. (R. B. Misra) **80a:53036** 53B40
- (with Dwivedi, B. D.) Decomposition of curvature tensor field  $K_{2, \text{ah}}$  in recurrent areal space. *Indian J. Pure Appl. Math.* 10 (1979), no. 1, 26-32. (R. B. Misra) **80g:53019** 53B40
- (with Dubey, V. J.) Decomposition of Berwald's curvature tensor field in generalised 2-recurrent Finsler space. *Indian J. Pure Appl. Math.* 10 (1979), no. 1, 33-38. (M. S. Al-Borney) **80b:53020** 53B40
- (with Dwivedi, B. D.) On general decomposition of curvature tensor field  $K_{2, \text{ah}}$  in a recurrent areal space of second order. *Indian J. Pure Appl. Math.* 10 (1979), no. 4, 461-466. (R. B. Misra) **80c:53020** 53B40
- Pandey, S. N. Flat wave solutions of the nonsymmetric unified Finzi field theory. (Russian. English summary) *Teoret. Mat. Fiz.* 39 (1979), no. 1, 137-142. (Ja. A. Smorodinskii) **80c:83037** 83E10 (53B50)
- Pandey, A. (with French, J. B.) Binary correlations in random matrix spectra. *J. Phys. A* 12 (1979), no. 5, L83-L88. (Authors' summary) **80b:82017** 82A15 (47B99)
- Pandey, B. N. (with Singh, J.) Estimation of variance of normal population using prior information. *J. Indian Statist. Assoc.* 15 (1977), 141-150. (Authors' summary) **80d:62025** 62F10
- Pandey, G. S. On a sequence of Fourier coefficients. *Math. Student* 45 (1977), no. 1, 80-83 (1978). (From the text) **80b:42002** 42A16
- Multipliers for [C, I] summability of Fourier series. *Pacific J. Math.* 79 (1978), no. 1, 177-182. (D. C. Russell) **80f:42005** 42A24
- Pandey, H. B. On complex hypersurfaces. (Turkish summary) *İstanbul Tek. Üniv. Bül.* 31 (1978), no. 1, 56-62. (A. Aeppli) **80c:53022** 53B35
- Submanifolds of codimension 2 in a Riemannian manifold. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 8, 1191-1197. (Y. Katsurada) **80a:53069** 53C40
- On GF-hypersurfaces. *Indian J. Pure Appl. Math.* 10 (1979), no. 5, 549-557. (Y. Tashiro) **80j:53062** 53C55 (53C25)
- Pandey, J. N. (with Pathak, Ram Shankar) Eigenfunction expansion of generalized functions. *Nagoya Math. J.* 72 (1978), 1-25. (Alexander Alenicyan) **80d:34029** 34B25 (33A65, 46F10)
- (with Pathak, Ram Shankar) The G-transform of generalized functions. *Rocky Mountain J. Math.* 9 (1979), no. 2, 307-325. (L. S. Dube) **80m:46037** 46F12 (44A20)
- Pandey, J. P. (with Pandey, H. D.) On generalised  $\bar{K}$ -recurrent Finsler space. *Pure Appl. Math. Sci.* 8 (1978), no. 1-2, 1-4. (R. B. Misra) **80a:53036** 53B40
- Pandey, M. (with Singh, J.) A note on testing mean of a normal population when variance is unknown. *J. Indian Statist. Assoc.* 16 (1978), 145-146. (Nanak Chand) **80j:62023** 62P03
- Pandey, P. N. (with Dwivedi, V. J.) Normal projective curvature tensor in a conformal Finsler manifold. *Proc. Nat. Acad. Sci. India Sect. A* 47 (1977), no. 2, 115-118. (I. Ghinea) **80j:53034** 53B40
- CA-collineation in a birecurrent Finsler manifold. *Tamkang J. Math.* 9 (1978), no. 1, 79-81. (Yoshihiro Ichijō) **80b:53026** 53B40
- Pandey, R. N. (with Singh, Ramji) A general differential equation for classical polynomials. *Kyungpook Math. J.* 18 (1978), no. 2, 233-237. (H. L. Manocha) **80c:33009** 33A65
- (with Singh, Ramji) Asymptotic behaviour of the generalized polynomial. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 21 (1978), no. 4, 307-314. (From the summary) **80b:33024** 33A70
- (with Singh, Ramji) Some special properties of classical polynomials. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 22 (1979), no. 2, 155-161. (Authors' summary) **80g:33024** 33A65
- (with Singh, Ramji) A general differential equation for classical polynomials. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 22 (1979), no. 2, 179-185. (D. P. Gupta) **80i:33007** 33A30 (33A65)
- (with Singh, Ramji) An effort towards unification of classical polynomials. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 22 (1979), no. 3, 239-251. (Rekha Srivastava) **80m:33010** 33A30 (33A35)
- Pandey, S. B. (with Mishra, R. S.; Sharma, U.) On Kählerian submanifold with vanishing Bochner curvature tensor. *Indian J. Pure Appl. Math.* 9 (1978), no. 12, 1291-1297. (S. I. Husain) **80c:53029** 53B35
- Pandey, S. C. (with Gupta, Reeta) A note on minimax (maximin) problems. *Optimisation* 15 (1978), no. 2-3, 106-113. (Authors' summary) **80a:90106** 90C20
- Pandey, S. N. On a generalized Peres space-time. *Indian J. Pure Appl. Math.* 7 (1976), no. 10, 1213-1219. (Carl Brans) **80i:83014** 83C20 (53B30)
- (with Mishra, R. S.) Semi-symmetric metric connections in an almost contact manifold. *Indian J. Pure Appl. Math.* 9 (1978), no. 6, 570-580. (Yoshiaki Maeda) **80b:53026** 53C15
- (with Sharma, Sushil) Plane symmetric space-time of class-I and electromagnetism. *Indian J. Pure Appl. Math.* 10 (1979), no. 11, 1389-1396. (P. C. Vaidya) **80i:83022** 83C50 (53B30)
- Pandit, S. G. (with Deo, S. G.) Stability and asymptotic equivalence of measure differential equations. *Nonlinear Anal.* 3 (1979), no. 5, 647-655. (S. Leela) **80j:34067** 34D99
- Pandit, S. N. N. (with Das, S.) Computation of a new lower bound: sequencing  $n$  jobs on  $m$  parallel processors. *Optimisation* 15 (1978), no. 1, 1-11. (B. S. Mittal) **80b:90077** 90B35
- Pandolfi, Luciano. Stabilization and controllability for a class of control systems. (Italian summary) *Atti Accad. Sci. Linee Rend. Cl. Sci. Fis. Mat. Natur.* (8) 64 (1978), no. 2, 130-136. (J. Warja) **80g:49038** 49E99 (93B05)
- Stabilization of control processes in Hilbert spaces. *Proc. Roy. Soc. Edinburgh Sect. A* 81 (1978), no. 3-4, 247-258. (A. J. Pritchard) **80d:93059** 93D15
- Some observations on the asymptotic behaviour of the solutions of the equation  $\dot{x} = A(t)x(t) + B(t)x(t)$ ,  $\lambda > 0$ . *J. Math. Anal. Appl.* 67 (1979), no. 2, 483-489. (E. F. Infante) **80i:34064** 34K20
- Pandya, G. P. (with Bahadur, Lal; Nijhawan, R. R.) Banach space of vector valued Lipschitz functions. *Indian J. Mech. Math.* 15 (1977), no. 1-2, 36-43 (1979). (P. K. Kamthan) **80b:46049** 46E40 (26A16)
- (with Bahadur, Lal; Nijhawan, R. R.) Banach space of vector-valued Lipschitz functions. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 21 (1978), no. 1, 59-70. (Authors' summary) **80b:46040** 46E40
- Pandzakidze, S. P. The convergence of multiple orthogonal series. (Russian. Georgian and English summaries) *Sakharth. SSR Mecn. Akad. Moambe* 89 (1978), no. 3, 553-555. (R. L. Cooke) **80c:42011** 42C15
- Panejah, B. P. On the problem with oblique derivative. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 6, 1394-1397. (V. V. Ivanov) **80b:35064** 35J70
- Panferov, V. S. On the Luzin-Denjoy theorem for multiple trigonometric series. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 275-277, "Nauka", Moscow, 1977. (L. Gogoladze) **80j:42030** 42B05
- Panfilov, N. G. (with Rožkov, V. I.) A boundary value problem for a linear system with a small parameter multiplying the derivative. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 10, 1806-1813, 1917. (I. Kiguradze) **80c:34014** 34B05 (34D15)
- Pang, Hye Suk. On the optimization of design in product space. (Korean. English summary) *Cho-shin In-min Kong-hwa-kuk Kwa-hak-won Tong-bo* 26 (1978), no. 4, 189-192. (U. B. Paik) **80a:62115** 62K05
- Pang, Jong Shi. On cone orderings and the linear complementarity problem. *Linear Algebra Appl.* 22 (1978), 267-281. (Ekkehard W. Sachs) **80c:90143** 90C33
- (with Cottle, Richard W.) A least-element theory of solving linear complementarity problems as linear programs. *Math. Oper. Res.* 3 (1978), no. 2, 155-170. (Shih Ping Han) **80a:90085** 90C05
- Hidden Z-matrices with positive principal minors. *Linear Algebra Appl.* 23 (1979), 201-215. (Thomas L. Markham) **80d:15026** 15A57 (90C33)
- A new characterization of real H-matrices with positive diagonals. *Linear Algebra Appl.* 25 (1979), 163-167. (Thomas L. Markham) **80b:15027** 15A57
- On a class of least-element complementarity problems. *Math. Programming* 16 (1979), no. 1, 111-126. (Klaus Tammer) **80c:90130** 90C33
- (with Kaneko, Ikuyo; Hallman, W. P.) On the solution of some (parametric) linear complementarity problems with applications to portfolio selection, structural engineering and actuarial graduation. *Math. Programming* 16 (1979), no. 3, 325-347. (S. R. Mohan) **80f:90135** 90C33
- On Q-matrices. *Math. Programming* 17 (1979), no. 2, 243-247. (Ikuyo Kaneko) **80b:90143** 90C33
- Panik, O. I. Some theorems on the existence of a solution for elliptic boundary value problems of general form. (Russian) *Boundary value problems for partial differential equations (Russian)*, pp. 79-88, 165, "Naukova Dumka", Kiev, 1978. (Ja. A. Roitberg) **80b:35036** 35J55
- Potential representations of solutions of boundary value problems that reduce to associated pseudodifferential equations on the boundary of the domain. (Russian) *Boundary value problems for partial differential equations (Russian)*, pp. 88-92, "Naukova Dumka", Kiev, 1978. (Ja. A. Roitberg) **80b:35023** 35J05 (35C99)
- The connection of conjugate boundary value problems with mutually conjugate pseudodifferential equations on the boundary of the domain. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 3, 580-583. (V. M. Babit) **80i:35188** 35S15
- The reduction of elliptic boundary value problems to elliptic systems of pseudodifferential equations on the boundary of the domain. (Russian) *Mat. Fiz.* 1978, no. 23, 78-84, 115. (Ju. V. Egorov) **80m:35031** 35J55

- Panićkin, A. V.** (with Janenko, N. N.; Okuncov, V. V.; Zaharov, Ju. N.; Šokin, Ju. I.) Two iteration schemes for the solution of a stationary system of Navier-Stokes equations. (Russian) *Complex analysis and its applications* (Russian), pp. 638–652, 672, "Nauka", Moscow, 1978. (Murli M. Gupta) **80j:65038** 65P05 (76D05)
- Panin, V. M.** The method of second-order for a problem of discrete minimax. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 1, 88–98, 268. (K. Hinderer) **80b:49022** 49B40 (90C30)
- Pankov, A. A.** Bounded and almost periodic solutions of evolution variational inequalities. (Russian) *Mat. Sb. (N.S.)* **100(150)** (1979), no. 4, 551–566, 640. (Ju. K. Dem'janovič) **80j:47083** 47H15 (35R45)
- Pankov, P. S.** (with Imanaliev, M. I.; Gabitov, I. R.) Computer application for the proof of the correctness of an inverse problem. (Russian) *Izv. Akad. Nauk Kirgiz. SSR* 1978, no. 5, 25–28. (From the text) **80f:76039** 76S05
- A combined method for proving certain theorems of mathematical analysis via a computer. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 3, 119–125. (G. E. Mine) **80k:68084** 68G15 (03-04)
- Panov, A. N.** The structure of the group  $C^*$ -algebra of a Euclidean motion group. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 4, 46–49. (Marc A. Rieffel) **80a:22008** 22D25 (46L99)
- Pansiot, Jean-Jacques** (with Hopcroft, John) On the reachability problem for 5-dimensional vector additive systems. *Theoret. Comput. Sci.* 8 (1979), no. 2, 135–159. (J. Paredaens) **80b:68022** 68B20
- Pansino, Pietro** (with Giambò, Sebastiano; Greco, Antonio) Sur la méthode perturbative et réductrice à  $n$ -dimensions: le fluide classique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 1, A85–A88. (Authors' summary) **80c:35064** 35L40 (76N99)
- (with Giambò, Sebastiano; Greco, Antonio) Sur la méthode perturbative et réductrice à  $n$ -dimensions: le cas général. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 10, A553–A556. (Authors' introduction) **80c:35065** 35Q20
- (with Anile, A. M.) Foundation of geometrical optics in general relativistic dispersive media. *J. Math. Phys.* 20 (1979), no. 1, 177–183. (Fritz Schwarz) **80c:78004** 78A25 (83C50)
- Panteleev, A. D.** (with Litvinov, V. G.) The Castiglione principle in problems of bending of plates of variable thickness. (Russian) *Prikl. Meh.* 14 (1978), no. 7, 63–69, 142. (Vadim Komkov) **80f:73058** 73K10
- Panwalkar, S. S.** (with Khan, A. W.) An ordered flow shop sequencing problem with TWK type due dates and total tardiness criterion. *J. Inst. Math. Appl.* 23 (1979), no. 3, 367–372. (B. S. Mittal) **80c:90054** 90B35
- (with Wooliam, C. R.) Flow shop scheduling problems with no in-process waiting: a special case. *J. Oper. Res. Soc.* 30 (1979), no. 7, 661–664. (Tadashi Kurisu) **80c:90055** 90B35
- Panzone, Rafael** (with Benedek, Agnes I.) Bessel expansions arising from anomalous Sturm-Liouville differential systems. *Rev. Un. Mat. Argentina* 28 (1977/78), no. 3-4, 161–185. (Alexander Alenicyan) **80c:34016** 34B25
- Pao, C. V.** Asymptotic behavior and nonexistence of global solutions for a class of nonlinear boundary value problems of parabolic type. *J. Math. Anal. Appl.* 65 (1978), no. 3, 616–637. (Lu-San Chen) **80c:35066** 35K60 (35B40)
- Criticality of neutron transport in a slab with finite reflectors. *J. Math. Phys.* 19 (1978), no. 12, 2499–2505. (Edward W. Larsen) **80d:82069** 82A70
- Positive solution of an integro-differential system in neutron transport with delayed neutron. (Italian summary) *Rend. Mat. (6)* 11 (1978), no. 4, 565–584 (1979). (A. Bellini-Morante) **80c:82052** 82A75 (45K05)
- An iterative method for solving a nonstationary radiation diffusion system. (German summary) *Z. Angew. Math. Phys.* 29 (1978), no. 5, 795–806. (Abha Ghoshal) **80c:65107** 65R20 (35Q20, 45K05, 80A99)
- Bifurcation analysis on a nonlinear diffusion system in reactor dynamics. *Applicable Anal.* 9 (1979), no. 2, 107–119. (Author's summary) **80g:82050** 82A70 (45K05, 80A30)
- Asymptotic behavior of the solution for the time-dependent neutron transport problem. *J. Integral Equations* 1 (1979), no. 2, 131–152. (A. Bellini-Morante) **80g:82052** 82A75 (45K05)
- Asymptotic behavior and bifurcation analysis for a nonlinear diffusion system arising from gas-liquid absorption. *Nonlinear Anal.* 3 (1979), no. 1, 101–109 (1978). (Piero de Mottoni) **80b:35013** 35B32 (35K60)
- Asymptotic stability and nonexistence of global solution for a semilinear parabolic equation. *Pacific J. Math.* 84 (1979), no. 1, 191–197. (Piero de Mottoni) **80m:35047** 35K60 (35B40)
- Pao, Yih Hsing** The transition matrix for the scattering of acoustic waves and for elastic waves. *Modern problems in elastic wave propagation* (Proc. IUTAM Symp., Northwestern Univ., Evanston, Ill., 1977), pp. 123–144, Wiley, New York, 1978. (Alok Nath Chakrabarti) **80f:76036** 76Q05
- Pao, Young-ping** Nonlinear behavior of linearly unstable magnetohydrodynamic modes. *Phys. Fluids* 21 (1978), no. 5, 765–772. (Ian Lerche) **80c:76060** 76W05 (35C99)
- Paolicchi, Paolo** A differential equation for the classical collapse problem. *Astrophys. and Space Sci.* 56 (1978), no. 2, 377–383. (Ram Krishan Sharma) **80c:83073** 83F05 (34C99)
- Pap, E.** (with Filipović, S.) A sequential theory of some spaces of generalized functions. *Publ. Inst. Math. (Beograd) (N.S.)* 25(39) (1979), 122–130. (G. Marinescu) **80b:46055** 46F05
- Papachristou, Christos A.** Characteristic measures of switching functions. *Inform. Sci.* 13 (1977), no. 1, 51–75. (Author's summary) **80g:94088** 94C10
- Modular logic design with NAND cascades of integrated circuits. (French and German summaries) *Digital Process.* 4 (1978), no. 3-4, 273–294. (Author's summary) **80g:94089** 94C10
- Papadakis, John S.** (with Wood, D. H.) Addendum: "An addition formula for Riemann functions" (J. Differential Equations 24 (1977), no. 3, 397–411). *J. Differential Equations* 29 (1978), no. 3, 474. (Editors) **80b:35107** 35L99
- (with Cohen, Jeffrey S.) An addition formula for Green's functions. *J. Math. Anal. Appl.* 67 (1979), no. 1, 120–139. (Rainer Picard) **80b:35027** 35C15 (35J25)
- Papadimitriou, Christos H.** The complexity of the capacitated tree problem. *Networks* 8
- (1978), no. 3, 217–230. (Ondrej Šýkora) **80c:68044** 68C25 (94C10)
- (with Gates, William H.) Bounds for sorting by prefix reversal. *Discrete Math.* 27 (1979), no. 1, 47–57. (Frank K. Hwang) **80j:68051** 68E05
- Efficient search for rationals. *Inform. Process. Lett.* 8 (1979), no. 1, 1–4. (A. Massarotti) **80c:68119** 68C25 (90C99)
- Optimality of the fast Fourier transform. *J. Assoc. Comput. Mach.* 26 (1979), no. 1, 95–102. (David A. Plaisted) **80b:68057** 68C25 (90B10, 94A11)
- The serializability of concurrent database updates. *J. Assoc. Comput. Mach.* 26 (1979), no. 4, 631–653. (Jane W. S. Liu) **80j:68011** 68B15 (68C15)
- (with Yannakakis, Mihalis) Scheduling interval-ordered tasks. *SIAM J. Comput.* 8 (1979), no. 3, 405–409. (Authors' summary) **80c:68087** 68C15 (68C25)
- Papadopoulos, D.** (with Persides, S.) A covariant formulation of the Landau-Lifshitz complex. *Gen. Relativity Gravitation* 11 (1979), no. 3, 233–243. (P. C. Vaidya) **80m:83034** 83C99 (53C80)
- Papadopoulos, George J.** Path integrals in quantum and statistical physics. *Path integrals and their applications in quantum, statistical and solid state physics* (Proc. NATO Advanced Study Inst., State Univ. Antwerp, Antwerp, 1977), pp. 85–162, NATO Adv. Study Inst. Ser., Ser. B: Physics, 34, Plenum, New York, 1978. (From the text) **80c:81022** 81C35 (82A15)
- See also Path integrals and their applications in quantum, statistical, and solid state physics. **80c:82019**
- Papadopoulos, N.** (with Ho, Y. C.) Further notes on redundancy in teams. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 323–325. (Authors' summary) **80c:93009** 93A10
- Papadopoulos, Susanne** (with Bauer, Heinz; Leha, Gottlieb) Determination of Korovkin closures. *Math. Z.* 168 (1979), no. 3, 263–274. (A. B. Németh) **80k:46019** 46A55 (41A36, 46E25)
- Papakonstantinou, G.** Minimization of modulo-2 sum of products. *IEEE Trans. Comput.* 28 (1978), no. 2, 163–167. (Author's summary) **80b:94043** 94C10
- Papakyriazis, Panagiotis A.** On the determination of maximum accuracy for regression processes with endogenous variable constraints. *Econom. Lett.* 3 (1979), no. 1, 31–36. (Author's summary) **80i:62064** 62K05 (90K05)
- Papanichail, N.** (with Levin, D.; Sideridis, A.) The Bergman kernel method for the numerical conformal mapping of simply connected domains. *J. Inst. Math. Appl.* 22 (1978), no. 2, 171–187. (Ju. E. Hohlov) **80h:30008** 30C30 (65E05)
- (with Behforooz, G. H.) Improved orders of approximation derived from interpolatory cubic splines. *BIT* 19 (1979), no. 1, 19–26. (Dietrich Braess) **80c:41004** 41A15 (65D07)
- (with Behforooz, G. H.) End conditions for cubic spline interpolation. *J. Inst. Math. Appl.* 23 (1979), no. 3, 355–366. (Claude Carasso) **80g:65011** 65D07
- Papangelou, F.** On the entropy rate of stationary point processes and its discrete approximation. *Z. Wahrsch. Verw. Gebiete* 44 (1978), no. 3, 191–211. (Mats Rudemo) **80b:60075** 60G55 (94A17)
- Papanicolaou, George C.** (with Bensoussan, Alain; Lions, Jacques-Louis) Homogenization of operators not in divergence form. *IJAA Internat. J. Appl. Anal.* 1 (1977), no. 1, 54–70. (G. Albinus) **80c:35028** 35J25
- (with Kesten, Harry) A limit theorem for turbulent diffusion. *Mathematical problems in theoretical physics* (Proc. Internat. Conf., Univ. Rome, Rome, 1977), pp. 371–374, Lecture Notes in Phys., 80, Springer, Berlin, 1978. (Werner Kohler) **80h:60035b** 60F05 (60G60, 60J60)
- (with Bensoussan, Alain; Lions, Jacques-Louis) Boundary layer analysis in homogenization of diffusion equations with Dirichlet conditions in the half space. *Proceedings of the International Symposium on Stochastic Differential Equations* (Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976), pp. 21–40, Wiley, New York, 1978. (W. F. Ames) **80g:35127** 35R60 (35J25)
- Boundary behavior of branching transport processes. *Stochastic analysis* (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1978), pp. 215–237, Academic Press, New York, 1978. (D. A. Šulaja) **80d:82070** 82A70 (60J99)
- Asymptotic analysis of stochastic equations. *Studies in probability theory*, pp. 111–179, *MAA Studies in Math.*, 18, Math. Assoc. America, Washington, D.C., 1978. (Mark Pinsky) **80j:60095** 60H10 (60F05)
- (with Bensoussan, Alain; Lions, Jacques-Louis) Asymptotics for branching transport processes. *Computing methods in applied sciences and engineering* (Proc. Third Internat. Symp., Versailles, 1977), I, pp. 317–329, Lecture Notes in Math., 704, Springer, Berlin, 1979. (From the introduction) **80g:82045** 82A70 (60J99)
- (with Kesten, Harry) A limit theorem for turbulent diffusion. *Comm. Math. Phys.* 65 (1979), no. 2, 97–128. (Werner Kohler) **80h:60035a** 60F05 (60G60, 60J60)
- (with Calisch, Russel E.) The fluid dynamical limit of a nonlinear model Boltzmann equation. *Comm. Pure Appl. Math.* 32 (1979), no. 5, 589–616. (V. P. Kalashnikov) **80c:82044** 82A70 (35Q20, 45K05)
- (with Bensoussan, Alain; Lions, Jacques-Louis) Boundary layers and homogenization of transport processes. *Publ. Res. Inst. Math. Sci.* 15 (1979), no. 1, 53–157. (S. R. S. Varadhan) **80i:60122** 60J99 (60J70, 82A70)
- Papantoni-Kazakos, P.** (with Kazakos, Dimitri) Sequential detection between Poisson processes. *IEEE Trans. Inform. Theory* 26 (1980), no. 1, 116–120. (Authors' summary) **80k:94006** 94A05 (62L10)
- Papantonopolou, Aigli** Non-proper intersection of surfaces and applications. *Bull. Soc. Math. Grèce (N.S.)* 18 (1977), no. 1, 80–93. (Ezio Stagnaro) **80c:14033** 14M15 (14C17)
- Surfaces in the Grassmann variety  $G(1, 3)$ . *Proc. Amer. Math. Soc.* 77 (1979), no. 1, 15–18. (Ragni Piene) **80j:14045** 14M15 (14F05, 14J25)
- Papapetrou, Achille** Perturbations des solutions cosmologiques homogènes et isotropes. (Italian and English summaries) *Rend. Sem. Mat. Fis. Milano* 47 (1977), 105–115 (1979). (Andrzej Trautman) **80d:83094** 83F05 (53C80)
- (with Stachel, John J.) A new Lagrangian for the vacuum Einstein equations and its tetrad form. *Gen. Relativity Gravitation* 9 (1978), no. 12, 1075–1087. (J. W. Auer) **80b:83004** 83C05 (53B05)
- (with Hamoui, A.) Spherically symmetric surface layers in general relativity—correction of an error. *Gen. Relativity Gravitation* 10 (1979), no. 3, 253–258. (W. Israel) **80c:83032** 83C55
- Paparoni, Eva** (with Magnaghi-Delfino, Paola) A transmission problem in an angle.



- (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 15 (1978), no. 3, 939-955. (P. C. File) **80d:35046** 35J25
- Papantoniou, N. J.** (with Fujimoto, Y.) Spontaneous breakdown of  $SU_N$ . (Italian and Russian summaries) *Nuovo Cimento A* (11) 48 (1978), no. 1, 24-38. (Authors' summary) **80d:81110a** 81G40 (22E70)
- (with Fujimoto, Y.) Spontaneous breakdown of chiral  $SU_N \times SU_N$ . *Nuovo Cimento A* (11) 48 (1978), no. 1, 39-64. (Authors' summary) **80d:81110b** 81G40 (22E70)
- (with Parker, Leonard) Asymmetric creation of matter and antimatter in the expanding universe. *Phys. Rev. D* (3) 19 (1979), no. 8, 2283-2299. (A. F. da F. Teixeira) **80d:83064** 83C99
- Papantoniou, Stavros** A note on the integrability of characteristic classes. (Greek summary) *Prakt. Akad. Athinon* 52 (1977), 375-383 (1978). (R. E. Stong) **80g:57032** 57R20
- Imbeddings, immersions and integrability of characteristic classes. *Math. Scand.* 43 (1978), no. 2, 177-184 (1979). (David Handel) **80h:55013** 55R40 (57R40)
- Generators and relations in the mod  $p$  Steenrod algebra. *Studies in algebraic topology*, pp. 167-188, *Advances in Math., Suppl. Studies*, 5, Academic Press, New York, 1979. (Donald M. Davis) **80h:55014** 55S10
- On killing characteristic classes by cobordism. *Manuscripta Math.* 29 (1979), no. 1, 85-92. (P. J. Kahn) **80i:57023** 57R20 (57R65)
- On the vanishing of the dual Stiefel-Whitney classes of orientable manifolds. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 310-314. (R. L. E. Schwarzenberger) **80g:57033** 57R20 (57Q35)
- Papathodorou, Theodore** Fast tensor product Poisson solvers for the Dirichlet problem on a rectangle. (French summary) *Ann. Sci. Math. Québec* 3 (1979), no. 1, 135-141. (Authors' summary) **80c:65195** 65T05 (65N20)
- Papavasiliopoulos, G. P.** (with Cruz, J. B., Jr.) On the existence of solutions to coupled matrix Riccati differential equations in linear quadratic Nash games. *IEEE Trans. Automat. Control* 24 (1979), no. 1, 127-129. (Emmanuel Nicholas Barron) **80c:93100** 93C99
- (with Cruz, J. B., Jr.) On the uniqueness of Nash strategies for a class of analytic differential games. *J. Optim. Theory Appl.* 27 (1979), no. 2, 309-314. (G. J. Olsder) **80c:90169** 90D25
- (with Medanić, J. V.; Cruz, J. B., Jr.) On the existence of Nash strategies and solutions to coupled Riccati equations in linear-quadratic games. *J. Optim. Theory Appl.* 28 (1979), no. 1, 49-76. (Authors' summary) **80c:90170** 90D25
- Paperno, E. L.** Solution of infinite systems of linear algebraic equations. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1300-1302, 1358. (Cs. J. Hegedűs) **80a:65120** 65J10 (55A06)
- Papick, Ira J.** A remark on coherent overings. *Canad. Math. Bull.* 21 (1978), no. 3, 373-375. (James Hein) **80h:13008** 13E05
- Finite type extensions and coherence. *Pacific J. Math.* 78 (1978), no. 1, 161-172. (Robert Gilmer) **80b:13003** 13B02 (13F05, 13G05)
- Papis, A. A.** (with Antonev, S. N.) Global smoothness of the solutions of equations of two-phase filtration. (Russian) *Dinamika Splošn. Sredy* No. 35 *Dinamicheskie Zadachi Mekhaniki Splošnyh Sred* (1978), 3-28, 173. (Authors' summary) **80d:35133** 35Q99 (76S05)
- (with Antonev, S. N.) Approximate methods of solving two-phase filtration problems. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 3, 521-525. (Jaroslav Jelen) **80k:76071** 76S05 (65P05)
- Papines, Robert L.** (with Lakshminarayan, Sankaran; Lakshmanan, Ram; Rochette, René) Optimal single-machine scheduling with earliness and tardiness penalties. *Oper. Res.* 26 (1978), no. 6, 1079-1082. (John C. Gittins) **80h:90085** 90B35
- Papini, P. L.** Sheltered points in normed spaces. *Ann. Mat. Pura Appl.* (4) 117 (1978), 233-242. (C. Franchetti) **80j:41061** 41A65 (46B20)
- Papke, W.** Startverhalten eines Automaten in stochastischen Umwelten. *Z. Elektr. Inform. Energietechnik* 8 (1978), no. 6, 533-540. (From the text) **80a:68056** 68D25 (68D05)
- Papp, Z. L.** (with Györy, K.) Effective estimates for the integer solutions of norm form and discriminant form equations. *Publ. Math. Debrecen* 25 (1978), no. 3-4, 311-325. (S. Y. Kotov) **80b:10026** 10B16 (10F99)
- Pappas, P. T.** Physics in six dimensions: an axiomatic formulation. *Lett. Nuovo Cimento* (2) 22 (1978), no. 15, 601-607. (From the introduction) **80a:83002** 83A05 (00A89)
- The "three-dimensional time" equation. *Lett. Nuovo Cimento* (2) 25 (1979), no. 14, 429-434. (Kishin Mariwalla) **80k:81231** 81M05 (51B20)
- Pappas of Alexandria** See Berggren, J. L. **80i:01003**
- Papic, Dina I.** (with Popescu, I. P.) Considérations algébriques sur les tissus associés aux fibrés principaux différentiables. *Papers from the National Colloquium on Geometry and Topology (Univ. Timișoara, Timișoara, 1977)*, 185-198. *Univ. Timișoara, Timișoara*, 1977. (J. L. Koszul) **80e:55029** 55R10 (53C05)
- Papina, A. N.** Dynamic interaction of a torsion-vibrational system with an actuator of bounded power. (Russian) *Prikl. Meh.* 14 (1978), no. 6, 131-134. (G. V. Hmelevskaja-Plotnikova) **80d:73104** 73K99 (70K99)
- Papiris, A. N.** (with Alhimov, A. P.; Vorozcov, E. V.; Fomin, V. M.) Theoretical and experimental investigation of the motion of a gas mixture with hard particles in a Laval nozzle. (Russian) *Cisl. Metody Meh. Splošn. Sredy* 9 (1978), no. 2 *Gazovaja Dinamika*, 5-15. (Editors) **80c:76052** 76T05 (76N15)
- Papes, Antonio** Sur la cohomologie des formes quadratiques. Colloque sur les Formes Quadratiques, 2 (Montpellier, 1977). *Bull. Soc. Math. France Mém. No. 59* (1979), 101-113. (Carl Riehm) **80a:15038** 15A63 (10C05, 13C10)
- Papes, Otilia T. Wiermann** Tensor products of Silva-holomorphic functions. *Advances in holomorphy (Proc. Sem. Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 629-700. *North-Holland Math. Studies*, 34, North-Holland, Amsterdam, 1979. (Richard M. Aron) **80g:46043** 46G20 (46M05)
- Papet, Luc** (with Lumer, Gunter) Semi-groups holomorphes, produit tensoriel de semi-groupes et équations d'évolution. *Séminaire de Théorie du Potentiel*, No. 4 (Paris, 1977/1978), pp. 156-177. *Lecture Notes in Math.*, 713, Springer, Berlin, 1979. (W. Dickmeis and P. L. Butzer) **80a:47041** 47D05
- Problèmes mixtes pour le système de Maxwell. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 3, A191-A194. (Author's summary) **80c:58039** 58G20 (47D05)
- Parameswaran, Mangalam R.** (with Kuttner, Brian) On the generalized Hausdorff and some related matrices. *Houston J. Math.* 4 (1978), no. 4, 569-576. (K. Endl) **80g:40004** 40C05
- (with Kuttner, Brian) A product theorem and a Tauberian theorem for Euler methods. *J. London Math. Soc.* (2) 18 (1978), no. 2, 299-304. (M. S. Rangachari) **80d:40003** 40D25 (40E05)
- A general Tauberian theorem. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 14(34) (1979), no. 1, 83-86. (B. Kuttner) **80i:40002** 40E05
- Paramhans, S. A.** (with Tiwary, A. K.) On closures of submodules. *Indian J. Pure Appl. Math.* 8 (1977), no. 11, 1415-1419. (Authors' introduction) **80i:16041** 16A64 (16A62)
- Parashar, Vinod K.** A note on total regularity for  $(R, \lambda, p)$  summability methods. *Acta Cienc. Indica* 4 (1978), no. 1, 94-96. (N. K. Govil) **80h:40005** 40G99
- (with Ahmad, Z. U.) On a relation between Nörlund summability and Lebesgue summability. *Kyungpook Math. J.* 18 (1978), no. 2, 223-232. (S. M. Mazhar) **80i:40001** 40D25 (40G05)
- On  $(N, p_n)$  and  $(K, 1, \alpha)$  summability methods. *Tamkang J. Math.* 9 (1978), no. 1, 35-45. (Hiroshi Hirokawa) **80j:40005** 40D25
- Parasjuk, I. O.** One-dimensional Schrödinger equation with an almost periodic potential. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 5, 401-404. (Author's summary) **80a:34026** 34B25 (65L07)
- Parametric resonance in linear Hamiltonian systems with quasiperiodic coefficients. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 1, 92-95, 112. (Stefan Mirica) **80b:34047** 34C28
- Paraskevopoulos, P. N.** Exact model matching of linear time-varying systems. *Proc. Inst. Electr. Engrs.* 125 (1978), no. 1, 66-70. (Author's summary) **80b:93046** 93B30
- hashemi-Parast, S. M.** See Hashemi-Parast, S. M.
- Parbery, R. D.** (with Karahaloo, B. L.) The optimal design of beam-columns. *Internat. J. Solids and Structures* 15 (1979), no. 11, 855-859. (Authors' summary) **80g:73045** 73K05 (49B10)
- Parichmann, Rainer** (with Duske, Jürgen; Specht, Johann) A homomorphic characterization of indexed languages. (Russian and German summaries) *Elektron. Informationsverarb. Kybernet.* 15 (1979), no. 4, 187-195. (Kenneth B. Salomon) **80j:68058** 68F05
- (with Duske, Jürgen; Specht, Johann) Szilard languages of IO-grammars. *Inform. and Control* 40 (1979), no. 3, 319-331. (Authors' summary) **80g:68094** 68F05
- Control system model for critically timed sources. *J. Assoc. Comput. Mach.* 26 (1979), no. 1, 1-5. (Frits C. Schoute) **80c:68010a** 68A05
- Corrigendum: "Control system model for critically timed sources" [J. Assoc. Comput. Mach. 26 (1979), no. 1, 1-5; MR 80c:68010]. *J. Assoc. Comput. Mach.* 27 (1980), no. 2, 402. (Editors) **80c:68010b** 68A05
- gómez Pardo, J. L.** See Gómez Pardo, J. L.
- Pardon, William** (with Bass, Hyman) Some hybrid asymptotic group phenomena. *J. Algebra* 53 (1978), no. 2, 327-333. (Bruce A. Magurn) **80c:20065** 20G99
- Pardoux, Étienne** Filtrage de diffusions avec conditions frontières: caractérisation de la densité conditionnelle. *Journées de Statistique des Processus Stochastiques (Grenoble, 1977)*, pp. 163-188, *Lecture Notes in Math.*, 636, Springer, Berlin, 1978. (B. L. Rozovskii) **80a:60062** 60G35 (60H15)
- Stochastic partial differential equation for the density of the conditional law of a diffusion process with boundary. *Stochastic analysis (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1978)*, pp. 239-269, Academic Press, New York, 1978. (R. Š. Lipcer) **80d:60082** 60H15 (60G35)
- Un résultat sur les équations aux dérivées partielles stochastiques et filtrage des processus de diffusion. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 16, A1065-A1068. (Author's summary) **80c:60084** 60H15 (60G35)
- Pardizanadze, V. V.** Optimal nonlinear filtering of a class of conditionally Gaussian sequences. (Russian. Georgian and English summaries) *Sakharis. SSR Mecn. Akad. Moambe* 89 (1978), no. 3, 545-548. (R. Š. Lipcer) **80j:60058** 60G35
- Optimal nonlinear filtering, interpolation and extrapolation of a class of conditionally-Gaussian processes. (Russian. Georgian and English summaries) *Sobbič. Akad. Nauk Gruzin. SSR* 92 (1978), no. 3, 565-568. (R. Š. Lipcer) **80j:60063** 60G35
- The problem of control optimal in the sense of Nash for linear diffusion processes with various information for the players. (Russian. Georgian and English summaries) *Sobbič. Akad. Nauk Gruzin. SSR* 93 (1979), no. 3, 533-536. (Author's summary) **80j:49006** 49A22
- Paré, Robert** (with Schumacher, Dietmar) Abstract families and the adjoint functor theorems. *Indexed categories and their applications*, pp. 1-125, *Lecture Notes in Math.*, 661, Springer, Berlin, 1978. (George D. Reynolds) **80b:18004** 18A40
- (with Linton, F. E. J.) Injectives in topoi. I. Representing coalgebras as algebras. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 196-206, *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (Ioan Tofan) **80j:18007a** 18B25 (18C15)
- (with Johnstone, P. T.; Linton, F. E. J.) Injectives in topoi. II. Connections with the axiom of choice. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 207-216, *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (Ioan Tofan) **80j:18007b** 18B25
- Paré, C. M.** (with Hameed, Abdul) Metrizability of topological spaces via covers. *Math. Japon.* 23 (1978/79), no. 5, 555-563. (C. E. Aul) **80b:54034** 54E35
- (with Hdeib, H. Z.) A note on  $[a, b]$ -compact spaces. *Canad. Math. Bull.* 22 (1979), no. 1, 105-112. (R. F. Dickman, Jr.) **80d:54024** 54D30 (54C10)
- Parent, Michel** (with Leroudier, Jacques) Discrete event simulation modelling of computer systems for performance evaluation. *Math. Comput. Simulation* 21 (1979), no. 1, 50-79. (Authors' summary) **80c:68244** 68J10 (68A05)
- Parent, Cesare** The hypoellipticity problem. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 2, 300-326. (David S. Tartakoff) **80c:35050** 35H05 (47F05)
- (with Rodino, Luigi) A pseudo differential operator which shifts the wave front set. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 251-257. (F. Cardoso) **80a:35120** 35S05
- mallet-Paré, John** See Mallet-Paré, John
- Parezanović, Nedeljko S.** Modelling of a Fredholm integral equation by the differential equation method. (Serbo-Croatian. English summary) *Mat. Vesnik* 2(15)(30) (1978), no. 1, 3-9. (Tetz Yoshimura) **80c:65127** 65R20

- Parfenov, P. G.** The coincidence of the dimensions of absolutely normal bicompa. (Russian) *Sibirsk. Mat. Ž.* **19** (1978), no. 3, 654–662, 719. (D. Adnadjević) **80b:54044** 54F45
- Parfitt, Amanda M.** (with Longdon, L. W.) Finite integral transforms and the control of distributed parameter systems. With discussion. *Recent theoretical developments in control* (Proc. Conf., Univ. Leicester, Leicester, 1976), pp. 255–264, Academic Press, London, 1978. (Kiran Chandra Das) **80g:35024** 35C99 (35C10, 49A22)
- Parham, Behrouz** (with Ashjaee, M. J.) An introduction to the mathematical aspects of computer system reliability. *Proceedings of the Eighth National Mathematics Conference (Arya-Mehr Univ. Tech., Tehran, 1977)*, pp. 267–301, Arya-Mehr Univ. Tech., Tehran, 1977. (Mark Karpovsky) **80b:68006** 68A05 (94Bxx)
- (with Avizienis, Algirdas) Detection of storage errors in mass memories using low-cost arithmetic error codes. *IEEE Trans. Comput.* **27** (1978), no. 4, 302–308. (Przemysław Prusinkiewicz) **80a:94038** 94B40
- Parikh, N.** (with Nayak, S. K.) On the behavior of solutions of  $y'' - p(t)y' = f(t)$ . *Applicable Anal.* **9** (1979), no. 1, 1–5. (L. Pinter) **80i:34051** 34C10
- Parida, J.** (with Sahoo, B.) An existence theorem for the generalized complementarity problem. *Bull. Austral. Math. Soc.* **19** (1978), no. 1, 51–58. (B. Mond) **80a:90137** 90C33
- (with Nayak, K. C.) An existence theorem for the complex linear complementarity problem. *Z. Angew. Math. Mech.* **59** (1979), no. 6, 275–276. (S. R. Mohan) **80j:90107** 90C33
- Parigi, Giuliano** La simplification par les variétés de Demazure. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 7, A535–A538. (Author's summary) **80c:32023** 32J25 (14B99)
- Parikh, Rohit** A decidability result for a second order process logic. *19th Annual Symposium on Foundations of Computer Science (Ann Arbor, Mich., 1978)*, pp. 177–183, IEEE, Long Beach, Calif., 1978. (Author's summary) **80c:68132** 68C30 (03B25, 68B20)
- Parikh, S. C.** (with Dantzig, George B.) On a pilot linear programming model for assessing physical impact on the economy of a changing energy picture. *Mathematical aspects of production and distribution of energy* (Proc. Sympos., San Antonio, Tex., 1976), pp. 93–106, Proc. Sympos. Appl. Math., XXI, Amer. Math. Soc., Providence, R.I., 1977. (Authors' summary) **80h:90161** 90C50 (90A16, 90C48)
- (with Dantzig, George B.) At the interface of modeling and algorithms research. *Nonlinear programming, 3* (Proc. Sympos., Special Interest Group Math. Programming, Univ. Wisconsin, Madison, Wis., 1977), pp. 283–302, Academic Press, New York, 1978. (From the summary) **80a:90154** 90C50
- de Paris, J.-Cl.** (with Wagschal, Claude) Problème de Cauchy non caractéristique à données Gevrey pour un opérateur analytique à caractéristiques multiples. *J. Math. Pures Appl.* (9) **57** (1978), no. 2, 157–172. (Maria Cinquini-Cibrario) **80d:35005** 35A05 (35L99)
- Paris, Jeff** See Colloquium: Logic, **80a:03003**
- Paris, R. B.** (with Wood, A. D.) The asymptotic expansion of solutions of the differential equation  $u'' + \lambda^2[(z^2 + c)u' + azu + bu] = 0$  for large  $|z|$ . *Philos. Trans. Roy. Soc. London Ser. A* **293** (1980), no. 1404, 511–533. (F. W. J. Oliver) **80k:34071** 34E05
- Parisi, G.** On non-renormalizable interactions. *New developments in quantum field theory and statistical mechanics* (Proc. Cargèse Summer Inst., Cargèse, 1976), pp. 281–305, NATO Adv. Study Inst. Ser., Ser. B: Physics, 26, Plenum, New York, 1977. (Lawrence P. Horwitz) **80b:81083** 81E15
- (with Brézin, E.) Critical exponents and large-order behavior of perturbation theory. *J. Statist. Phys.* **19** (1978), no. 3, 269–292. (Nicolae Angelescu) **80a:82018** 82A25 (00A89)
- Hausdorff dimensions and gauge theories. *Phys. Lett. B* **81** (1979), no. 3–4, 357–360. (Author's summary) **80c:81084** 81E15 (28A75)
- Parisi, Valerio** (with Inceri, Sandro; Zirilli, Francesco) A new method for solving nonlinear simultaneous equations. *SIAM J. Numer. Anal.* **16** (1979), no. 5, 779–789. (Authors' summary) **80f:65058** 65H10
- Park, C.** (with Skoug, D. L.) Distribution estimates of barrier-crossing probabilities of the Yeh-Wiener process. *Pacific J. Math.* **78** (1978), no. 2, 455–466. (N. M. Zinchenko) **80c:60093** 60J65 (60G15)
- Park, David** ★Classical dynamics and its quantum analogues. *Lecture Notes in Physics*, 110. Springer-Verlag, Berlin-New York, 1979. viii + 339 pp. ISBN 3-540-09565-9 (Victor Wong) **80m:70003** 70-01 (78A05, 81-01)
- Park, Jae Keol** Artinian skew group rings. *Proc. Amer. Math. Soc.* **75** (1979), no. 1, 1–7. (Donald S. Passman) **80d:16009** 16A26
- Park, James L.** (with Band, William) Some fundamental difficulties with quantum mechanical collision theory. *Found. Phys.* **8** (1978), no. 9–10, 677–694. (Authors' summary) **80f:81095** 81F15 (47A40)
- (with Gilmore, Todd, Jr.) Superselection rules in quantum theory. I. A new proposal for state restriction violation. *Found. Phys.* **9** (1979), no. 7–8, 537–556. (Johan G. Belinfante) **80e:81007** 81B10
- Park, Kwang Sung** (with Chae, Younki) The singular ideas and Goldie dimensions of group rings. *Kyungpook Math. J.* **18** (1978), no. 2, 135–139. (S. K. Sehgal) **80g:16014** 16A27
- Park, Sehie** (with Kasahara, Shouro) Fixed point theorems for mappings with a quasi-contractive iterate at a point. *Math. Sem. Notes Kobe Univ.* **6** (1978), no. 2, 395–401. (L. Górniewicz) **80a:54084** 54H25
- Fixed points of  $f$ -contractive maps. *Rocky Mountain J. Math.* **8** (1978), no. 4, 743–750. (P. V. Subrahmanyam) **80d:54059** 54H25
- On  $f$ -nonexpansive maps. *J. Korean Math. Soc.* **16** (1979/80), no. 1, 29–38. (M. Edelstein) **80m:54060** 54H25
- Park, Soo Yong** (with O'Riagain, Lochlainn; Wali, Kameswar C.) Magnetic-monopole interactions. *Phys. Rev. D* (3) **20** (1979), no. 8, 1941–1950. (Authors' summary) **80c:81052** 81E10 (81D20)
- Park, Y. S.** See Park, Young Soo
- Park, Yong Jin** (with Tanaka, Sueo) A new approach for network overall reliability analysis. *Electron. Comm. Japan* **60** (1977), no. 10, 1–8. (Authors' summary) **80g:68010** 68A05
- Park, Yong Moon** Lack of screening in the continuous dipole systems. *Comm. Math. Phys.* **70** (1979), no. 2, 161–167. (Thomas Spencer) **80k:82027** 82A15
- Park, Young Soo** (with Choe, Tae Ho) Characterizations of  $R$ -compact ordered spaces. *Kyungpook Math. J.* **18** (1978), no. 2, 147–148. (D. J. Lutzer) **80c:54031** 54F05
- (with Choe, Tae Ho) Wallman's type order compactification. *Pacific J. Math.* **81** (1979), no. 2, 339–347. (R. F. Dickman, Jr.) **80m:54034** 54D35
- (with Choe, Tae Ho) Embedding ordered topological spaces into topological semilattices. *Semigroup Forum* **17** (1979), no. 3, 189–199. (W. Wiley Williams) **80c:54041** 54F05
- Parkash, K.** (with Murari, K.) Servicing of vehicles at an automobile service centre with variable waiting space. *Pure Appl. Math. Sci.* **10** (1979), no. 1–2, 71–80. (Authors' summary) **80m:90054** 90B22
- Parkash, Om** (with Patkar, Vivek; Saxena, P. C.) Linear piecewise linear programs with variable coefficients. *Pure Appl. Math. Sci.* **10** (1979), no. 1–2, 51–56. (Authors' summary) **80m:90065** 90C05
- Parker, D. F.** (with Spencer, A. J. M.; Berry, D. S.; England, A. H.; Faulkner, T. R.; Green, W. A.; Holden, J. T.; Middleton, D.; Rogers, T. G.) ★Engineering mathematics. Vol. 2. *Van Nostrand Reinhold Co. Ltd., New York-Toronto, Ont.-London, 1977*. 400 pp. ISBN 0-442-30206-1 (Vadim Komkov) **80g:00003** 00A06
- Finite-amplitude oscillations of a spherical cavity in a nearly-incompressible elastic material. *Arch. Mech. (Arch. Mech. Stas.)* **30** (1978), no. 6, 777–790. (Author's summary) **80i:73019** 73D99 (35Q99)
- (with Seymour, B. R.) Finite amplitude one-dimensional pulses in an inhomogeneous granular material. *Arch. Rational Mech. Anal.* **72** (1979/80), no. 3, 265–284. (Peter J. Chen) **80j:73021** 73D99 (35Q99)
- The role of Saint-Venant's solutions in rod and beam theories. *Trans. ASME Ser. E J. Appl. Mech.* **46** (1979), no. 4, 861–866. (Author's summary) **80i:73005** 73C10
- Parker, D. Stott, Jr.** Combinatorial merging and Huffman's algorithm. *IEEE Trans. Comput.* **28** (1979), no. 5, 365–367. (Author's summary) **80g:94111** 94C30 (94A17)
- Notes on shuffle/exchange-type switching networks. *IEEE Trans. Comput.* **29** (1980), no. 3, 213–222. (Author's summary) **80m:94097** 94C10 (94A11)
- Parker, Donald B.** Injectors which are T.I. subgroups. *Comm. Algebra* **6** (1978), no. 14, 1471–1475. (John S. Wilson) **80b:20023a** 20D10
- Parker, E. T.** An inequality for pseudosubplanes of sets of orthogonal Latin squares. *J. Combin. Theory Ser. A* **25** (1978), no. 1, 76. (Author's summary) **80k:05024** 05B15
- (with Dyer, Gerald A.) A problem with permutations. I. *J. Combin. Theory Ser. A* **26** (1979), no. 2, 201. (Dominique Foata) **80g:05005** 05A10
- Parker, G. Edgar** Semigroups of continuous transformations and generating inverse limit sequences. *Pacific J. Math.* **80** (1979), no. 1, 227–235. (Dix H. Petley) **80h:54048** 54H15 (54B25)
- Parker, George** Divergence free vector fields and Bochner's theorems. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astron. Phys.* **26** (1978), no. 12, 979–983 (1979). (R. H. Bowman) **80f:53044** 53C99 (57R25)
- Parker, Leonard** Path integrals for a particle in curved space. *Phys. Rev. D* (3) **19** (1979), no. 2, 438–441. (G. R. Allcock) **80b:81039** 81C35 (58D20)
- (with Papastamatiou, N. J.) Asymmetric creation of matter and antimatter in the expanding universe. *Phys. Rev. D* (3) **19** (1979), no. 8, 2283–2299. (A. F. da F. Teixeira) **80d:83064** 83C99
- Parker, Yvonne M.** (with Boyle, L. L.) Symmetry coordinates and vibration frequencies for an icosahedral cage. *Molecular Phys.* **39** (1980), no. 1, 95–109. (Authors' summary) **80k:81185** 81G50 (20H15)
- Parkes, E. J.** (with Gribben, R. J.) A note on the application of the method of strained coordinates to a problem of wave propagation in plasmas. *J. Phys. A* **11** (1978), no. 11, 2341–2348. (Carlo Cercignani) **80b:76045** 76X05 (35B25)
- Parkin, I. A.** On determining the prime implicants of a Boolean function without recourse to its minterm form. *Austral. Comput. J.* **10** (1978), no. 4, 153–156. (Author's summary) **80g:94090** 94C10 (03G05)
- Parks, Harold** Some new constructions and estimates in the problem of least area. *Trans. Amer. Math. Soc.* **248** (1979), no. 2, 311–346. (F. J. Almgren, Jr.) **80b:49034** 49F22
- Parl, Steen** A new method of calculating the generalized  $Q$  function. *IEEE Trans. Inform. Theory* **26** (1980), no. 1, 121–124. (Author's summary) **80i:94011** 94A12 (68C05)
- Parlamento, Franco** On the completeness of the  $\omega$ -rule. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* **36** (1977/78), 235–249 (1979). (Carlo Cellucci) **80h:03085** 03F30 (03F20)
- Parlato, Lucio** (with Esposito, Rosa; Lo Re, Pia Maria; Magro, Gaetano) Homology cycles with coefficients. (Italian. English summary) *Ricerche Mat.* **28** (1979), no. 1, 143–157. (Jack Weinstein) **80m:55004** 55N10 (55N22)
- Parlett, B. N.** (with Hoffmann, W.) A new proof of global convergence for the tridiagonal QL algorithm. *SIAM J. Numer. Anal.* **15** (1978), no. 5, 929–937. (S. F. McCormick) **80a:65075** 65F15
- (with Scott, D. S.) The Lanczos algorithm with selective orthogonalization. *Math. Comp.* **33** (1979), no. 145, 217–238. (Colette Lebaud) **80c:65090** 65F15
- Parnar, A. K.** (with Prasanna, Shanti; Buch, Smriti B.) On a paper of Phadke, Khasbardar and Thakare. *Indian J. Pure Appl. Math.* **10** (1979), no. 4, 467–469. (Teishirō Saitō) **80d:47035** 47B20
- Parmenter, M. M.** (with Polcino Miles, César) Isomorphic group rings of direct products. *Arch. Math. (Basel)* **31** (1978/79), no. 1, 11–14. (Ralph W. Wilkerson) **80c:16010** 16A26
- Parmentier, R. D.** (with Grella, G.) Solutions of the sine-Gordon equation in 2 + 0 dimensions. *Leti. Nuovo Cimento* (2) **25** (1979), no. 10, 294–296. (M. M. Skraginov) **80h:35114** 35Q20
- Parnev, I. V.** (with Artemkina, L. V.) Application of differential equations to the description of the queueing process with controllable input flow and to seeking its characteristics. (Russian) *Differentsial'nye Uravneniya (Ryazan) No. 11* (1978), 28–34. (Authors' summary) **80d:60123** 60K25
- Parnovskii, S. L.** Motion of particles in the field of a naked singularity of Kasner type with complex or equal exponents. *Ž. Eksp. Teoret. Fiz.* **76** (1979), no. 2, 385–392. (Russian; translated as Soviet Phys. JETP) **49** (1979), no. 2, 195–198. (S. G. Mamaev) **80j:83006** 83C15 (53C80)
- Parodi, F.** Construction of a universe of nonlinear devices over a pair of abelian groups. (Italian) *Rend. Sem. Mat. Univ. Padova* **58** (1977), 45–54 (1978). (Ioan Tofan) **80k:18007** 18B99



- Parvičenko, I. I.** On some questions related to iteration of set-theoretic operations. (Russian) *Mat. Sb. (N.S.)* **106**(148) (1978), no. 2, 265–295. (S. A. Peregrudov) **80c:04003** 04A05
- Part, William C.** (with Schucany, William R.; Boyer, John E.) Correlation structure in Farlie-Gumbel-Morgenstern distributions. *Biometrika* **65** (1978), no. 3, 650–653. (S. Kotz) **80a:62081** 62H20 (62H05)
- Parras Gujosa, Luis** (with Pascual Acosta, Antonio) A study of new bounds for the distributions and measures of effectiveness of the  $GI/M/1$  queue. (Spanish) *Trabajos Estadist. Investigación Oper.* **29** (1978), no. 2, 69–76. (Brian Conolly) **80b:60116** 60K25
- Parrichini, G.** (with O'Riartaigh, Lochlainn) Anomalous behaviour of the effective potential. *Feynman path integrals* (Proc. Internat. Colloq., Marseille, 1978), pp. 374–388, *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (V. E. Korepin) **80m:81032** 81C35
- Parreau, François** (with Host, Bernard) Sur un problème de I. Glöckberg: les idéaux fermés de type fini de  $M(G)$ . (English summary) *Ann. Inst. Fourier (Grenoble)* **28** (1978), no. 3, x, 143–164. (C. McGehee) **80b:43003** 43A10  
(with Host, Bernard) Ensembles de Rajchman et ensembles de continuité. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 19, A899–A902. (Authors' summary) **80c:43009** 43A46 (43A25)
- Parring, A.** The manifold of symplectic 2m-planes and the spherical mapping. (Russian. Estonian and German summaries) *Tartu Riikl. Ül. Toimetised No. 464 Trudy Mat. i Meh.* no. 22 (1978), 116–136. (I. Vaisman) **80b:53036** 53C30
- Parry, C. F.** (with Longuet-Higgins, M. S.) Inverse properties of the plane  $n$ -line. II. An infinite six-fold chain of circle theorems. *J. London Math. Soc.* (2) **19** (1979), no. 3, 541–560. (J. F. Rigby) **80k:51007** 51M05
- Parry, Charles J.** On the class number of relative quadratic fields. *Math. Comp.* **32** (1978), no. 144, 1261–1270. (S. P. Demuškin) **80b:12004** 12A50  
(with Brown, Ezra) The 2-class group of biquadratic fields. II. *Pacific J. Math.* **78** (1978), no. 1, 11–26. (Pierre Damey) **80a:12006** 12A30
- Parry, Gareth P.** A continuum model of many-body interactions in a perfect crystal. *Math. Proc. Cambridge Philos. Soc.* **85** (1979), no. 2, 379–385. (Author's summary) **80b:82048** 82A50  
On the comparison of stability criteria in anisotropic materials. *Math. Proc. Cambridge Philos. Soc.* **86** (1979), no. 3, 529–538. (C.-C. Wang) **80b:73017** 73C50 (26B25)
- Parry, William** (with Palmer, Marion Rachel; Walters, Peter) Large sets of endomorphisms and of  $g$ -measures. The structure of attractors in dynamical systems (Proc. Conf., North Dakota State Univ., Fargo, N.D., 1977), pp. 191–210, *Lecture Notes in Math.*, 668, Springer, Berlin, 1978. (Nathaniel Friedman) **80b:28025** 28D05 (58F11)  
(with Helson, Henry) Cocycles and spectra. *Ark. Mat.* **16** (1978), no. 2, 195–206. (Richard Isaac) **80d:28036** 28D05 (43A17)  
An information obstruction to finite expected coding length. *Ergodic theory* (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1978), pp. 163–168, *Lecture Notes in Math.*, 729, Springer, Berlin, 1979. (Nathaniel Friedman) **80b:28032** 28D20
- Parsa, Zohreh** Topological solitons in physics. *Amer. J. Phys.* **47** (1979), no. 1, 56–62. (David J. Kaup) **80b:81078** 81E10 (35Q99, 81D15)
- Parfenov, N. Ja.** See *Principles of the construction of information disseminating devices*. **80c:94002**
- Parlin, A. N.** (with Bašmakova, I. G.; Gnedenko, B. V.; Kuzičeva, Z. A.; Medvedev, F. A.; Ožigova, E. P.; Rudakov, A. N.; Slavutin, E. I.; Šeĭnin, O. B.; Juškevič, A. P.) ★Математика XIX века. (Russian) [XIXth century mathematics] Математическая логика. Алгебра. Теория чисел. Теория вероятностей. [Mathematical logic. Algebra. Number theory. Probability theory] Edited by A. N. Kolmogorov and A. P. Juškevič. "Nauka", Moscow, 1978. 255 pp. (I. Grattan-Guinness) **80i:01010** 01A55  
Abelian coverings of arithmetic schemes. (Russian) *Dokl. Akad. Nauk SSSR* **243** (1978), no. 4, 855–858. (Gerhard Pfister) **80b:14014** 14G15 (12B25)
- Parson, L. Alayne** (with Tull, Jack) Asymptotic behavior of multiplicative functions. *J. Number Theory* **10** (1978), no. 4, 395–420. (Don Redmond) **80f:10055** 10H25
- Parsons, T. D.** (with Alspach, Brian) Isomorphism of circulant graphs and digraphs. *Discrete Math.* **25** (1979), no. 2, 97–108. (R. C. Read) **80c:05064** 05C25
- Parsons, Thomas W.** A Winograd-Fourier transform algorithm for real-valued data. *IEEE Trans. Acoust. Speech Signal Process.* **27** (1979), no. 4, 398–402. (Author's summary) **80b:94004** 94A11 (65T05)
- Parsons, Van L.** A note on the exact distribution of a nonparametric test statistic for ordered alternatives. *Ann. Statist.* **7** (1979), no. 2, 454–458. (M. Raghuvaran) **80b:62035** 62G10 (62E15)
- Parter, Seymour V.** See *Numerical methods for partial differential equations*. **80k:65006**
- Parthasarathy, K.** (with Tewari, U. B.) Isometric multipliers of Segal algebras. *Bull. Austral. Math. Soc.* **20** (1979), no. 1, 105–114. (Harald E. Krogstad) **80g:43008** 43A22
- Parthasarathy, K. R.** See *Parthasarathy, Kalyanapuram Rangachari*
- Parthasarathy, K. R.** (with Ravindra, G.) The validity of the strong perfect-graph conjecture for  $(K_4 - e)$ -free graphs. *J. Combin. Theory Ser. B* **26** (1979), no. 1, 98–100. (Alan Tucker) **80m:05045** 05C15
- Parthasarathy, Kalyanapuram Rangachari** (with Bhatia, Rajendra) ★Lectures on functional analysis. Part I. Perturbation by bounded operators. ISI Lecture Notes, 3. Macmillan Co. of India, Ltd., New Delhi, 1978. 146 pp. ISBN 0-33390-271-8 (B. M. Makarov) **80d:47001** 47-01 (26E15, 46-01, 47A60)  
Eigenvalues of matrix-valued analytic maps. *J. Austral. Math. Soc. Ser. A* **26** (1978), no. 2, 179–197. (Winfried Kabbalo) **80b:47016** 47A55 (15A18)  
Infinitely divisible distributions in  $SL(k, \mathbb{C})$  or  $SL(k, \mathbb{R})$  may be imbedded in dyadic convolution semigroups. *Probability measures on groups* (Proc. Fifth Conf., Oberwolfach, 1978), pp. 252–256, *Lecture Notes in Math.*, 706, Springer, Berlin, 1979. (Wilfried Hazod) **80b:60014** 60B15 (43A65)
- Parthasarathy, R.** A generalization of the Enright-Varadarajan modules. *Compositio Math.* **36** (1978), no. 1, 53–73. (P. C. Trombi) **80f:22016** 22E47 (17B15)
- Partridge, J. R.** Hermitian operators for absolute norms and absolute direct sums. *Linear Algebra Appl.* **23** (1979), 275–280. (Peter Lancaster) **80k:15034** 15A57
- Constants relating a Hermitian operator and its square. *Math. Proc. Cambridge Philos. Soc.* **85** (1979), no. 2, 325–333. (Takayuki Furuta) **80b:47029** 47B15 (47A30)
- Parton, V. Z.** (with Perlin, P. I.) ★Интегральные уравнения теории упругости. (Russian) [Integral equations in elasticity theory] With an introduction by D. I. Serman and appendices by S. F. Stupak and N. F. Andrianov. "Nauka", Moscow, 1977. 311 pp. (Vadim Komkov) **80a:73001** 73-02 (30E25, 45-01)
- Parvatham, Rajagopalam** (with Nagore, C. Sri Hari) Characteristic function of a meromorphic function  $f$  and differential monomials in  $f$ . *Indian J. Pure Appl. Math.* **7** (1976), no. 10, 1178–1184. (W. H. J. Fuchs) **80i:30047** 30D35  
(with Blambert, Maurice) On the lower order of entire functions defined by  $L$ -Dirichletian elements. (French summary) *Ann. Sci. Math. Québec* **3** (1979), no. 2, 199–213. (Shlomo Strelitz) **80j:30007** 30B50 (30D20)  
(with Blambert, Maurice) On the overconvergence of certain series. *Internat. J. Math. Math. Sci.* **2** (1979), no. 1, 45–60. (M. E. Noble) **80i:30007** 30B50
- Paşa, Gelyp** (with Fleury, Françoise; Polievshi, Dan) Homogénéisation de corps composites sous l'action de forces de grande fréquence spatiale. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 14, B241–B244. (Authors' summary) **80k:73014** 73C40
- Paşcu, E. E.** The spectrum of a fourth-order nonselfadjoint differential operator on the half-axis. (Russian) *Functional analysis and its applications*, No. 3 (Russian), pp. 135–148. "Ėlm", Baku, 1978. (Stefan Balint) **80c:34013** 34B25 (47E05)
- Pascali, Dan** (with Şburian, Silviu) ★Nonlinear mappings of monotone type. *Editura Academiei*, Bucharest; *Sijthoff & Noordhoff International Publishers*, Alphen aan den Rijn, 1978. x + 341 pp. ISBN 90-286-0118-X (J. Kolomyj) **80g:47056** 47Hxx  
(with Şburian, Silviu) Odd nonlinear operators. (Romanian. English summary) *Stud. Cerc. Mat.* **30** (1978), no. 4, 413–424. (A. B. Németh) **80a:47101** 47H15
- Pascali, Eduardo** (with Carriero, Michele)  $\Gamma$ -convergence of nonnegative integrals dominated by functionals of area type. (Italian. English summary) *Ann. Univ. Ferrara Ser. VII (N.S.)* **24** (1979), 51–63. (Carlo Sbordone) **80b:49025** 49F25 (49A99)
- Pascaud, J. L.** (with Goursaud, J.-M.) Anneaux de polynômes semi-héréditaires. *Ring theory* (Proc. Conf., Univ. Waterloo, Waterloo, 1978), pp. 131–157, *Lecture Notes in Math.*, 734, Springer, Berlin, 1979. (Marco Fontana) **80k:16019** 16A30 (16A45)  
(with Valette, J.) Group actions on  $Q$ -F-rings. *Proc. Amer. Math. Soc.* **76** (1979), no. 1, 43–44. (K. R. Fuller) **80m:16011** 16A36 (16A72)
- Paşenko, V. P.** (with Osipov, I. L.; Šipilin, A. V.) The computation of flows of a nonviscous gas in channels with a strongly changing cross-section. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **18** (1978), no. 4, 964–973, 1069. (Authors' summary) **80b:76027** 76N15 (65P05)
- Paschke, William L.** Relative commutant of a von Neumann algebra in its crossed product by a group action. *Math. Z.* **163** (1978), no. 1, 5–13. (Alain Connes) **80b:46052** 46L10
- Paschal, H.** (with Domingos, J. M.) From the classical field with sources to multipole matrix elements. *Internat. J. Theoret. Phys.* **17** (1978), no. 1, 43–76. (Authors' summary) **80b:78005** 78A25 (35Q99, 81G35)
- Pascu, Anca** (with Baciu-Tugulea, Aurora) A mathematical model in fuzzy systems theory. (French summary) *Operational research '78* (Proc. Eighth IFORS Internat. Conf., Toronto, Ont., 1978), pp. 1034–1039, North-Holland, Amsterdam, 1979. (Authors' summary) **80b:93014** 93A99  
(with Păun, Gheorghe) On the planarity of bicolored digraph grammar systems. *Discrete Math.* **25** (1979), no. 2, 195–197. (Derick Wood) **80b:68063** 68F05
- Pascu, N. N.**  $\alpha$ -starlike functions. (Romanian. English summary) *Bul. Univ. Braşov Ser. C* **19** (1977), 37–39 (1978). (A. W. Goodman) **80j:30020** 30C45  
(with Podaru, V.; Rotaru, P.) Calculation of the alpha-starlike radius for starlike functions of order beta. (Romanian. German summary) *Bul. Univ. Braşov Ser. C* **19** (1977), 41–46 (1978). (A. W. Goodman) **80j:30022** 30C45 (30C30, 65E05)  
Alpha-close-to-convex functions. *Romanian-Finnish Seminar on Complex Analysis* (Proc., Bucharest, 1976), pp. 331–335, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (John G. Milcetic) **80j:30021** 30C45
- Pascual, J. See Ribera Pascual, J.**
- Pascual Acosta, Antonio** (with Infante Macías, R.) Some variations of the variable duration problem. (Spanish) *Trabajos Estadist. Investigación Oper.* **29** (1978), no. 1, 67–76. (Rainer Burkard) **80c:90084** 90B35  
(with Parras Gujosa, Luis) A study of new bounds for the distributions and measures of effectiveness of the  $GI/M/1$  queue. (Spanish) *Trabajos Estadist. Investigación Oper.* **29** (1978), no. 2, 69–76. (Brian Conolly) **80b:60116** 60K25
- Pasched, K.** On the reduction of storage space and processing time for matrices. *Z. Angew. Math. Mech.* **58** (1978), no. 7, T430–T432. (From the introduction) **80a:65088** 65F30
- Paşenčenko, Ju. A.** (with Pavljuk, I. A.) Construction of periodic solutions of nonautonomous systems of ordinary differential equations. (Russian) *Mat. Fiz. No. 24* (1978), 46–52, 121. (A. Ramm) **80b:34042** 34C25  
Numerical analytic methods for the construction of periodic solutions. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 35 (1978), 122–126, 167. (Author's summary) **80a:65188** 65L99
- Paşenčuk, A. E.** A random walk problem in the quarter plane. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 6(204), 229–230. (From the text) **80b:60067** 60J10
- Paşenkov, V. V.** Imbeddings of distributive lattices in Boolean algebras. (Russian) *Ordered sets and lattices*, No. 5 (Russian), pp. 76–82, 118, Saratov. Gos. Univ., Saratov, 1978. (P. Kratochvíl) **80m:06014** 06D05 (06E99)
- Pashkovski, G. S.** See *Paikovski, G. S.*
- Pasi, M. See Gladkii, A. V.** **80b:68072**
- Pasicki, L.** A short proof of the Caristi theorem. *Comment. Math. Prace Mat.* **20** (1977/78), no. 2, 427–428. (L. Janos) **80a:54086** 54H25
- Pasini, Antonio** Model-theoretic approach to geometries. *J. Combin. Inform. System Sci.* **4** (1979), no. 1, 66–75. (Hugo Volger) **80j:03051** 03C65 (51D05)
- Pask, C.** (with Barrell, K. F.) Computation of Bessel functions of complex argument using their zeros. *Internat. J. Comput. Math.* **7** (1979), no. 1, 65–72. (Authors' summary) **80b:65020** 65D20
- Paskonov, V. M.** See *Numerical methods in continuum mechanics*. **80b:76001**

- Paikov, P. I.** (with Stojanov, N. V.) Conditional stability of the solutions of systems of differential equations with lag. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Priroda Mat.* 12 (1976), no. 1, 237-249 (1978). (Authors' summary) 80d:34104 34K20
- Paikovskii, G. S.** Hierarchical models of experiments in Bayesian theory of decision making (generalization of problems of search for defects). *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1977, no. 6, 91-99 (Russian); translated as *Engrg. Cybernetics* 15 (1977), no. 6, 72-79 (1978). (Shelemyahu Zacks) 80d:62065 62L05
- Experiments in mini-max decision-making problems. *Kybernetes* 8 (1979), no. 4, 315-321. (Jaap Wessels) 80i:62008 62C20
- Paikovskii, V. I.** A problem of temperature distribution in ribbed bodies. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 1, 106-111, 189. (D. M. Eidsu) 80f:35019 35C10
- Helversen-Pasotto, Anna** See Helversen-Pasotto, Anna
- Pasquall Coluzzi, Dario** The axial symmetries of the hyperbolic plane. (Italian. English summary) *Pubbl. Istit. Mat. Appl. Fac. Ingr. Univ. Stud. Roma Quaderno No. 11* (1978), 25-34. (E. J. F. Primrose) 80a:51009 51M10
- Pasquini, Lionello** Construction of systems of linear and homogeneous partial differential equations (in two variables) that have a prescribed linear manifold of solutions. (Italian. English summary) *Rend. Mat.* (6) 11 (1978), no. 1, 65-84. (V.-V. Olariu) 80a:35019 35C05
- Pass, Ralph P.** On the partial quotients of algebraic integers. *J. Number Theory* 11 (1979), no. 1, 14-15. (Melvin M. Sweet) 80b:10045 10F25
- Passi, Inder Bir S.** The associated graded ring of a group ring. *Bull. London Math. Soc.* 10 (1978), no. 3, 241-255. (B. Hartley) 80a:20008 20C07 (16A27)
- ★Group rings and their augmentation ideals. *Lecture Notes in Mathematics*, 715. Springer-Verlag, Berlin-New York, 1979. vi + 137 pp. ISBN 3-540-09254-4 (E. Formanek) 80a:20009 20C07
- Pasman, D. S.** Crossed products over semiprime rings. *Houston J. Math.* 4 (1978), no. 4, 583-592. (Afzal Beg) 80d:16010 16A27 (16A12)
- (with Montgomery, Susan) Crossed products over prime rings. *Israel J. Math.* 31 (1978), no. 3-4, 224-256. (Kenneth A. Brown) 80a:16022 16A27 (16A12)
- (with Lorenz, Martin) Centers and prime ideals in group algebras of polycyclic-by-finite groups. *J. Algebra* 57 (1979), no. 2, 355-386. (Ken-ichi Tahara) 80f:20005 20C07 (16A27)
- Pasnow, Eli** Hermite-Birkhoff interpolation: a class of nonpoised matrices. *J. Math. Anal. Appl.* 62 (1978), no. 1, 140-147. (T. J. Rivlin) 80a:41003 41A05
- Pasty, Gregory B.** (with Bruck, Ronald E.) Almost convergence of the infinite product of resolvents in Banach spaces. *Nonlinear Anal.* 3 (1979), no. 2, 279-282. (A. Pazy) 80c:47044 47H06 (47H20)
- Patey, U.** Global solutions of mathematical programs with intrinsically concave functions. *J. Optim. Theory Appl.* 26 (1978), no. 1, 97-115. (Author's summary) 80f:90124 90C30
- Pastl, P.** (with Bonora, L.; Tonin, M.; Zizzi, P.) Extended Higgs models and 't Hooft algebra. (Italian summary) *Nuovo Cimento A* (11) 54 (1979), no. 4, 507-522. (From the text) 80a:81062 81E99 (58E20)
- Pastijn, Francis** The Schützenberger groups of a semigroup and of its subsemigroups. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjel. Prirod. Mat. Nauka No. 16* (1976), 27-36. (From the text) 80c:20094 20M30
- Orthodox bands of modules. *Groupe d'Etude d'Algebre (Marie-Paule Malliavin), 1re année* (1975/76), Exp. No. 12, 13 pp. *Secrétariat Math., Paris*, 1978. (J. J. Malone) 80c:16018 16A64
- (with Bylaen, Karl; Meakin, John) The fundamental four-spiral semigroup. *J. Algebra* 54 (1978), no. 1, 6-26. (M. Friedberg) 80c:20081 20M10
- Maximal subsemigroups of simple pseudo-inverse semigroups. *Simon Stevin* 53 (1979), no. 1-2, 121-130. (P. F. Conrad) 80c:20067 20M10 (06A12)
- Pastore, G. L.** Some theorems on Markov branching processes. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 4, 16-25. (E. Seneta) 80c:60112 60J80
- Pastorová, Mária** The absolute continuity of functions defined on the  $\sigma$ -ring generated by a ring. (Russian summary) *Math. Slovaca* 28 (1978), no. 3, 227-233. (C. W. Swartz) 80c:28013 28B05
- Pastore, Franco** (with Bonadies, Manuella) Ordinary discontinuity waves in hyperelastic thin shells. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 1, 121-128. (Author's summary) 80g:73057 73L99
- Pastur, L. A.** (with Figotin, A. L.) Ergodic properties of the distribution of eigenvalues of some classes of random selfadjoint operators. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 131-134, 218, "Naukova Dumka", Kiev, 1978. (Authors' summary) 80c:47031 47B37 (60H25, 81C10)
- (with Zagrebnov, V. A.) Singular interaction potentials in classical statistical mechanics. (Russian. English summary) *Teoret. Mat. Fiz.* 36 (1978), no. 3, 352-372. (Marko V. Jarić) 80c:82032 82A30 (46N05)
- Pasyukov, B. A.** (with Čigogidze, A. Č.) The dimension of products of completely regular spaces. (Russian. Georgian and English summaries) *Sakharov. SSR Mecn. Akad. Moambe* 90 (1978), no. 3, 553-556. (D. Adnadjević) 80d:54044 54F45
- Pasutor, A.** (with Burmeister, P.; John, R.) On closed morphisms in the category of partial algebras. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 69-76. Heyn, Klagenfurt, 1979. (H. Herrlich) 80k:18009 18C99
- Patarinskii, S. P.** (with Konstantinov, M. M.; Petkov, Petko Hr.; Hristov, Nikola D.) Mutual observation in linear systems and synthesis in the case of incomplete information. (Russian) *Math. Balkanica* 6 (1976), 88-98 (1978). (From the text) 80f:93095 93E20
- (with Konstantinov, M. M.; Petkov, Petko Hr.; Hristov, Nikola D.) Design of linear control systems with incomplete state information. *Automat. i Telemekh.* 1978, no. 9, 68-78 (Russian); translated as *Automat. Remote Control* 39 (1978), no. 9, part 1, 1316-1325 (1979). (Authors' introduction) 80g:93033 93B99
- (with Konstantinov, M. M.; Petkov, Petko Hr.; Hristov, Nikola D.) An algebraic criterion for the stability of linear systems with lag. (Bulgarian. Russian and English summaries) *Automat. Izisl. Tehn.* 12 (1978), no. 6, 5-13, 2, 3. (D. Bobrowaki) 80d:34106 34K35 (34K20, 93D15)
- Patarkacišvili, M. M.** (with Burštein, M. I.; Vainštein, Ju. B.; Ruda, L. G.) Realization of one approach to integrated circuit layout automation. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* 94 (1979), no. 3, 573-576. (Author's summary) 80m:94108 94C15
- Patashinskiĭ, A. Z.** (with Pokrovskii, V. L.) ★Fluctuation theory of phase transition. Translated from the Russian and edited by P. J. Shepherd. *International Series in Natural Philosophy*, 98. Pergamon Press, Oxford-New York-Toronto, Ont., 1979. x + 321 pp. ISBN 0-08-021664-1 (Editors) 80b:82022 82A25
- Patefield, W. M.** The unreplicated ultrastructural relation: large sample properties. *Biometrika* 65 (1978), no. 3, 535-540. (Masafumi Akahira) 80f:62033 62F10
- Pátek, Bohumil** On memoryless approximation of finite state channels. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes* (Prague, 1978), Vol. C, pp. 267-278. Reidel, Dordrecht, 1979. (Author's summary) 80m:94042 94A40
- Patel, K. A.** Series representation of functions of two variables and the Dirichlet problem. *Proc. Nat. Acad. Sci. India Sect. A* 48 (1978), no. 2, 63-75. (Author's summary) 80t:42001 42A05
- Patel, L. K.** Einstein universe with a source-free electromagnetic field. *Acta Phys. Acad. Sci. Hungar.* 45 (1978), no. 4, 371-374 (1979). (Steve Kloster) 80f:83027 83C50
- Radiating Demianski-type space-times. *Indian J. Pure Appl. Math.* 9 (1978), no. 10, 1019-1026. (Sotiris Persides) 80b:83047 83D05
- On Einstein and Gödel universes. *Acta Cienc. Indica* 5 (1979), no. 4, 182-185. (P. C. Vaidya) 80m:83028 83C55 (53B50)
- Patel, M. D.** A class of axially symmetric stationary exact solutions of Einstein's vacuum field equations. *J. Austral. Math. Soc. Ser. B* 20 (1977/78), no. 3, 344-351. (Author's summary) 80a:83022 83C20 (53B30)
- A class of axisymmetric stationary exact solutions of Einstein-Maxwell equations. *J. Phys. A* 12 (1979), no. 3, 383-391. (Hans Stephani) 80d:83027 83C20
- Patel, Rajnikant** (with Toda, Mitsuhiro) Performance bounds for continuous-time filters in the presence of modeling errors. *IEEE Trans. Aerospace Electron. Systems* 14 (1978), no. 6, 912-919. (J. P. Babary) 80b:93151 93E11
- Minimal-order inverses for linear systems with zero and arbitrary initial states. *Internat. J. Control* 30 (1979), no. 2, 245-258. (V. M. Marčenko) 80b:93028 93B99
- (with Toda, Mitsuhiro) Trace inequalities involving Hermitian matrices. *Linear Algebra Appl.* 23 (1979), 13-20. (B. Levinger) 80b:15028 15A45
- Patel, S. M.** Factorization of quasihyponormal operators. *Publ. Inst. Math. (Beograd)* (N.S.) 24(38) (1978), 121-123. (R. G. Bartle) 80c:47027 47B20
- A class of non-hyponormal operators on Hilbert spaces. *Rio. Mat. Univ. Parma* (4) 4 (1978), 23-27 (1979). (B. L. Wadhwa) 80g:47029 47B20
- Essentially normaloid and essentially convexoid operators. *Yokohama Math. J.* 26 (1978), no. 1, 55-59. (R. G. Bartle) 80c:47026 47B20
- Patel, S. R.** (with Jani, P. N.) On minimum variance unbiased estimation of generalized Poisson distribution and decapitated generalized Poisson distribution. *J. Indian Statist. Assoc.* 15 (1977), 151-159. (Authors' summary) 80d:62026 62F10
- Minimum variance unbiased estimation of multivariate modified power series distribution. *Metrika* 25 (1978), no. 3, 155-161. (From the introduction) 80c:62034 62F10
- (with Shah, Shantilal M.) Minimum variance unbiased estimation of left truncated multivariate power series distributions. *Metrika* 25 (1978), no. 4, 209-218. (Stanley L. Sclove) 80c:62035 62F10 (62H12)
- Minimum variance unbiased estimation of left truncated multivariate modified power series distribution. *Metrika* 26 (1979), no. 2, 87-94. (Author's summary) 80b:62021 62F10
- de Pater, C.** Petrus van Musschenbroek (1692-1761), a Dutch Newtonian. *Janus* 64 (1977), 77-87. (Editors) 80a:01015 01A50
- Patera, J.** (with Burdet, G.; Perrin, M.; Winternitz, P.) Sous-algèbres de Lie de l'algèbre de Schrödinger. *Ann. Sci. Math. Québec* 2 (1978), no. 1, 81-108. (F. W. Lemire) 80b:17002 17B05
- (with Lemire, F.) An explicit construction of some discrete unitary series of representations of  $u(p, q)$ . *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 1, 49-52. (Wayne J. Holman, III) 80b:22039 22E70 (81C40)
- (with Sharp, R. T.; Winternitz, P.) Polynomial irreducible tensors for point groups. *J. Math. Phys.* 19 (1978), no. 11, 2362-2376. (M. K. F. Wong) 80d:22018 22E70 (81C40)
- (with Lemire, F.) Formal analytic continuation of Gel'fand's finite-dimensional representations of  $gl(n, C)$ . *J. Math. Phys.* 20 (1979), no. 5, 820-829. (J. F. Cornwell) 80g:22013 22E45 (22E70)
- Pateron, Alan L. T.** On invariant means which are not inversion invariant. *J. London Math. Soc.* (2) 19 (1979), no. 2, 312-318. (Joseph Max Rosenblatt) 80f:43005 43A07
- Pateron, M. S.** (with Munro, J. Ian) Selection and sorting with limited storage. *19th Annual Symposium on Foundations of Computer Science (Ann Arbor, Mich., 1978)*, pp. 253-258. IEEE, Long Beach, Calif., 1978. (Authors' summary) 80c:68162 68E05 (68C25)
- Pathak, Ashutosh** Approximation of a function by a singular integral in  $L_1$ -norm. *Indian J. Pure Appl. Math.* 10 (1979), no. 4, 389-393. (P. L. Butzer) 80b:41009 41A35
- Pathak, P. K.** A new proof of a theorem of Pólya. *Studia Sci. Math. Hungar.* 10 (1975), no. 3-4, 317-321 (1978). (R. A. Horn) 80b:60032 60E05
- Pathak, Ram Shankar** Zeros of a cross product of Whittaker functions. I.  $|m|$  large. *Indian J. Pure Appl. Math.* 7 (1976), no. 11, 1346-1349. (From the text) 80g:33009 33A07
- Formal solution of dual integral equations involving H-functions. *Mathematica (Cluj)* 19(42) (1977), no. 1, 85-93 (1978). (K. S. Parihar) 80a:45013 45F10 (33A35)
- (with Pandey, J. N.) Eigenfunction expansion of generalized functions. *Nagoya Math. J.* 72 (1978), 1-25. (Alexander Alenicyan) 80d:34029 34B25 (33A65, 46F10)
- On a class of dual integral equations. *Nederl. Akad. Wetensch. Indag. Math.* 40 (1978), no. 4, 491-501. (Editors) 80b:45010 45F10
- Dual series equations involving heat polynomials. *Nederl. Akad. Wetensch. Indag. Math.* 41 (1979), no. 4, 455-463. (K. N. Srivastava) 80a:45008 45F10
- On the Meijer transform of generalized functions. *Pacific J. Math.* 80 (1979), no. 2, 523-536. (Reinhard Mennicken) 80b:46036 46F12 (44A15)
- On the existence of fundamental solutions of certain boundary value problems.



Proc. Amer. Math. Soc. 73 (1979), no. 2, 193-198. (J. W. Neuberger) 80d:35006  
35A05 (35D05)  
(with Pandey, J. N.) The G-transform of generalized functions. *Rocky Mountain J. Math.* 9 (1979), no. 2, 307-325. (L. S. Dube) 80m:46037 46F12 (44A20)  
Analytic functions having distributional boundary values in  $W'$ -spaces. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 2, 227-242. (Ju. M. Zinov'ev) 80i:32021 32A40 (32A45, 46F15)

Pathan, M. A. On finite summations. *Math. Balkanica* 6 (1976), 155-160 (1978). (B. R. Bhanale) 80j:33005 33A35 (44A10)  
On some transformations of Kampé de Fériet's function. *Acta Cienc. Indica* 4 (1978), no. 4, 438-439. (R. G. Buschman) 80g:33012 33A35  
On some transformations of triple hypergeometric series  $F^{(3)}$ . III. *Indian J. Pure Appl. Math.* 9 (1978), no. 11, 1113-1117. (H. M. Srivastava) 80m:33002 33A30  
On multiplication formula for hypergeometric functions. *Kyungpook Math. J.* 18 (1978), no. 2, 285-288. (V. L. Deshpande) 80b:33002 33A30  
Integrals involving Legendre functions. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 21 (1978), no. 1, 21-25. (Author's summary) 80g:44001 44A10  
On finite double sums. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 21 (1978), no. 2, 145-149. (Brij Mohan) 80e:44001 44A10  
On finite double summations of Whittaker's function  $W_{\kappa, \mu}(x)$ . *Acta Cienc. Indica* 5 (1979), no. 1, 47-50. (Author's summary) 80g:33010 33A30  
On an expansion of triple hypergeometric series  $F^{(3)}$ . *Bull. Malaysian Math. Soc.* (2) 2 (1979), no. 1, 31-36. (H. M. Srivastava) 80i:33007 33A35  
A note on the generalization of the summation formulas for Appell's and Kampé de Fériet's hypergeometric functions. *J. Math. Anal. Appl.* 72 (1979), no. 2, 783-787. (H. M. Srivastava) 80m:33006 33A30  
On a transformation of a general hypergeometric series of four variables. *Nederl. Akad. Wetensch. Indag. Math.* 41 (1979), no. 2, 171-175. (V. L. Deshpande) 80m:33007 33A30 (33A35)

Pathiaux, Martine Classification en sous familles fermées de  $n$ -uples de nombres algébriques. *Séminaire Delange-Pisot-Poitou, 18e année: 1976/77, Théorie des nombres, Fasc. 2, Exp. No. G23, 3 pp., Secrétariat Math., Paris, 1977. (Editors) 80j:12001 12A15*

Pathá, Péter (with Polyák, György) A note on a paper of Y. Matsouka. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 1, 119-121. (Péter Kiss) 80j:10007 10A20 (10A40)

Pathria, R. K. (with Karmeshu) Cooperative behaviour in a nonlinear model of diffusion of information. (French summary) *Canad. J. Phys.* 57 (1979), no. 9, 1572-1578. (From the summary) 80i:82013 82A05 (94A15)

Patil, D. A. (with Thakare, Nimbakrishna) On extreme points of functions of order  $\alpha$  with positive real part and related results. *Indian J. Pure Appl. Math.* 9 (1978), no. 12, 1353-1358. (K. S. Padmanabhan) 80e:30013 30D50  
(with Thakare, W. K.) Radii of convexity of certain classes of  $p$ -valent analytic functions. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 1, 71-84. (W. C. Royster) 80i:30021 30C45  
(with Thakare, Nimbakrishna) On coefficient bounds of  $p$ -valent  $\lambda$ -spirals functions of order  $\alpha$ . *Indian J. Pure Appl. Math.* 10 (1979), no. 7, 842-853. (E. P. Merkes) 80i:30017 30C45

Patil, G. P. (with Ratnaparkhi, M. V.) Characterizations of certain statistical distributions based on additive damage models involving Rao-Rubin condition and some of its variants. *Sankhyā Ser. B* 39 (1977), no. 1, 65-75. (V. Seshadri) 80d:62017 62E10  
(with Rao, C. Radhakrishna) Weighted distributions and size-biased sampling with applications to wildlife populations and human families. (French summary) *Biometrics* 34 (1978), no. 2, 179-189. (Jon Stene) 80e:62010 62E15 (62P10, 92A17)

Patil, H. P. (with Kulli, V. R.) Critical graphs of  $k$ -minimally nonouterplanar graphs. *Proceedings of the Symposium on Graph Theory (Indian Statist. Inst., Calcutta, 1976), pp. 221-226, ISI Lecture Notes, 4, Macmillan of India, New Delhi, 1979. (Authors' summary) 80m:05026 05C10*

Patil, K. R. (with Thakare, Nimbakrishna) New operational formulas and generating functions for Laguerre polynomials. *Indian J. Pure Appl. Math.* 7 (1976), no. 10, 1104-1118. (T. S. Chihara) 80g:33022 33A65  
(with Thakare, Nimbakrishna) Operational formulas for a function defined by a generalized Rodrigues' formula. I. *Proc. Nat. Acad. Sci. India Sect. A* 48 (1978), no. 2, 85-93. (J. P. Singhal) 80i:33013 33A65  
(with Thakare, Nimbakrishna) Multilinear generating function for the Konhauser biorthogonal polynomial sets. *SIAM J. Math. Anal.* 9 (1978), no. 5, 921-923. (H. L. Manocha) 80j:33020 33A65

Patil, N. P. (with Date, T. H.) Definite material scheme in relativistic magnetohydrodynamics. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 28 (1978), no. 4, 417-422. (Authors' summary) 80e:76062 76Y05 (85A30)

Patil, S. A. (with Kovner, J. L.) On the power of an optimum test for the mean of the inverse Gaussian distribution. *Technometrics* 21 (1979), no. 3, 379-381. (G. S. Lingappaiah) 80m:62025 62F05

Patil, S. J. (with Sarangi, S. M.) On modified deficiencies of meromorphic functions. *Indian J. Pure Appl. Math.* 10 (1979), no. 1, 6-13. (N. Toda) 80d:30028 30D35

Patuier, Guy Sur les fonctions d'un opérateur pseudo-différentiel elliptique. *Publ. Dép. Math. (Lyon)* 14 (1977), no. 3, 21-58. (From the introduction) 80g:35129 35S05 (47G05, 58G15)  
Déformations différentielles à coefficients constants. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 7, A423-A426. (From the summary) 80e:58048 58H05 (35S99, 58F06)

Patkar, Vivek (with Saxena, P. C.; Parkash, Om) Linear piecewise linear programs with variable coefficients. *Pure Appl. Math. Sci.* 10 (1979), no. 1-2, 51-56. (Authors' summary) 80m:90065 90C05  
(with Aggarwal, S. P.) Branch and bound technique for integer geometric programming. *Z. Angew. Math. Mech.* 59 (1979), no. 8, 395-396. (From the text) 80i:90104 90C10

Paul, B. On the summability of derived Fourier series by Riesz's typical means. *J. Indian Math. Soc. (N.S.)* 41 (1977), no. 3-4, 331-339 (1978). (From the text) 80a:42007 42A24

Patricio, Fernanda Cubic spline functions and initial value problems. *BIT* 18 (1978), no. 3, 342-347. (J. R. Cash) 80b:65102 65L05

Patruco, V. (with Muri, A.) A method for the numerical inversion of the Laplace transform. (Italian. English summary) *Calcolo* 15 (1978), no. 1, 51-58. (Authors' summary) 80c:65243 65R10

Patsko, V. S. The differential game of evasion in a plane. *Prikl. Mat. Mekh.* 41 (1977), no. 4, 604-608. (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 4, 617-621 (1978). (Irinel Dragan) 80e:90153 90D26

Patten, Paul R. Locally connected generalized absolute neighborhood retracts. *Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978), I. Topology Proc.* 3 (1978), no. 1, 159-168 (1979). (Donald Coram) 80m:54027 54C55

Patterson, Chris W. (with Harter, William G.) Asymptotic eigenvalues of fourth and sixth rank octahedral tensor operators. *J. Math. Phys.* 20 (1979), no. 7, 1453-1459. (Authors' summary) 80e:81102 81G50

Patterson, David B. The fundamental group of the modulus space. *Michigan Math. J.* 26 (1979), no. 2, 213-223. (C. MacLachlan) 80g:32042 32G15 (14H15, 30F10, 57N05)

Patterson, E. M. Pseudorings: a survey and new results. *Bull. Malaysian Math. Soc.* (2) 1 (1978), 1-15. (R. Gorton) 80i:16049 16A78

Patterson, James H. (with Harvey, Richard T.) An implicit enumeration algorithm for the time/cost tradeoff problem in project network analysis. *Found. Control Engng.* 4 (1979), no. 3, 107-117. (From the summary) 80j:90061 90B10 (90C35)

Patterson, Richard R. The square-preserving algebra endomorphisms of  $H^*(BO, \mathbb{Z}_2)$ . *Quart. J. Math. Oxford Ser. (2)* 29 (1978), no. 114, 225-240. (H. Wada) 80g:55033 55R45

Patterson, S. J. On Dirichlet series associated with cubic Gauss sums. *J. Reine Angew. Math.* 303/304 (1978), 102-125. (M. Makys) 80g:10041 10H10 (10D24, 10G10)  
On the distribution of Kummer sums. *J. Reine Angew. Math.* 303/304 (1978), 126-143. (Bruce C. Berndt) 80m:10031 10G10  
Some examples of Fuchsian groups. *Proc. London Math. Soc.* (3) 39 (1979), no. 2, 276-298. (Ch. Pommerenke) 80j:30070 30F35

Patterson, T. N. L. (with Morrow, C. R.) Construction of algebraic cubature rules using polynomial ideal theory. *SIAM J. Numer. Anal.* 15 (1978), no. 5, 953-976. (Authors' summary) 80a:65048 65D30

Patula, William T. Growth and oscillation properties of second order linear difference equations. *SIAM J. Math. Anal.* 10 (1979), no. 1, 55-61. (M. Iolov) 80i:39006 39A10  
Growth, oscillation and comparison theorems for second-order linear difference equations. *SIAM J. Math. Anal.* 10 (1979), no. 6, 1272-1279. (B. G. Pachpatte) 80j:39004 39A10

Patzner, H. (with Elster, Karl-Heinz) Zur dynamischen Optimierung unendlichstufiger Prozesse in nichtautonomen Systemen. (English and Czech summaries) *Ekonom.-Mat. Obzor* 14 (1978), no. 3, 284-296. (Authors' summary) 80e:49026 49C20  
(with Elster, Karl-Heinz) Zur dynamischen Optimierung unendlichstufiger Prozesse bei speziellen Problemstellungen. (English and Czech summaries) *Ekonom.-Mat. Obzor* 14 (1978), no. 3, 297-307. (Authors' summary) 80e:49023 49C20 (93C99)

Paugam, Michel Sur les invariants homologiques des anneaux locaux noethériens: un calcul de la cinquième déflexion  $\epsilon_5$ . *Séminaire d'Algèbre Paul Dubreil, 30ème année (Paris, 1976-1977), pp. 298-338, Lecture Notes in Math., 641, Springer, Berlin, 1978. (W. Vogel) 80d:13005 13D25*

Paukšto, M. V. The relation between deformation and stress in polycrystals. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 3, 141-143, 159. (L. Jentsch) 80d:73019 73B25  
An extension theorem for some function classes. (Russian) *Mat. Zametki* 25 (1979), no. 6, 825-834, 956. (Author's summary) 80f:46038 46E35

Paul, E. M. On the distribution of values of additive arithmetic functions. *Sankhyā Ser. A* 40 (1978), no. 1, 1-9. (J. Galambos) 80i:10073 10K20

Paul, Jerome L. Partitioning the lattice points in  $\mathbb{R}^n$ . *J. Combin. Theory Ser. A* 26 (1979), no. 3, 238-248. (S. Brent Morris) 80i:50175 90D42

Paul, Michael E. (with Markley, Nelson G.) Recipe minimal sets. *The structure of attractors in dynamical systems (Proc. Conf., North Dakota State Univ., Fargo, N.D., 1977), pp. 179-190, Lecture Notes in Math., 668, Springer, Berlin, 1978. (H. Keynes) 80b:54051 54H20  
(with Houck, David J.) Non-singular 0-1 matrices with constant row and column sums. *Linear Algebra Appl.* 22 (1978), 263-266. (A. O. Morris) 80a:15018 15A36  
(with Houck, David J.) On a theorem of de Bruijn and Erdős. *Linear Algebra Appl.* 23 (1979), 157-165. (N. G. de Bruijn) 80b:05013 05B25 (15A99)*

Paul, S. R. (with Plackett, R. L.) Inference sensitivity for Poisson mixtures. *Biometrika* 65 (1978), no. 3, 591-602. (I. N. Volodin) 80f:62040 62F35

Paul, Wolfgang J. ★Komplexitätstheorie. Teubner Studienbücher: Informatik. Leitfäden der Angewandten Mathematik und Mechanik, 39. B. G. Teubner, Stuttgart, 1978. 247 pp. ISBN 3-519-02341-5 (G. Wechsung) 80c:68033 68C25 (03D15, 68-01)  
(with Tarjan, Robert Endre) Time-space trade-offs in a pebble game. *Acta Inform.* 10 (1978), no. 2, 111-115. (Forbes D. Lewis) 80j:68033 68C25 (05C99, 68E10)

Paulauskas, V. L. Infinitely divisible and stable laws in separable Banach spaces. I. (Russian. Lithuanian and English summaries) *Lietuv. Mat. Sb.* 18 (1978), no. 4, 101-114, 201. (S. A. Čobanjan) 80e:60007 60B11

Paulik, A. (with Knauff, W.) A note on Davis type error bounds. *BIT* 18 (1978), no. 2, 175-183. (M. M. Chawla) 80f:65026 65D30  
(with Knauff, W.) Modifizierte Rechteckregel bei 2 $\pi$ -periodischen Funktionen. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T427-T429. 80a:65033 65D15

Paulin, Gerhard See Warschawski, W. L. 80m:93005

Paulin, Jeanne Saint Jean (with Cioranescu, Doina) Homogénéisation de problèmes d'évolution dans des ouvertures à cavités. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 20, A899-A902. (Authors' summary) 80b:35016 35B40

Paul, Marvin C. (with Murphy, Paul E.) Minimum comparison merging of sets of approximately equal size. *Inform. and Control* 42 (1979), no. 1, 87-96. (Authors' summary) 80e:68163 68E05 (90D99)

Paulos, John A model-theoretic account of confirmation. *Notre Dame J. Formal Logic* 20 (1979), no. 2, 451-457. (David W. Miller) 80g:03006 03A05

Paulsen, Vern Continuous canonical forms for matrices under unitary equivalence. *Pacific J. Math.* 76 (1978), no. 1, 129-142. (Erik G. F. Thomas) 80j:46110 46L99 (15A21)

- Weak compendence invariants for essentially  $n$ -normal operators. *Amer. J. Math.* 101 (1979), no. 5, 979–1006. (P. A. Fillmore) **80j:47032** 47B15 (46M20)
- Paumier, J.-C. Solutions stables d'un problème simplifié de coque élastique. (English summary) *RAIRO Anal. Numér.* 12 (1978), no. 3, 283–293, iv. (G. Paria) **80b:73046** 73L99 (65N30)
- Păun, George. Generative grammars for some economical activities (scheduling and marshalling problems). *Found. Control Engng.* 2 (1977), no. 1, 15–25. (S. Marcus) **80g:68060** 68D05 (90B35)
- On some classes of contextual grammars. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 22(70) (1978), no. 2, 183–189. (Sorin Istrail) **80c:68057** 68F05
- An infinite hierarchy of contextual languages with choice. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 22(70) (1978), no. 4, 425–429. (Johnson M. Hart) **80c:68058** 68F05 (03D05)
- Linear simple matrix languages. (French and German summaries) *Elektron. Informatsionnaya Kibernet.* 14 (1978), no. 7–8, 377–384. (A. Salomaa) **80d:68094** 68F05
- Operations with contextual grammars and languages. (Romanian. English summary) *Stud. Cerc. Mat.* 30 (1978), no. 4, 425–439. (M. Novotný) **80e:68191** 68F05
- On some prolongations of languages. (Romanian. English summary) *Stud. Cerc. Mat.* 30 (1978), no. 5, 511–520. (Sorin Istrail) **80j:68063** 68F05 (68F99)
- (with Pascu, Anca) On the planarity of bicolored digraph grammar systems. *Discrete Math.* 25 (1979), no. 2, 195–197. (Derick Wood) **80i:68063** 68F05
- (with Băluță, M.; Dobrescu, V.) Algorithm for solving a combinatorial problem of optimal selection. (French and Russian summaries) *Econom. Comput. Econom. Cybernet. Stud. Res.* 13 (1979), no. 1, 87–95. (J. Falk) **80e:90066** 90C10
- On Szilard's languages associated to a matrix grammar. *Inform. Process. Lett.* 8 (1979), no. 2, 104–105. (Etsuro Moriya) **80b:68095** 68F05
- Normal forms for bicolored-digraph grammar systems. *Internat. J. Comput. Math.* 7 (1979), no. 2, 109–118. (Author's summary) **80h:68070** 68F10
- On the family of finite index matrix languages. *J. Comput. System Sci.* 18 (1979), no. 3, 267–280. (Author's summary) **80k:68060** 68F05
- On some variants of the traveling salesman problem. A mathematical linguistic approach. (Romanian. English summary) *Stud. Cerc. Mat.* 31 (1979), no. 2, 213–226. (Anca Pascu) **80j:90109** 90C35 (05C20, 68F05)
- Pauwels, J. P. (with Alblas, J. B.) The indentation of an elastic layer by a rigid stamp under conditions of complete adhesion. (German summary) *Acta Mech.* 35 (1980), no. 1–2, 109–126. (Authors' summary) **80m:73069** 73T05
- Păvăloiu, Ion. Une variante de la méthode de Newton. *Anal. Numér. Théor. Approx.* 7 (1978), no. 1, 95–99. (Simeon Reich) **80g:47078** 47H17 (65J15)
- A generalisation de la méthode de Newton. *Mathematica (Cluj)* 20(43) (1978), no. 1, 45–51. (V. Sree-Hari-Rao) **80c:65073** 65J15
- Pavel, Garofita. On the approximate solution of the Cauchy problem for a linear differential equation of order  $n$ . (Romanian. English summary) *Studia Univ. Babeş-Bolyai Math.* 23 (1978), no. 2, 49–53. (P. Talpalaru) **80i:34003** 34A15 (34A45)
- Pavel, Monique. Pattern recognition: the categorical setting. *Inform. Sci.* 17 (1979), no. 1, 43–74. (Author's summary) **80e:68223** 68G10
- Skeletal categories. *Pattern Recognition* 11 (1979), no. 5–6, 325–326. (Author's summary) **80i:68076** 68G10
- Pavel, N. (with Turinici, Mihai) Positive solutions of a system of ordinary differential equations. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 24 (1978), no. 1, 63–70. (Sadakazu Aizawa) **80k:34009** 34A10
- (with Urşescu, C.) Flow-invariance for higher order differential equations. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 24 (1978), no. 1, 91–100. (Sadakazu Aizawa) **80k:34087** 34C20
- Pavelka, Jan. On fuzzy logic. I. Many-valued rules of inference. *Z. Math. Logik Grundlag. Math.* 25 (1979), no. 1, 45–52. (Settimo Termini) **80j:03038a** 03B52 (03E72)
- On fuzzy logic. II. Enriched residuated lattices and semantics of propositional calculi. *Z. Math. Logik Grundlag. Math.* 25 (1979), no. 2, 119–134. (Settimo Termini) **80j:03038b** 03B52 (03E72)
- On fuzzy logic. III. Semantical completeness of some many-valued propositional calculi. *Z. Math. Logik Grundlag. Math.* 25 (1979), no. 5, 447–464. (Settimo Termini) **80j:03038c** 03B52 (03E72)
- Pavell, Richard. Birkhoff's theorem and Einstein's equations. *Phys. Rev. D* 3 (1979), no. 10, 2876–2878. (Alan Barnes) **80i:83052** 83D05 (53B50)
- The Planck integral cannot be evaluated in terms of a finite series of elementary functions. *J. Math. Phys.* 21 (1980), no. 1, 14. (Author's summary) **80k:26001** 26A06
- Paveri-Fontana, S. L. (with Paiano, G.) An exact method for the evaluation of the  $S$  matrix for the Yukawa potential problem. *J. Phys. A* 11 (1978), no. 9, 1697–1714. (V. D. Košanenko) **80i:81051** 81F15 (44A10, 81F05)
- Pavlović, B. Eine kennzeichnende Eigenschaft der Zykel der Galileischen Ebene. *Arch. Math. (Basel)* 32 (1979), no. 5, 509–512. (H. Brauner) **80m:51014** 51N30
- Pavlenko, V. A. The average number of internal commutators. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 2, 137–138. (Jaroslav Nešetřil) **80k:05117** 05C30 (05C15)
- Pavlenko, V. N. Nonlinear equations with discontinuous operators in Banach spaces. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 5, 569–572, 621. (Milan Kučera) **80k:47059** 47H05 (35J65)
- Pavliček, J. (with Nezbeda, I.; Boublík, T.) An accurate equation of state of a hard convex body fluid mixture. *Czechoslovak J. Phys. B* 29 (1979), no. 10, 1061–1070. (Authors' summary) **80i:82023** 82A50
- Pavlidis, Theo. Qualitative similarities between the behavior of coupled oscillators and circadian rhythms. *Bull. Math. Biol.* 40 (1978), no. 6, 675–692. (Author's summary) **80a:92031** 92A09 (34C15, 58F14)
- Pavlidis, Theodoros. (with Yannakakis, Mihalis) Topological characterization of families of graphs generated by certain types of graph grammars. *Inform. and Control* 42 (1979), no. 1, 72–86. (Authors' summary) **80e:68174** 68E10 (68F05)
- Pavljuk, I. A. (with Pashchenko, Ju. A.) Construction of periodic solutions of nonautonomous systems of ordinary differential equations. (Russian) *Mat. Fiz. No. 24* (1978), 46–52, 121. (A. Ramm) **80k:34042** 34C25
- Pavlov, A. I. (with Pohodzei, B. B.; Ravkin, I. A.) A method for the modeling of the exponential distribution based on the properties of the Poisson process. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1316–1320, 1359. (V. Dupač) **80d:65018** 65C10
- (with Pohodzei, B. B.) Pseudorandom numbers generated by linear recurrent relations over a finite field. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 836–842, 1080. (P. Neumann) **80j:65006** 65C10 (68J99)
- Pavlov, B. S. (with Faddeev, M. D.) Construction of selfadjoint dilation for a problem with an impedance boundary condition. (Russian. English summary) *Investigations on linear operators and the theory of functions, VIII. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 73 (1977), 217–223, 236 (1978). (Authors' summary) **80a:35092** 35P05
- A partial scattering matrix, its factorization and analyticity. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 2, 291–295. (H. Baumgärtel) **80e:47009** 47A40 (35P25, 81F05)
- (with Adamjan, V. M.) Trace formula for dissipative operators. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, no. 2, 5–9, 118. (E. R. Cekanovskij) **80k:47026** 47B10 (47B44)
- Pavlov, B. V. (with Kosikov, V. S.) Design of algorithms for searchfree adaptive systems with use of linear models. *Automat. i Telemekh.* 1977, no. 8, 84–94. (Russian. English summary); translated as *Automat. Remote Control* 38 (1977), no. 8, part 1, 1182–1191 (1978). (Authors' summary) **80h:93082** 93C40
- Pavlov, E. A. The operator of Calderón. (Russian. English summary) *Anal. Math.* 4 (1978), no. 2, 117–124. (Jóran Bergh) **80d:46054** 46E30 (46M99)
- Pavlov, G. A. On the inverse problem of the total potential of mass. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 2, 287–292, 381. (V. M. Isakov) **80d:35143** 35R30 (31A25)
- Pavlov, I. V. Monotonic confidence limits in the class of distributions with increasing function of the failure rate. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1977, no. 6, 72–84. (Russian); translated as *Engng. Cybernetics* 15 (1977), no. 6, 55–66 (1978). (G. S. Lingappaiah) **80k:62028** 62F25 (62N05)
- (with Smirnov, A. B.) Optimal recording of random flows of events. *Automat. i Telemekh.* 1978, no. 6, 38–49. (Russian); translated as *Automat. Remote Control* 39 (1978), no. 6, part 1, 808–817. (Richard F. Serfozo) **80d:60117** 60K10
- Pavlov, Ju. G. Sensitivity of the coordinates of the optimum to disturbances of the coefficients in linear programming problems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 2, 196–200, 223. (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 2, 151–155 (1979). (J. A. Tomlin) **80i:90076** 90C05
- Pavlov, K. B. (with Pokrovskij, L. D.; Tarasenko, S. N.) The stationary flow of an inviscid heat conducting gas. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1329–1335, 1360. (Authors' summary) **80d:76070** 76N15
- Pavlov, N. N. (with Voevodin, A. F.) Solution of mixed boundary value problems for two-dimensional heat equations. (Russian) *Dinamika Splošn. Sredy No. 35 Dinamicheskie Zadachi Mehaniki Splošnyh Sred* (1978), 29–39, 173. (Authors' summary) **80e:65120** 65P05
- Pavlov, R. (with Todorov, Todor Stefanov) Algebras of unbounded operators and their application in relativistic quantum field theory. (Bulgarian. English summary) *Annuire Univ. Sofia Fac. Phys.* 66 (1974/75), 53–56 (1978). (Authors' summary) **80e:81014** 81C10 (47D40)
- Pavlov, S. P. (with Kulikov, È. L.; Kirichenko, V. F.) On the solution of the problem of synthesis with account taken of a stationary representation of functionals. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 4, 738–739, 767. (Authors' summary) **80i:47056** 47H15
- Pavlov, V. G. (with Boretskij, I. V.) Group-theoretic interpretation of certain properties of a linear dynamic system. *Automat. i Telemekh.* 1979, no. 2, 12–15. (Russian); translated as *Automat. Remote Control* 40 (1979), no. 2, part 1, 163–165. (Tsutomu Mita) **80i:93019** 93B05 (93A10)
- Pavlov, V. P. (with Polivanov, A. D.) Analytic structure of amplitude 3→3. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics* (Leipzig, 1977), pp. 164–176. Teubner, Leipzig, 1978. (Masatsugu Minami) **80k:81015** 81C10 (32A25)
- Theory of generalized retarded operators. (Russian. English summary) *Theoret. Mat. Fiz.* 37 (1978), no. 2, 154–170. (V. D. Košanenko) **80e:81108** 81F20 (47A40)
- (with Logunov, A. A.; Medvedev, B. V.; Muzafarov, L. M.; Polivanov, M. K.; Suhanov, A. D.) Analytical structure of the amplitude of 3→3 forward scattering. (Russian. English summary) *Theoret. Mat. Fiz.* 40 (1979), no. 2, 179–193. (Authors' summary) **80i:81050** 81F15
- Pavlov, Yu. G. See Pavlov, Ju. G.
- Pavlova, L. V. An equilibrium model in mathematical economics. (Russian. English summary) *Issled. Operacii i ASU No. 12* (1978), 13–18, 130. (Hans Keiding) **80b:90017** 90A14
- Positiveness and singularity of balanced prices in an optimal model of economic equilibrium. (Russian. English summary) *Issled. Operacii i ASU No. 13* (1979), 9–13, 132. (Hans Keiding) **80i:90033** 90A14
- Pavlova, M. F. (with Karcevskij, M. M.; Ljasko, A. D.) Difference schemes for an equation of non-steady-state nonlinear filtration. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 9, 1692–1706, 1727. (Murlu M. Gupta) **80k:65097** 65P05
- Pavlova, O. S. (with Ternov, I. M.; Halilov, V. R.) Equations of the spin motion in an external field. I. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1978, no. 12, 89–95. (Authors' summary) **80b:81028** 81C05
- Pavlovic, S. V. Über eine Erweiterung der Formel von Stirling. *Mitt. Math. Gesellsch. Hamburg* 10, no. 5, 349–352 (1977). (From the text) **80g:26003** 26–01
- Pavlovic, Velimir (with Bogdanović, Stojan; Milić, Svetozar) Anti-inverse semigroups. *Publ. Inst. Math. (Beograd) (N.S.)* 24(38) (1978), 19–28. (Mohan S. Putcha) **80c:20086** 20M10
- The Moufang functional equation  $B_f(x, B_f(y, B_f(x, z))) = B_f(B_f(x, y), x, z)$  on GD-groupoids. *Aequationes Math.* 19 (1979), no. 1, 37–47. (D. A. Robinson) **80k:20112** 20N99 (39B50)
- Pavlovskij, D. S. Spaces of open sets and spaces of continuous functions. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 4, 815–818. (K. Sieklucki) **80k:54013** 54B20 (54A25, 54C35)



- Absolutes of continuous mappings. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 3, 27-30, 84-85. (V. V. Miškin) **80i:54015** 54C10 (54G05)
- Pavlovskii, Ju. N. Aggregation, decomposition, group properties, decomposition structures of dynamical systems. (Russian) *Kibernet. i Vychisl. Tehn.* 1978, no. 39, 53-63, 114. (Ju. E. Glikh) **80d:58028** 58F05 (34C35)
- Pavšić, M. (with Caldrola, P.; Recami, Erasmo) Explaining the large numbers by a hierarchy of "universes": a unified theory of strong and gravitational interactions. (Italian and Russian summaries) *Nuovo Cimento B* (11) 48 (1978), no. 2, 205-271. (From the summary) **80c:83054** 83F05
- Pawłowski, Krzysztof Fixed points of cyclic group actions on disks. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 12, 1011-1015 (1979). (Allan Edmonds) **80j:57041** 57S25 (57S17)
- Pawar, Y. S. (with Thakare, Nimbakrishna) 0-distributive semilattices. *Canad. Math. Bull.* 21 (1978), no. 4, 469-481. (T. S. Fofanova) **80f:06002** 06A12
- Pawełka, Joanna On some example of a nonmeasurable set. *Demonstratio Math.* 12 (1979), no. 2, 343-350. (A. de Korvin) **80i:28017** 28A35
- Pawłczyk, Bogusław On some properties of the connectedness of the subautomata associated with the change of operating time of finite automata. *Found. Control Engrg.* 3 (1978), no. 4, 171-176 (1979). (S. Huzino) **80b:68062** 68D05
- Pawlak, Z. (with Rozenberg, Grzegorz; Savitch, Walter J.) Programs for instruction machines. *Inform. and Control* 41 (1979), no. 1, 9-28. (Authors' summary) **80c:68019** 68B05 (68D35)
- Pawlik, P. S. (with Reismann, H.) Dynamics of initially stressed hyperelastic solids. (German and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 4, 145-155. (J. Ignaczak) **80g:73012** 73B99
- Pawlikowski, Krzysztof Message waiting time in a packet switching system. *J. Assoc. Comput. Mach.* 27 (1980), no. 1, 30-41. (Author's summary) **80m:94098** 94C10 (68A05, 68J05)
- Pawłowicz, Alex Aus dem Leben Gustav Zeuners. *Wiss. Z. Tech. Univ. Dresden* 27 (1978), no. 6, 1185-1188. (Editors) **80c:01029** 01A70
- Przostek-Pawlowska, Jolanta See *Przostek-Pawlowska, Jolanta*
- Pawłowski, Kazimierz Synthesis of linear stationary discrete tracking systems. (Polish. English and Russian summaries) *Podstawy Sterowania* 9 (1979), no. 2, 225-230. (Editors) **80i:93025** 93B99
- Pax, S. A. (with Davenport, Robert J.) Cross-sectionally simple spheres can be wild. *General Topology Appl.* 10 (1979), no. 2, 139-146. (T. B. Rushing) **80c:57014** 57N45
- Paxia, Giuseppe The strict Henselization of a couple. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 15 (1978), no. 2, 606-618. (Gerhard Pfister) **80c:13018** 13J15
- Payafar, M. (with Mignotte, Maurice) Distance entre les racines d'un polynôme. (English summary) *RAIRO Anal. Numér.* 13 (1979), no. 2, 181-192. (F. Götz) **80d:65053** 65H05
- Payan, Charles (with Jaeger, F.) A class of regularisable graphs. Advances in graph theory (Cambridge Combinatorial Conf., Trinity Coll., Cambridge, 1977). *Ann. Discrete Math.* 3 (1978), 125-127. (Gary Haggard) **80a:05165** 05C99
- (with Nguyen Huy Xuong) Upper embeddability and connectivity of graphs. *Discrete Math.* 27 (1979), no. 1, 71-80. (Saul Stahl) **80f:05038** 05C10 (05C40)
- (with Jaeger, F.; Nguyen Huy Xuong) A class of upper-embeddable graphs. *J. Graph Theory* 3 (1979), no. 4, 387-391. (Richard D. Ringstein) **80a:05046** 05C10
- Payan, J. J. (with Bouvier, L.) Sur la structure galoisienne du groupe des unités d'un corps abélien de type  $(p, p)$ . (English summary) *Ann. Inst. Fourier (Grenoble)* 29 (1979), no. 1, xv, 171-187. (K. Masuda) **80j:12007** 12A57
- Payne, Fred R. (with Chuang, Sue Li) A second-stage eddy-viscosity calculation for the flat-plate turbulent boundary layer. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 507-517, Academic Press, New York, 1979. (T. Tatsumi) **80m:76035** 76D10 (76F10)
- A second stage eddy-viscosity model for turbulent fluid flows: or, a universal statistical tool? *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 675-688, Academic Press, New York, 1979. (J. D. Atkinson) **80i:76025** 76F05
- Payne, L. E. (with Sperb, René; Stakgold, Ivar) On Hopf type maximum principles for convex domains. *Nonlinear Anal.* 1 (1976/77), no. 5, 547-559. (V. A. Kondrat'ev) **80m:35026** 35J20
- (with Knops, R. J.) Uniqueness and continuous dependence of the null solution in the Cauchy problem for a nonlinear elliptic system. *Inverse and improperly posed problems in differential equations (Proc. Conf., Math. Numer. Methods, Halle, 1979)*, pp. 151-160, Math. Research, 1, Akademie-Verlag, Berlin, 1979. (R. N. Pederson) **80g:35057** 35J60
- (with Knops, R. J.) Nonexistence of global solutions in nonlinear Cauchy elastodynamics. *Arch. Rational Mech. Anal.* 70 (1979), no. 2, 125-133. (J. Dunwoody) **80j:73020** 73D99 (35Q99)
- (with Philippin, Gérard A.) Some maximum principles for nonlinear elliptic equations in divergence form with applications to capillary surfaces and to surfaces of constant mean curvature. *Nonlinear Anal.* 3 (1979), no. 2, 193-211. (E. Giusti) **80h:35056** 35J60 (49F10)
- (with Khosrovshahi, G. B.; Levine, H. A.) On the positive spectrum of Schrödinger operators with long range potentials. *Trans. Amer. Math. Soc.* 253 (1979), 211-228. (P. A. Mišnaevskii) **80i:35053** 35J10 (35P99, 47A40)
- Payne, Robert L. (with Goodwin, Graham C.) ★Dynamic system identification. Experiment design and data analysis. Mathematics in Science and Engineering, 136. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1977. x+291 pp. ISBN 0-12-289750-1 (Valdas Pukas) **80c:93046** 93B30 (62-01)
- Payne, S. E. (with Killgrove, R. B.) Generalized quadrangles of order sixteen. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 555-565, Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978. (Joseph A. Thas) **80c:05049** 05B25 (05-04)
- Payne, W. H. (with McMillen, K. L.) Orderly enumeration of nonsingular binary matrices applied to text encryption. *Comm. ACM* 21 (1978), no. 4, 259-263. (P. E. O'Neill) **80c:68031** 68C05
- Paz, Azaria A generalization of the Cayley Hamilton theorem and possible applications to formal series theory. *Séries formelles en variables non commutatives et applications (Proc. 5e Ecole de Printemps Informat. Théorique, Vieux-Boucau les Bains, 1977)*, pp. 231-235, École Nat. Sup. Tech. Avancées, Paris, 1978. (P. Dömös) **80d:68104** 68F15 (15A45)
- Pazderski, Gerhard One-headed representation modules of abelian  $p$ -groups over a field of characteristic  $p$ . *Publ. Math. Debrecen* 26 (1979), no. 1-2, 65-70. (Michael Klemm) **80g:20016** 20C20
- Pázma, V. On path integrals and relativistic quantum mechanics. *Czechoslovak J. Phys. B* 29 (1979), no. 5, 481-486. (Iraj Hormozdian) **80j:81026** 81C35 (81M05)
- Pazner, Elisha A. (with Wesley, Eugene) Cheateproofness properties of the plurality rule in large societies. *Rev. Econom. Stud.* 45 (1978), no. 1, 85-91. (From the introduction) **80i:90014** 90A08
- Pazy, A. Strong convergence of semigroups of nonlinear contractions in Hilbert space. *J. Analyse Math.* 34 (1978), 1-35 (1979). (J. A. Goldstein) **80j:47067** 47H20
- The asymptotic behaviour of semigroups of nonlinear contractions having large sets of fixed points. *Proc. Roy. Soc. Edinburgh Sect. A* 80 (1978), no. 3-4, 261-271. (Simeon Reich) **80k:47092** 47H20
- Pčeláň, V. K. A Carleman boundary value problem with a discontinuous quasiconformal shift. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 11, 976-978, 1052. (N. K. Karapetjan) **80k:30043** 30E25
- Peacock, R. M. Groups with a cyclic Sylow subgroup. *J. Algebra* 56 (1979), no. 2, 506-509. (Leo J. Alex) **80h:20039** 20D20
- Peacock, Christopher Necessity and truth theories. *J. Philos. Logic* 7 (1978), no. 4, 473-500. (Jerzy Perzanowski) **80j:03030** 03B45
- Peano, Giuseppe See *Podrazzi, Malno*, **80f:01015** and *Fregaglia, Paolo*, **80j:01017**
- Pearce, C. E. M. Teletraffic theory and the renewal paradox. (French summary) *Operational research '78 (Proc. Eighth IFORS Internat. Conf., Toronto, Ont., 1978)*, pp. 1092-1103, North-Holland, Amsterdam, 1979. (Frank A. Haight) **80c:90065** 90B20 (68C15)
- Pearce, Kent (with Campbell, Douglas M.) Generalized Bazilevič functions. *Rocky Mountain J. Math.* 9 (1979), no. 2, 197-226. (Evelyn M. Silvia) **80d:30005** 30C45
- Pearcy, Carl (with Foias, Ciprian; Voiculescu, Dan) Biquasitriangular operators and quasimilarity. *Linear spaces and approximation (Proc. Conf., Math. Res. Inst., Oberwolfach, 1977)*, pp. 47-52, Internat. Ser. Numer. Math., 40, Birkhäuser, Basel, 1978. (K. Veselić) **80b:47022** 47A65
- (with Kim, H. W.) Subnormal operators and hyperinvariant subspaces. *Illinois J. Math.* 23 (1979), no. 3, 459-463. (J. P. Williams) **80g:47028** 47B20 (47A15)
- (with Brown, Scott W.; Chevreau, B.) Contractions with rich spectrum have invariant subspaces. *J. Operator Theory* 1 (1979), no. 1, 123-136. (Donald W. Hadwin) **80m:47002** 47A15
- (with Apostol, Constantin; Foias, Ciprian) That quasipotent operators are norm-limits of nilpotent operators revisited. *Proc. Amer. Math. Soc.* 73 (1979), no. 1, 61-64. (Edward Zeff) **80c:47013** 47A65
- (with Deckard, D.; Foias, Ciprian) Compact operators with root vectors that span. *Proc. Amer. Math. Soc.* 76 (1979), no. 1, 101-106. (T. T. West) **80m:47018** 47B05
- Pearl, Judea On the connection between the complexity and credibility of inferred models. *Internat. J. Gen. Systems* 4 (1977/78), no. 4, 255-264. (Author's summary) **80b:03034** 03B99 (68C25, 68J10)
- (with Crolotte, Alain) Bounds on memory versus error trade-offs in question-answering systems. *IEEE Trans. Inform. Theory* 25 (1979), no. 2, 193-202. (Authors' summary) **80b:68105** 68G05 (68C25, 94A34)
- (with Crolotte, Alain) Elasticity conditions for storage versus error exchange in question-answering systems. *IEEE Trans. Inform. Theory* 25 (1979), no. 6, 653-664. (Authors' summary) **80m:94046** 94A50 (68H05)
- Pearle, Philip Toward explaining why events occur. *Internat. J. Theoret. Phys.* 18 (1979), no. 7, 489-518 (1980). (From the summary) **80m:81014** 81B99
- Pearlman, J. G. (with Denham, M. J.) Canonical realization of bilinear input/output maps. *SIAM J. Control Optim.* 17 (1979), no. 4, 451-468. (Authors' summary) **80h:93029** 93B99
- Pearlman, William A. (with Gray, Robert M.) Source coding of the discrete Fourier transform. *IEEE Trans. Inform. Theory* 24 (1978), no. 6, 683-692. (Authors' summary) **80f:94012** 94A29 (94A34)
- Pearson, A. E. (with Kwon, W. H.) On feedback stabilization of time-varying discrete linear systems. *IEEE Trans. Automat. Control* 23 (1978), no. 3, 479-481. (Authors' summary) **80a:93137** 93D15
- (with Wei, K. C.) On minimum energy control of commutative bilinear systems. *IEEE Trans. Automat. Control* 23 (1978), no. 6, 1020-1023. (Authors' summary) **80c:93092** 93C99
- Nonlinear system identification with limited time data. *Automatica—J. IFAC* 15 (1979), no. 1, 73-84. (Torbjørn Strøm) **80d:93079** 93E12 (93B30)
- (with Chin, Y. K.) Identification of MIMO systems with partially decoupled parameters. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 599-604. (William D. Ray) **80i:93033** 93C15 (93E10)
- See also *Fahmy, Moustafa M.; et al.*, **80c:93097**
- Pearson, B. J. Dendritic decompositions of generalized simple closed curves. *Colloq. Math.* 38 (1977/78), no. 2, 197-212. (A. Lelek) **80c:54041** 54F50
- Pearson, D. B. (with Amrein, Werner O.) Commutators of Hilbert-Schmidt type and the scattering cross section. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 30 (1979), no. 2, 89-107. (P. A. Mišnaevskii) **80i:47010** 47A40 (47B47, 81F05)
- (with Choudhury, M. H.) The spectral properties of many-electron atomic Hamiltonians and the method of configuration interaction. I. Proof of convergence of the configuration interaction method. *J. Math. Phys.* 20 (1979), no. 4, 752-756. (Georges Bessis) **80c:81016** 81C05 (47A70)
- (with Amrein, Werner O.) A time-dependent approach to the total scattering cross section. *J. Phys. A* 12 (1979), no. 9, 1469-1492. (Gheorghe Nenciu) **80j:81064** 81F05 (47A40)
- Pearson, E. S. (with Johnson, N. L.; Burr, I. W.) Comparisons of the percentage points of distributions with the same first four moments, chosen from eight different systems of frequency curves. *Comm. Statist. B—Simulation Comput.* 8 (1979), no. 3, 191-229. (Authors' summary) **80c:62021** 62E15
- Pearson, J. Boyd (with Antsaklis, P. J.) Stabilization and regulation in linear multivariable

- systems. *IEEE Trans. Automat. Control* **23** (1978), no. 5, 928-930. (Authors' summary) **80b:93064** 93C05
- See also Morari, Manfred; et al. **80a:93040**
- Pearson, K. R. A lower bound for the degree of polynomials satisfied by matrices. *J. Austral. Math. Soc. Ser. A* **27** (1979), no. 4, 430-436. (Robert Grone) **80a:15012** 15A24 (16A42)
- Pearson, R. B. See Ray, Dipankar, **80k:81135**
- Pearson, T. L. (with Ceder, J. G.) More on Darboux points of real functions. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 9, 1301-1309. (Pavel Kostyrko) **80d:26004** 26A15 (26A21)
- Pečarskii, K. K. The correlation function of a statistical functional for a system of interacting particles. (Russian) *Ukrain. Mat. Ž.* **30** (1978), no. 5, 634-645, 717. (Author's summary) **80d:82021** 82A05
- Pecastings, F. (with Ladevèze, J.; Ladevèze, P.; Manton, M.; Pelle, J.-P.) Sur les fondements de la théorie linéaire des poutres élastiques. I. Méthode. Construction du prolongement admissible optimal. (English summary) *J. Mécanique* **18** (1979), no. 1, 129-173. (H. J. Weitschke) **80m:73014** 73C99 (49H05, 73K05)
- Pecell, G. (with Churchill, R. C.; Rod, D. L.) A survey of the Hénon-Heiles Hamiltonian with applications to related examples. *Stochastic behavior in classical and quantum Hamiltonian systems* (Volta Memorial Conf., Como, 1977), pp. 76-136. *Lecture Notes in Phys.*, **93**, Springer, Berlin, 1979. (Zbigniew Nitecki) **80k:58046** 58F05 (70F15)
- (with Thomas, E. S.) Normal modes, uncoupling, and stability for a class of nonlinear oscillators. *Quart. Appl. Math.* **37** (1979/80), no. 3, 281-301. (Richard Cushman) **80k:34053** 34C15 (58F14, 58F22, 58-30, 70K20)
- Pečerskaja, N. A. (with Sedunov, E. V.) Minimax designs of regression experiments with account taken of systematic error. (Russian. English summary) *Kibernetika (Kiev)* **1978**, no. 4, 126-130. (Ivar Petersen) **80a:62117** 62K05 (62J05)
- Pečerskii, Ju. N. (with Karelin, A. V.) ★ Теоретико-графические методы в распознавании образов. (Russian) [Graph-theoretic methods in pattern recognition] Edited by A. D. Zakrevskii. "Stintsa", Kishinev, 1978. 91 pp. (Josef Kittler) **80g:68112** 68G10 (68E10)
- Pečerskii, Sergei The Shapley value for games without side payments. (Russian. Lithuanian and English summaries) *Mat. Metody v Social. Nauk.—Trudy Sem. Processy Optimal. Upravlenija II Sekcija* No. 10 (1978), 43-62, 121. (E. Vilkas) **80d:90159** 90D12
- Pech, Gunter (with Landsberg, Max) Hyperinvariante konvexe Teilmengen vollstetiger Abbildungen in topologischen Vektorräumen. *Math. Nachr.* **89** (1979), 165-168. (Sandy Grabner) **80j:46008** 46A15 (47A15)
- Pechanec-Dražić, Jaroslav Functional separation of inductive limits and representation of presheaves by sections. I. Separation theorems for inductive limits of closed presheaves. *Czechoslovak Math. J.* **28(183)** (1978), no. 4, 525-547. (From the introduction) **80a:18011** 18F20
- Pečnický, Kay R. (with Cohen, Jeffrey M.) New exact solution to the Einstein-Dirac equations. *Phys. Rev. D* (3) **19** (1979), no. 6, 1635-1640. (R. F. Bijlajlov) **80d:83016** 83C05 (53B50)
- Pečlanec, Edgar Geometrical meaning of the curvature scalar of a 3-space. *Tensor (N.S.)* **32** (1978), no. 1, 45-50. (George Stamou) **80a:53073** 53C45
- Pečnikas, Philip (with Pollak, Eli; Child, Mark S.) Classical transition state theory: a lower bound to the reaction probability. *J. Chem. Phys.* **72** (1980), no. 3, 1669-1678. (Authors' summary) **80k:30010** 80A30
- Pečnická, A. V. (with Belov, E. G.) Joint distribution of the busy period and the free period in a queueing system. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1978**, no. 6, 3-8. (Bruce D. Craven) **80d:60124** 60K25
- Peck, G. W. Short proof of a general weight Burnside lemma. *Stud. Appl. Math.* **60** (1979), no. 2, 173-176. (Larry C. Grove) **80j:05007** 05A15 (20C99)
- Peck, N. T. (with Kallot, Nigel) Quotients of  $L_p(0, 1)$  for  $0 < p < 1$ . *Studia Math.* **64** (1979), no. 1, 65-75. (K. Sundaresan) **80d:46051** 46E30
- Peckover, R. S. (with Turland, B. D.) The stability of planar melting fronts in two-phase thermal Stefan problems. *J. Inst. Math. Appl.* **25** (1980), no. 1, 1-15. (Authors' summary) **80a:80012** 80A20 (76E99)
- Pečnikov, I. A. Distributions on manifolds of parabolic cylinders and ruled geometry. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 7(194), 106-108. (R. M. Geidel'man) **80h:53006** 53A15 (70B99)
- Pečuk, D. V. Identification of dynamic characteristics of linear and a class of nonlinear nonstationary objects with delay. (Russian. English summary) *Automatika* **1979**, no. 3, 13-23, 92. (Author's summary) **80e:93154** 93E25
- Pečurkin, N. S. (with Degermendži, A. G.; Terskov, I. A.) A criterion for the stationary coexistence of flowing-liquid microbe populations. (Russian) *Dokl. Akad. Nauk SSSR* **245** (1979), no. 4, 987-990. **80d:92023** 92A15
- Pečzynski, Norbert (with Zieschang, Heiner) On coverings of Seifert 3-manifolds. *Arch. Math. (Basel)* **31** (1978/79), no. 4, 382-386. (Hugh M. Hilden) **80f:57011** 57N10
- Pedersen, Erik Kjaer Smoothings of  $H$ -spaces. *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 2, pp. 215-216. *Proc. Sympos. Pure Math.*, **XXXII**, Amer. Math. Soc., Providence, R.I., 1978. (Editors) **80e:55017** 55P45 (57R10, 57R65)
- (with Taylor, Laurence R.) The Wall finiteness obstruction for a fibration. *Amer. J. Math.* **100** (1978), no. 4, 887-896. (Douglas R. Anderson) **80g:55030** 55R05 (57Q10)
- Smoothing  $H$ -spaces. *Math. Scand.* **43** (1978), no. 2, 185-196 (1979). (Albert O. Shar) **80d:55012** 55P45 (57R10, 57R65)
- Pedersen, F. (with Folland, N.; Nevins, B.) When must a base for a locally connected space contain a base of connected sets? *Portugal. Math.* **36** (1977), no. 1, 61-63. (C. W. Patty) **80d:54017** 54D05
- Pedersen, Gert Kjaer Isomorphisms of UHF algebras. *J. Funct. Anal.* **30** (1978), no. 1, 1-16. (Hisashi Choda) **80m:46055** 46L05
- (with Olesen, Dorte) Some  $C^*$ -dynamical systems with a single KMS state. *Math. Scand.* **42** (1978), no. 1, 111-118. (J. W. Bunce) **80a:46041** 46L55
- (with Akemann, Charles A.) Central sequences and inner derivations of separable  $C^*$ -algebras. *Amer. J. Math.* **101** (1979), no. 5, 1047-1061. (Richard I. Loeb) **80m:46051** 46L05
- (with Cuntz, Joachim) Equivalence and traces on  $C^*$ -algebras. *J. Funct. Anal.* **33** (1979), no. 2, 135-164. (Richard I. Loeb) **80m:46053** 46L05
- Pedersen, J. (with Lam, C. F.) Solving large sets of differential equations describing queueing systems with the aid of a dynamic allocation algorithm. *J. Inst. Math. Appl.* **2** (1978), no. 4, 435-441. (Authors' summary) **80a:65186** 65L99 (60K25)
- Pedersen, J. G. Fiducial inference. (French summary) *Internat. Statist. Rev.* **46** (1978), no. 2, 147-170. (R. J. Buehler) **80e:62001** 62A30
- Pedersen, Jean J. Visualizing parallel divisions of space. *Math. Gaz.* **62** (1978), no. 422, 250-262. (B. Artmann) **80f:52009** 52A25 (51-01)
- Pedgaonkar, A. M. (with Chaudhari, B. T.; Prabhu-Ajgaonkar, S. G.) Selection of a unique estimator for Ikeda-Sen's sampling procedure. *J. Indian Statist. Assoc.* **16** (1978), 97-111. (David Bellhouse) **80k:62017** 62D05
- (with Prabhu-Ajgaonkar, S. G.) Comparison of sampling strategies. *Metrika* **25** (1978), no. 3, 149-153. (David Bellhouse) **80k:62018** 62D05
- Pedicchio, Maria Cristina (with Rossi, Fabio)  $V$ -monoidality,  $V$ -adjunctions and monoidal functors. I, II. (Italian. English summary) *Rend. Istit. Mat. Univ. Trieste* **10** (1978), no. 1-2, 5-40, 80-100 (1979). (G. M. Kelly) **80a:18015** 18D10 (18D20, 18D25)
- Pedlosky, J. Finite-amplitude baroclinic waves in a continuous model of the atmosphere. *J. Atmospheric Sci.* **36** (1979), no. 10, 1908-1924. (Robert Pearson) **80m:86006** 86A10 (76E20)
- Pedoe, D. ★ Circles. A mathematical view. Corrected reprint of the 1957 edition. *Dover Publications, Inc., New York*, 1979. viii + 87 pp. ISBN 0-486-63698-4 (Editors) **80k:51001** 51-01
- Pedrazzi, Malno Axiomatic systems in the work of Giuseppe Peano and his school. (Italian. English summary) *Physis—Riv. Internaz. Storia Sci.* **19** (1977), no. 1-4, 319-335 (1979). (H. C. Kennedy) **80f:01015** 01A55 (51-03)
- de Pedro, Hugo E. (with Heegard, Chris; Wolf, Jack K.) Permutation codes for the Gaussian broadcast channel with two receivers. *IEEE Trans. Inform. Theory* **24** (1978), no. 5, 569-578. (Ram Astar) **80k:94016** 94A24
- Peel, D. A. (with Chappell, D.) On the political theory of the business cycle. *Econom. Lett.* **2** (1979), no. 4, 327-332. (Authors' summary) **80g:90010** 90A08
- The dynamic behavior of a simple macro-model with endogenous labor supply and demand. *Internat. Econom. Rev.* **20** (1979), no. 2, 381-389. (Author's introduction) **80f:90044** 90A16
- Peel, M. H. (with James, G. D.) Specht series for skew representations of symmetric groups. *J. Algebra* **56** (1979), no. 2, 343-364. (Jürgen Tappe) **80k:20021** 20C30
- Peele, Lawrence (with Kimeldorf, George) Time series prediction functions based on imprecise observations. *Ann. Statist.* **7** (1979), no. 4, 801-811. (Marc Hallin) **80f:62086** 62M10 (41A15)
- Characterizations of autoregressive prediction and moving average prediction as discrete-time spline interpolation. *Comm. Statist. A—Theory Methods* **8** (1979), no. 1, 35-46. (T. G. Sulaberide) **80e:62067** 62M20
- Peercy, P. S. (with Chen, P. J.) One-dimensional dynamic electromechanical constitutive relations of ferroelectric materials. (German summary) *Acta Mech.* **31** (1978/79), no. 3-4, 231-241. (Authors' summary) **80b:73050** 73R05
- Peetre, Jaak The Euler derivative. An intrinsic approach to the calculus of variations. *Math. Scand.* **42** (1978), no. 2, 313-333. (Jill P. Mesirov) **80j:58033** 58E99 (49A50)
- Two new interpolation methods based on the duality map. *Acta Math.* **143** (1979), no. 1-2, 73-91. (H. Triebel) **80d:46125** 46M35 (46E30)
- Two observations on a theorem by Coifman. *Studia Math.* **64** (1979), no. 3, 191-194. (H. Triebel) **80j:46047** 46E30 (42B30, 46M35)
- Peera, K. G. (with Topenčarov, Vladimir V.) On the  $X$ -reduction of  $S$ -automata. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Plovdiva Mat.* **12** (1976), no. 4, 19-30 (1977). (V. Ju. Melits) **80m:68053** 68D25 (68D30)
- (with Topenčarov, Vladimir V.) Mathematical theory of automata—a categorical approach. (Russian) *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 2, 299-313. (Jiří Adámek) **80k:68043** 68D30 (18B20)
- Peikonen, Erkki Ein hypoelliptisches Dirichletproblem. (English summary) *Soc. Sci. Fenn. Comment. Phys.-Math.* **48** (1978), no. 3, 131-143. (J. R. Schlenker) **80j:35021** 35H05
- Pelifer, K. (with Ballieu, R. J.) Attractivity of the origin for the equation  $\ddot{x} + f(t, x, \dot{x})\dot{x}^2 + g(x) = 0$ . *J. Math. Anal. Appl.* **65** (1978), no. 2, 321-332. (Hildebrando M. Rodrigues) **80a:34057** 34D05
- Pell, Jürgen Mathematisch-numerische Verfahren zur Analyse von Schwingungsvorgängen. (English summary) With discussion. *Nova Acta Leopoldina (N.F.)* **46** (1977), no. 225, 495-524, 573-579. (M. E. Wise) **80e:92039** 92A15 (34C15, 65M99)
- Inverse problems in growth dynamics. *Inverse and improperly posed problems in differential equations* (Proc. Conf., Math. Numer. Methods, Halle, 1979), pp. 197-213. *Math. Research*, 1, Akademie-Verlag, Berlin, 1979. (Robert J. Mulholland) **80j:92003** 92A09 (93B30)
- martin Peinador, Elena See Martin Peinador, Elena
- Pelre, Benjamin See Pyskor, Helena M., **80j:01022**
- Pelre, Charles S. See Essays: Philosophy of Charles Pelre, **80b:03005**
- Pelre, James Mills See Kennedy, Hubert, **80k:01036**
- Pelgen, Heinz-Otto (with Prüfer, Michael) The Leray-Schauder continuation method is a constructive element in the numerical study of nonlinear eigenvalue and bifurcation problems. *Functional differential equations and approximation of fixed points* (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978), pp. 326-409. *Lecture Notes in Math.*, **730**, Springer, Berlin, 1979. (Christian Fenske) **80k:55007** 55M20 (58E07, 65H05)
- (with Górniewicz, Lech) Degeneracy, nonjective fixed points and the fixed point index. *J. Math. Pures Appl.* (9) **58** (1979), no. 2, 217-228. (Christian Fenske) **80k:55004** 55M20 (58C30)
- See also Functional differential equations and approximation of fixed points, **80g:00005**
- Pekarev, E. L. Convolution on an operator domain. (Russian) *Funkcional. Anal. i Prilozhen.* **12** (1978), no. 3, 84-85. (S. G. Samko) **80b:47001** 47A05 (47B99, 94C05)
- Pekarskii, A. A. Rational approximation of continuous functions with given moduli of continuity and change. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1978**, no. 5, 34-39, 142. (A. B. Pevnyi) **80a:65034** 65D15 (41A20)
- Remark on a paper by K. I. Oskolkov. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I*



- 1978, no. 3, 62-64, 88. (Author's summary) **80g:42007** 42A20
- Pekelis, A. S.** Lattice characterization of the locally nilpotent radical in a group. (Russian) *A collection of papers on algebra (Russian)*, pp. 158-171, *Minist. Oborony SSSR*, 1978. (V. D. Mazurov) **80k:20027** 20E15
- Pekelman, Dov** (with Rausser, Gordon C.) Adaptive control: survey of methods and applications. *Applied optimal control*, pp. 89-120, *Studies in the Management Sci.*, 9, North-Holland, Amsterdam, 1978. (Zbigniew Nahorski) **80h:93083** 93C40
- On optimal utilization of production processes. *Oper. Res.* 27 (1979), no. 2, 260-278. (Ronald W. Shephard) **80d:90046** 90B30
- Pelc, Andrzej** On some weak forms of the axiom of choice in set theory. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 7, 585-589. (Paul E. Howard) **80k:03053** 03E25
- Pelczar, Andrzej** A local version of the generalized retract theorem of Ważewski with applications in the theory of partial differential equations of first order. *Ann. Polon. Math.* 36 (1979), no. 1, 11-28. (R. Kannan) **80i:54050** 54H20 (34C35, 35B99, 35F99)
- Sufficiency of jets by the method of integral inequalities. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat. No. 20* (1979), 17-32. (J. Bochnak) **80h:58005** 58A20 (26D15, 58C27)
- Peled, D.** (with Hansen, L. P.; Holt, C. A.) A note on first degree stochastic dominance. *Econom. Lett.* 1 (1978), no. 4, 315-319. (Edwin H. Neave) **80h:90015** 90A06 (90A05, 90A10)
- Pelg, Bezael** Representation of simple games by social choice functions. *Internat. J. Game Theory* 7 (1978), no. 2, 81-94. (Nimrod Megiddo) **80i:90015** 90A08 (90D12)
- Topological properties of the efficient point set. II. *J. Math. Anal. Appl.* 63 (1978), no. 2, 377-384. (From the introduction) **80h:90013** 90A05
- Game theoretic analysis of voting schemes. *Game theory and related topics (Proc. Sem., Bonn and Hagen, 1978)*, pp. 83-89, North-Holland, Amsterdam, 1979. (Author's summary) **80m:90016** 90A08 (90D40)
- A note on manipulability of large voting schemes. *Theory and Decision* 11 (1979), no. 4, 401-412. (Author's summary) **80k:90005** 90A08 (92A20)
- Pelg, Shmuel** Maximal derivations for probabilistic strings in stochastic languages. *Inform. and Control* 42 (1979), no. 3, 290-304. (Author's summary) **80f:68095** 68F15
- Pelch, B. L.** Обобщенная теория оболочек. (Russian) [A generalized theory of shells] "Višša Škola", Lvov, 1978. 159 pp. (Vadim Komkov) **80h:73042** 73L05 (35Q99)
- Pelletier, Lambertus Adrianus** (with van Duyn, C. J.) A class of similarity solutions of the nonlinear diffusion equation. *Nonlinear Anal.* 1 (1976/77), no. 3, 223-233. (W. F. Ames) **80b:35080** 35K55
- A nonlinear eigenvalue problem occurring in population genetics. *Journées d'Analyse Non Linéaire (Proc. Conf., Besançon, 1977)*, pp. 170-187, *Lecture Notes in Math.*, 665, Springer, Berlin, 1978. (Wolf von Wahl) **80h:35081** 35K55 (35B32, 92A15)
- (with Clément, Philippe) Un principe du maximum pour des opérateurs elliptiques non coercifs. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 14, A945-A946. (Authors' summary) **80h:35046** 35J15
- The mathematical theory of clines. *Proceedings, Bicentennial Congress Wiskundig Genootschap (Vrije Univ., Amsterdam, 1978)*, Part II, pp. 295-308, *Math. Centre Tracts*, 101, Math. Centrum, Amsterdam, 1979. (J. P. Kernevez) **80j:92006** 92A10 (35B35)
- Pel'minskii, S. V.** (with Koval'skii, M. Ju.) On the problem of constructing the macrostructural nonequilibrium entropy. (Russian. English summary) *Ukrain. Fiz. Ž.* 23 (1978), no. 7, 1096-1105, 1224. (Authors' summary) **80i:82008** 82A05
- Pelligrad, Costel** Invariant subspaces of von Neumann algebras. II. *Proc. Amer. Math. Soc.* 73 (1979), no. 3, 346-350. (Edward Azofof) **80d:47070** 47D25 (46L10, 47A15)
- (with Christensen, Erik) Commutants of nest algebras modulo the compact operators. *Invent. Math.* 56 (1980), no. 2, 113-116. (Kenneth R. Davidson) **80m:47038** 47D30
- Pell, John L.** (with Marshall, John T.) Path-integral evaluation of the space-time propagator for quadratic Hamiltonian systems. *J. Math. Phys.* 20 (1979), no. 7, 1297-1302. (L. S. Schulman) **80h:81020** 81C30 (58D30)
- Pell, R. W.** (with Kirwan, W. E.) A note on a class of slit conformal mappings. *Canad. J. Math.* 30 (1978), no. 6, 1166-1173. (R. Kühnau) **80d:30013** 30C55
- Pellat, R.** (with Pesme, D.; Laval, G.) Approximation des phases aléatoires et de l'élargissement de résonance en turbulence faible des plasmas. (English summary) *J. Physique* 38 (1977), no. 8 Suppl., Colloque No. 3, C3-213-C3-224. (F. C. Auluck) **80a:82035** 82A45 (00A89)
- (with Asséou, E.; Cesarsky, C. J.; Lachéze-Rey, M.) Parker instability in the presence of curved magnetic field lines. *Astrophys. J.* 225 (1978), no. 1, part 2, 21-25. (Authors' summary) **80e:76061** 76X05 (49H05)
- Pellissier, Jean** An inequality for the semi-martingales application to stochastic differential equations. *Probability theory on vector spaces (Proc. Conf., Trzebieżowice, 1977)*, pp. 207-223, *Lecture Notes in Math.*, 656, Springer, Berlin, 1978. (Philip Protter) **80e:60075** 60H10 (60G42)
- Stabilité d'équations différentielles stochastiques hilbertiennes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 2, A157-A160. (Author's summary) **80e:60078** 60H15
- Convergence en règle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 6, A289-A292. (Author's summary) **80m:60006** 60B10
- Pelle, J.-P.** (with Ladevèze, J.; Ladevèze, P.; Manton, M.; Pécastaing, F.) Sur les fondements de la théorie linéaire des poutres élastiques. I. Méthode. Construction du prolongement admissible optimal. (English summary) *J. Mécanique* 18 (1979), no. 1, 129-173. (H. J. Weinitschke) **80m:73014** 73C99 (49H05, 73K05)
- Pflickinger-Pellé, Jacqueline** See Fleckinger-Pellé, Jacqueline
- Penna, Pellegrini, Silvia** See Maana Pellegrini, Silvia
- Pellegrino, Giuseppe** An observation on the problem of complete  $k$ -arcs in  $S_{2q}$ , with  $q \equiv 1$  (mod 4). (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 1-2, 33-44 (1978). (Armin Herzer) **80d:51011** 51E15 (05B25)
- $t$ -designs associated with nondegenerate conics in a Galois plane of odd order. *J. Statist. Plann. Inference* 2 (1978), no. 3, 307-312. (Peter J. Cameron) **80a:05027** 05B05 (51E15, 62K10)
- Some elementary arithmetic propositions and their application to the  $k$ -arcs theory. (Italian. English summary) *Boll. Un. Mat. Ital. A (5)* 16 (1979), no. 2, 322-330. (Armin Herzer) **80j:05027** 05B25 (51E15)
- Pellegrinotti, A.** (with Marchioro, C.; Pulvirenti, M.; Triolo, L.) Velocity of a perturbation in infinite lattice systems. *J. Statist. Phys.* 19 (1978), no. 5, 499-510. (Authors' summary) **80h:82053** 82A60 (58F05)
- (with Marchioro, C.; Pulvirenti, M.; Suhov, Yu.) Time evolution of Gibbs states for an anharmonic lattice. *Comm. Math. Phys.* 66 (1979), no. 2, 131-146. (Authors' summary) **80i:82014** 82A05 (60K35)
- Peller, V. V.** Estimates of operator polynomials in symmetric spaces. A functional calculus for absolute contractions. (Russian) *Mat. Zametki* 25 (1979), no. 6, 899-912, 957. (Chandler Davis) **80j:47047** 47B38 (42A45, 47A60)
- Pelletier, Guy** Transition vers la turbulence de Langmuir forte. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 9, B159-B162. (Author's summary) **80m:82044** 82A45 (76F05)
- Pelletier, Joan Wick** Dual functors and the Radon-Nikodym property in the category of Banach spaces. *J. Austral. Math. Soc. Ser. A* 27 (1979), no. 4, 479-494. (V. Losert) **80h:46117** 46M15 (47D30)
- Olvert Pellicer, Joaquin** See Olvert Pellicer, Joaquin
- López Pellicer, M.** See López Pellicer, M.
- Pellicciardi, Gabriele** (with Bortone, Carlo) On entropy according to Forte and Sastri for a canonical system. (Italian. English summary) *Rend. Mat.* (6) 11 (1978), no. 3, 445-453 (1979). (Authors' summary) **80e:82028** 82A35
- Pelling, M. J.** On the singularity set of complex functions satisfying the Cauchy-Riemann equations. *Michigan Math. J.* 26 (1979), no. 2, 225-229. (Author's introduction) **80i:30041** 30D05 (30G15)
- Peltraut, Y.** (with Garcia, M.; Maillard, P.) Une martingale de saut multiplicatif donné. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 51-52, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (From the text) **80g:60048** 60C44
- (with Garcia, M.; Maillard, P.) Sur la structure de certaines familles de tribus. (English summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* 14 (1978), no. 3, 335-341. (Maurizio Pratelli) **80h:60066** 60C44
- Peltzer, P.** (with Pucker, N.) Specific features of time-dependent  $P_N$  approximations in spherical geometry. *Acta Phys. Austriaca* 51 (1979), no. 1, 9-28. (A. Bellini-Morante) **80e:82053** 82A75 (65Rxx)
- Peluso, Roberto I.** (with Galeone, Luciano) The iterative method for solving the matrix equation  $AX + XB = C$ . (Italian. English summary) *Boll. Un. Mat. Ital. B (5)* 16 (1979), no. 1, 1-8. (G. C. Barozzi) **80h:65020** 65F10
- Pelyh, V. A.** Correctness of the Cauchy problem statement for a system of Einstein equations, coordinate conditions and the theory of reference systems. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 3, 590-593. (A. Staruszkiewicz) **80j:83005** 83C05
- Pempinelli, F.** (with Boiti, M.) Similarity solutions of the Korteweg-de Vries equation. *Nuovo Cimento B (11)* 51 (1979), no. 1, 70-78. (G. L. Lamb, Jr.) **80d:35126** 35Q20 (76D05)
- Pen, A. S.** (with Bakiev, K.; Skubenko, B. F.) On an upper bound for the product of linear inhomogeneous forms. (Russian) *Mat. Zametki* 23 (1978), no. 6, 789-797. (R. A. Rankin) **80b:10040a** 10E15
- de la Peña, L.** See de la Peña Auerbach, Luis
- Arrate Peña, M.** See Arrate Peña, M.
- de la Peña Auerbach, Luis** (with Cetto, A. M.) Quantum mechanics derived from stochastic electrodynamics. *Found. Phys.* 8 (1978), no. 3-4, 191-210. (Robin Hudson) **80a:81061** 81D99 (35R60, 82A99)
- (with Cetto, A. M.) The quantum harmonic oscillator revisited: a new look from stochastic electrodynamics. *J. Math. Phys.* 20 (1979), no. 3, 469-483. (Ludwig Arnold) **80d:81013** 81C05 (81L05)
- Pence, Dennis D.** Hermite-Birkhoff interpolation and monotone approximation by splines. *J. Approx. Theory* 25 (1979), no. 3, 248-257. (Darell J. Johnson) **80j:41005** 41A05
- Penel, P.** (with Bardos, C.; Frisch, Uriel; Sulem, Pierre Louis) Modified dissipativity for a nonlinear evolution equation arising in turbulence. *Arch. Rational Mech. Anal.* 71 (1979), no. 3, 237-256. (J. F. Heyda) **80i:35110** 35Q20 (76F05)
- Penenko, V. V.** (with Obruchov, N. N.) Implicit approximations of a higher order of accuracy for the second derivative. (Russian) *Čisl. Metody Meh. Splošn. Sredy* 9 (1978), no. 3 *Matematičeskoe Modelirovanie*, 128-136. (From the text) **80e:65026** 65D25
- (with Marčuk, G. I.) Application of optimization methods to the problem of mathematical simulation of atmospheric processes and environment. *Modelling and optimization of complex systems (Proc. IFIP-TC 7 Working Conf., Novosibirsk, 1978)*, pp. 240-252, *Lecture Notes in Control and Information Sci.*, 18, Springer, Berlin, 1979. (Robert Pearson) **80m:86005** 86A10 (93A10)
- Peng, C. K.** (with do Carmo, Manfredo P.) Stable complete minimal surfaces in  $\mathbb{R}^3$  are planes. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 6, 903-906. (F. J. Almgren, Jr.) **80j:53012** 53A10 (53C42)
- Peng, Jia Gui** (with Chern, Shiing Shen) Lie groups and KdV equations. *Manuscripta Math.* 28 (1979), no. 1-3, 207-217. (J. Christina) **80h:22025** 22E99 (35Q20, 58A15, 58F07)
- Peng, Qiu He** (with Huang, Yin Liang) An asymptotic solution of Poisson's equation for a screw-shaped disturbance of density in a spiral galaxy of finite thickness. *Chinese Astronom. J.* 3 (1979), no. 2, 168-173. (L. F. Oster) **80h:85004** 85A05 (35Q20)
- Peng, T. A.** A note on  $p$ -nilpotent groups. *Bull. Malaysian Math. Soc. (2)* 1 (1978), no. 2, 117-118. (F. Pérez Monasor) **80d:20023** 20D10 (20D20)
- Pengelly, David J.** (with Jungmann, Mark) Index four orientable embeddings and case zero of the Heawood conjecture. *J. Combin. Theory Ser. B* 26 (1979), no. 2, 131-144. (A. T. White) **80f:05039** 05C10 (05C15)
- de la Peña, Guilhermo** See Contemporary developments in continuum mechanics and partial differential equations. **80h:73003**
- Penkov, B.** Lucien Godeaux (1887-1975). (Bulgarian) *Fiz.-Mat. Spis. B' Igar. Akad. Nauk.* 21(54) (1978), no. 3, 234-235. (Editors) **80e:01028** 01A70
- Penna, Michael A.** On a theorem of Sullivan. *Canad. Math. Bull.* 21 (1978), no. 2, 201-206. (R. Fritsch) **80g:55025** 55P62
- On the geometry of combinatorial manifolds. *Pacific J. Math.* 77 (1978), no. 2, 499-522. (D. B. Fuks) **80f:57010** 57Q99 (53C05)

- Penney, D. E. (with Erdős, Paul; Pomerance, Carl) On a class of relatively prime sequences. *J. Number Theory* 10 (1978), no. 4, 451-474. (Matti Jutila) **80a:10059** 10H15 (10H25)
- Penney, R. C. Rational subspaces of induced representations and nilmanifolds. *Trans. Amer. Math. Soc.* 246 (1978), 439-450. (L. Corwin) **80b:22010** 22D10 (22E27) (with Rukhin, Andrew L.) d'Alembert's functional equation on groups. *Proc. Amer. Math. Soc.* 77 (1979), no. 1, 73-80. (Ferenc Fenyes) **80b:39013** 39B50 (39B30)
- Penot, Jean-Paul Calcul sous-différentiel et optimisation. *J. Funct. Anal.* 27 (1978), no. 2, 248-276. (A. D. Ioffe) **80e:58018** 58E15 (46G99, 49B99)
- The use of generalized subdifferential calculus in optimization theory. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978), Section I*, pp. 495-511, *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (A. D. Ioffe) **80j:58007** 58C20 (49A50, 90C30)
- (with Théra, Michel) Semi-continuité des applications et des multiapplications. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 4, A241-A244. (Authors' summary) **80m:58007** 58C20
- (with Théra, Michel) Polarité des applications convexes à valeurs vectorielles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 7, A419-A422. (Authors' summary) **80i:46014** 46A99 (49A27)
- Penrose, O. Kinetics of phase transitions. *Stochastic processes in nonequilibrium systems (Lectures, Fifth Stiges Internat. School Statist. Mech., Stiges, 1978)*, pp. 210-234, *Lecture Notes in Phys.*, 84, Springer, Berlin, 1978. (Masuo Suzuki) **80g:82024** 82A25 (with Rechtman, R.) Continuity of the temperature and derivation of the Gibbs canonical distribution in classical statistical mechanics. *J. Statist. Phys.* 19 (1978), no. 4, 359-366. (Authors' summary) **80b:82030** 82A30
- Penrose, R. (with Hansen, R. O.; Newman, Ezra T.; Tod, K. P.) The metric and curvature properties of  $\mathcal{N}$ -space. *Proc. Roy. Soc. London Ser. A* 363 (1978), no. 1715, 445-468. (C. T. J. Dodson) **80b:83017** 83C30 (53C50)
- Penttinen, Martti (with Harju, Tero) Some decidability problems of sentential forms. *Internat. J. Comput. Math.* 7 (1979), no. 2, 95-107. (Authors' summary) **80f:68064** 68F05 (68C30)
- (with Maurer, Hermann; Salomaa, Arto K.; Wood, Derick) On non-context-free grammar forms. *Math. Systems Theory* 12 (1979), no. 4, 297-324. (S. Ginsburg) **80b:68062** 68F05
- Penzlin, Ju. G. The problem of twins in formal arithmetic. (Russian) *Mat. Zametki* 26 (1979), no. 4, 505-511, 653. (O. V. Belegradskii) **80m:03115** 03H15 (03C65, 03F30, 10N15, 12L15)
- Pepe, Luigi The "prime element" of the Rational arithmetic of Pietro Mengoli. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 1, 201-209. (P. Bockstaele) **80j:01012** 01A45 (04-03)
- Pepin, Robert L. Gravitational theory of matter. *Phys. Rev. D* (3) 18 (1978), no. 10, 3581-3594. (N. Rosen) **80b:83053** 83E05
- Pequeno, T. H. (with Lucena, C. J.) An approach for data type specification and its use in program verification. *Inform. Process. Lett.* 8 (1979), no. 2, 98-103. (Giorgio Levi) **80d:68023** 68B10
- Peralta, Jean-Claude (with Fougères, Alain) Application au calcul des variations de l'optimisation intégrale convexe. *Journées d'Analyse Non Linéaire (Proc. Conf., Besançon, 1977)*, pp. 70-99, *Lecture Notes in Math.*, 665, Springer, Berlin, 1978. (A. Kós) **80f:49011** 49A50
- Percacci, R. (with Denardo, G.) Quantum field theory for a rotating observer. (Italian summary) *Nuovo Cimento B* (11) 48 (1978), no. 1, 81-89. (Authors' summary) **80b:81121** 81M05
- (with Gava, E.; Jengo, R.; Omero, C.) Classical solutions for a generally covariant  $CP^2$  non-linear  $\sigma$ -model. *Nuclear Phys. B* 151 (1979), no. 3, 457-468. (Authors' summary) **80c:81062** 81E10 (53C30)
- Einstein-Maxwell instantons and charge quantization. (Italian and Russian summaries) *Nuovo Cimento B* (11) 52 (1979), no. 1, 90-104. (A. F. da F. Teixeira) **80b:83013** 83C20 (53B35)
- Perce, Peter (with Douglas, Jim, Jr.; Dupont, Todd; Scott, L. Ridgway) A family of  $C^1$  finite elements with optimal approximation properties for various Galerkin methods for 2nd and 4th order problems. (French summary) *RAIRO Anal. Numér.* 13 (1979), no. 3, 227-255. (Reinhard Scholz) **80c:65067** 65N30
- Perce, V. A. (with Kalašnikov, V. A.) An approach to the solution of the problem of function partitioning of the structure of a combination automaton. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 3, 134-139. (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 3, 109-114. (Authors' summary) **80e:68073** 68C05 (68D05, 68E10)
- Perceval, Ian C. Regular and irregular spectra of molecules. *Stochastic behavior in classical and quantum Hamiltonian systems (Volta Memorial Conf., Como, 1977)*, pp. 259-282, *Lecture Notes in Phys.*, 93, Springer, Berlin, 1979. (Author's summary) **80k:81194** 81G55 (58F05)
- A variational principle for invariant tori of fixed frequency. *J. Phys. A* 12 (1979), no. 3, L57-L60. (Erich Miersmann) **80c:70021** 70H30 (49H05, 58Fxx)
- Stochastic metastability and Hamiltonian dynamics. *Proc. Roy. Soc. London Ser. A* 336 (1979), no. 1724, 129-141. (P. J. Holmes) **80e:58022** 58F05 (34D99, 58F11)
- Percy, Nicolas A remark on the introduction of coordinates in Minkowski planes. *J. Geom.* 12 (1979), no. 2, 175-183. (R. Artzy) **80d:51009** 51B20
- Percegrine, D. H. (with Stiasnie, M.) On averaged equations for finite-amplitude water waves. *J. Fluid Mech.* 94 (1979), no. 3, 401-407. (Alan Jeffrey) **80k:76018** 76B15 (with Hibberd, S.) Surf and run-up on a beach: a uniform bore. *J. Fluid Mech.* 95 (1979), no. 2, 323-345. (Authors' summary) **80k:76015** 76B15
- Pereira, Basilio de Bragança Tests for discrimination among models. *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. 1. (Portuguese), pp. 345-358, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Editors) **80d:62022** 62F03
- Tests and efficiencies of separate regression models. *Biometrika* 65 (1978), no. 2, 319-327. (B. K. Ghosh) **80b:62017** 62F05 (62F10, 62J05)
- Test for the discrimination between lognormal, gamma and Weibull distributions. (Portuguese) *Estatística* 33 (1979), no. 120, 41-46. (Author's summary) **80i:62067** 62N05 (62F03)
- simões-Pereira, J. M. S. See Simões-Pereira, J. M. S.
- Pereira, N. R. (with Chen, H. H.; Lee, Y. C.) Algebraic internal wave solitons and the integrable Calogero-Moser-Sutherland  $N$ -body problem. *Phys. Fluids* 22 (1979), no. 1, 187-188. (Authors' summary) **80b:76042** 76V05 (58F07)
- (with Chu, Flora Y. F.) Damped double solitons in the nonlinear Schrödinger equation. *Phys. Fluids* 22 (1979), no. 5, 874-881. (Authors' summary) **80c:81096** 81E99 (65P05, 81G35)
- Pereira da Silva, Clóvis (with Cardoso, Jayme Machado) On Ward quasigroups. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 24 (1978), no. 2, 231-233. (R. Artzy) **80e:20085** 20N05
- On a theorem of Lagrange for Ward quasigroups. (Portuguese) *Rev. Colombiana Mat.* 12 (1978), no. 3-4, 91-96. (H. D'Alarcao) **80b:20107** 20N05
- Perelmutter, A. Adjustment of free networks. With a comment by Georges Blaha. *Bull. Géodésique* 53 (1979), no. 4, 291-296. (Author's summary) **80c:65050** 65F20
- Perel'muter, V. M. An algorithm for the optimization of discrete stochastic systems with unknown parameters. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 2, 111-115. (Author's summary) **80m:93096** 93E20
- Perelomov, A. M. Completely integrable classical systems connected with semisimple Lie algebras. III. *Lett. Math. Phys.* 1 (1975/77), no. 6, 531-534. (Mark Adler) **80g:58033** 58F05 (34C05)
- (with Golo, V. L.) A few remarks on chiral theories with sophisticated topology. *Lett. Math. Phys.* 2 (1977/78), no. 6, 477-482. (M. Hongoh) **80b:81029** 81E05 (22E47, 53Q40, 58A10)
- (with Calogero, F.) Properties of certain matrices related to the equilibrium configuration of the one-dimensional many-body problems with the pair potentials  $V_1(x) = -\log |\sin x|$  and  $V_2(x) = 1/\sin^2 x$ . *Comm. Math. Phys.* 59 (1978), no. 2, 109-116. (Georges Bessis) **80d:70019** 70F10 (15A90, 34C15, 58F07)
- Instantons and Kähler manifolds. *Comm. Math. Phys.* 63 (1978), no. 3, 237-242. (Nicholas M. J. Woodhouse) **80c:81072** 81E10 (53C55, 58G07)
- (with Calogero, F.) Asymptotic density of the zeros of Hermite polynomials of diverging order, and related properties of certain singular integral operators. *Lett. Nuovo Cimento* (2) 23 (1978), no. 18, 650-652. (Y. L. Luke) **80f:33015** 33A65 (with Calogero, F.) Asymptotic density of the zeros of Laguerre and Jacobi polynomials. *Lett. Nuovo Cimento* (2) 23 (1978), no. 18, 653-656. (Y. L. Luke) **80f:33016** 33A65
- Exact results for one-dimensional many-particle systems. (Russian. English summary) *Fiz. Elementar. Častice i Atom. Jadra* 10 (1979), no. 4, 850-883. (J. S. Joel) **80k:81198** 81H05 (58F07, 70H99)
- (with Ol'shanečii, M. A.) Explicit solutions of classical generalized Toda models. *Invent. Math.* 54 (1979), no. 3, 261-269. (A. Morimoto) **80m:58018** 58F05 (58F07)
- (with Calogero, F.; Ol'shanečii, M. A.) Rational solutions of the KdV equation with damping. *Lett. Nuovo Cimento* (2) 24 (1979), no. 4, 97-100. (T. Kahan) **80k:35112** 35Q20 (58F07)
- (with Calogero, F.) Some Diophantine relations involving circular functions of rational angles. *Linear Algebra Appl.* 25 (1979), 91-94. (M. Lotkin) **80d:15010** 15A18 (10G05, 15A99)
- (with Ahmed, Shafique; Bruschi, M.; Calogero, F.; Ol'shanečii, M. A.) Properties of the zeros of the classical polynomials and of the Bessel functions. (Italian and Russian summaries) *Nuovo Cimento B* (11) 49 (1979), no. 2, 173-199. (R. A. Askey) **80g:33018** 33A65 (33A40, 70F10)
- Perelomov, A. P. See Gibson, W. M.; et al., **80m:81002**
- Perelson, Alan S. Optimal strategies for an immune response. *Some mathematical questions in biology, X (Proc. 12th Sympos. Math. Biol., Washington, D.C., 1978)*, pp. 109-163, *Lectures on Math. in the Life Sciences*, 11, *Amer. Math. Soc., Providence, R.I.*, 1979. (Author's summary) **80b:92009** 92A09
- (with Oster, George F.) Theoretical studies of clonal selection: minimal antibody repertoire size and reliability of self-non-self discrimination. *J. Theoret. Biol.* 81 (1979), no. 4, 645-670. (Fred L. Bookstein) **80k:92003** 92A09 (60D05)
- (with DeLisi, Charles) Receptor clustering on a cell surface. I. Theory of receptor cross-linking by ligands bearing two chemically identical functional groups. *Math. Biosci.* 48 (1980), no. 1-2, 71-110. (Authors' summary) **80k:92017** 92A40
- Perel'man, I. L.  $M$ -barreled topological  $M$ -spaces. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 29 (1978), 117-122, iv. (From the summary) **80d:46004** 46A07
- Various generalizations of the notion of "barreledness" in topological  $M$ -spaces. (Russian) *Functional analysis*, No. 12 (Russian), pp. 132-135, *Ukrainian Gos. Ped. Int., U'lyanovsk*, 1979. (Harold H. McFaden) **80k:46005** 46A07
- Perestjuk, M. O. (with Šovkopljias, V. N.) Periodic solutions of nonlinear differential equations with an impulse influence. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 5, 517-524, 619. (V. G. Zadorožnij) **80j:34042** 34C25
- Peretti, Aldo Théorie statistique des nombres. I. Nombre de solutions de l'équation diophantienne  $x_1^2 + x_2^2 + \dots + x_n^2 = \mu^2$ . *Bull. Number Theory Related Topics* 1 (1975/76), no. 3, 6-9. (H. J. Godwin) **80m:10014a** 10B15
- Théorie statistique des nombres. II-VII. *Bull. Number Theory Related Topics* 4 (1979), no. 1, 1-22. (H. J. Godwin) **80m:10014b** 10B15
- Peretti, P. (with Böhm, Corrado; Dezan, Ciancaglini, M.; Ronchi Della Rocca, S.) A discrimination algorithm inside  $\lambda$ -calculus. *Theoret. Comput. Sci.* 8 (1979), no. 3, 271-291. (Henk Barendregt) **80g:03012a** 03B40
- Perelav, G. E. The compactness of the set of plane continua of finite linear measure. (Russian) *Ukr. Vysš. Učebn. Zaved. Matematika* 1977, no. 11(186), 124-126. (A. Császár) **80f:54025** 54F15 (28A75)
- Pereyra, Victor Numerical solution of boundary value problems for ordinary differential equations. (Spanish. English summary) *Acta Cient. Venezolana* 30 (1979), no. 1, 7-22. (Author's summary) **80c:65081** 65L10
- (with Keller, Herbert B.) Difference methods and deferred corrections for ordinary boundary value problems. *SIAM J. Numer. Anal.* 16 (1979), no. 2, 241-259. (Pietro Marzulli) **80b:65058** 65L10
- Pérez, Hernando Stability theory—stability following Ljapunov's second method. (Spanish) *Bol. Mat.* 11 (1977), no. 1-3, 23-34. (N. Onuchic) **80g:34053** 34D20 (34-01)
- barja Pérez, J. See Barja Pérez, J.
- Perez, J. Fernando (with Driessler, Wulf; Landau, L. D.) Estimates of critical lengths and



- critical temperatures for classical and quantum lattice systems. *J. Statist. Phys.* **20** (1979), no. 2, 123–162. (Ronald F. Fox) **80d:82035** 82A25
- Perez, R. B. On the expansion of the propagator in power series of the coupling constant. *J. Math. Phys.* **20** (1979), no. 2, 241–244. (G. P. Bava) **80c:81021** 81C05
- Pérez-García, C. (with Jou, D.; Rubi, J. M.) Variational solutions for the two-stream mixing of power-law fluids. *Appl. Sci. Res.* **35** (1979), no. 5–6, 393–407. (Authors' summary) **80m:76006** 76A05
- Pérez-Gómez, A. (with López Fernández-Asenjo, Félix) An application of the semi-open topology on  $\mathbb{R}$ . (Spanish) *Gaceta Mat. (I) (Madrid)* **30** (1978), no. 7–8, 185–186. (Editors) **80g:28001** 28–01
- Pericagin, A. A. (with Kunicyn, A. L.) On the stability of triangular libration points of the photogravitational restricted circular three-body problem. *Celestial Mech.* **18** (1978), no. 4, 395–408. (D. Schmidt) **80a:70025** 70M10 (34D99)
- Pérez-Rendón, Antonio (with García, Pedro L.) Reducibility of the symplectic structure of minimal interactions. *Differential geometrical methods in mathematical physics, II* (Proc. Conf., Univ. Bonn, Bonn, 1977), pp. 409–433, *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (Virgil Obădeanu) **80f:58022** 58F06 (57R25, 81C99)
- Perfiller, I. G. The construction of a hypercontinuum of precomplete classes of a countably many-valued logic. (Russian) *Problemy Kibernet.* No. 35 (1979), 29–44, 208. (A. Salomaa) **80m:03055** 03B50
- Perget, J. (with Benczur, A.; Krámlí, András) On the Bayesian approach to optimal performance of page storage hierarchies. *Selected Papers on Operating Systems: Theory and Practice* (Lectures, Visegrád Winter School, Visegrád, 1978), pp. 117–132, Szémió, Kútató Int., Budapest, 1978. (Authors' summary) **80g:68030** 68B20
- (with Krámlí, András) The statistical behavior of a characteristic of the insertion algorithm "batched hashing and linear probing". *Tanulmányok—MTA Számítástech. Automat. Kutató Int. Budapest No. 87* (1978), 21–25. (K. H. V. Booth) **80b:68118** 68H05 (68B15)
- Periaux, J. (with Glowinski, Roland; Mantel, B.; Pironneau, O.)  $H^{-1}$  least squares method for the Navier-Stokes equations. *Numerical methods in laminar and turbulent flow* (Proc. First Internat. Conf., Univ. College Swansea, Swansea, 1978), pp. 29–42, Halsted, New York, 1978. (J. P. Hennart) **80d:76021** 76D05 (65P05)
- (with Bristeau, M. O.; Pironneau, O.; Glowinski, Roland; Perrier, P.) On the numerical solution of nonlinear problems in fluid dynamics by least squares and finite element methods. I. Least square formulations and conjugate gradient solution of the continuous problems. *Comput. Methods Appl. Mech. Engrg.* **17/18** (1979), part 3, 619–657. (Authors' summary) **80c:65099** 65N30 (49D07, 76D05)
- Perić, Veselin Sur l'existence d'une partie finale dénombrable dans un groupe ordonné linéairement. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjel. Prirod. Mat. Nauka* **61** (1978), no. 17, 71–73. (R. S. Pierce) **80b:06019** 06F15
- Peřina, J. (with Peřinová, V.) Generalized Fokker-Planck equation approach to optical parametric processes. I. Equations of motion and their solutions. *Czechoslovak J. Phys. B* **28** (1978), no. 11, 1183–1195. (Masuo Suzuki) **80b:81118a** 81K05
- (with Peřinová, V.) Generalized Fokker-Planck equation approach to optical parametric processes. II. Photocounting statistics. *Czechoslovak J. Phys. B* **28** (1978), no. 11, 1196–1207. (Masuo Suzuki) **80b:81118b** 81K05
- Peřinová, V. (with Peřina, J.) Generalized Fokker-Planck equation approach to optical parametric processes. I. Equations of motion and their solutions. *Czechoslovak J. Phys. B* **28** (1978), no. 11, 1183–1195. (Masuo Suzuki) **80b:81118a** 81K05
- (with Peřina, J.) Generalized Fokker-Planck equation approach to optical parametric processes. II. Photocounting statistics. *Czechoslovak J. Phys. B* **28** (1978), no. 11, 1196–1207. (Masuo Suzuki) **80b:81118b** 81K05
- Peritz, Eric (with Ray, Rose) Some statistical methods for survival analysis with rare failures. *Comm. Statist. A—Theory Methods* **7** (1978), no. 7, 619–636. (S. M. Pandit) **80a:62164** 62N05 (62G10)
- Park, J. H. H. (with Capel, H. W.) Time- and frequency-dependent correlation functions for the homogeneous and alternating-isotropic XY-models. *Phys. A* **100** (1980), no. 1, 1–23. (Authors' summary) **80k:82071** 82A67
- Perkins, W. R. (with Özgüner, Ümit) Optimal control of multilevel large-scale systems. *Internat. J. Control* **28** (1978), no. 6, 967–980. (Kimio Kanai) **80b:93011** 93A15 (49B10)
- Perko, Richard Zur algebraischen Theorie der Lösungen schwach singulärer linearer Differentialgleichungen im Körper der Laurentreihen über einem Körper positiver Charakteristik unter Zugrundelegung einer nicht-iterativen Differentiation. (English summary) *Ber. Math.-Statist. Sect. Forsch. Graz No. 98* (1978), 12 pp. (K. Okugawa) **80h:12023** 12H05 (34A20)
- Über partielle Differentialgleichungen von Briot-Bouquetschem Typ bei  $p$ -adisch bewertetem Grundkörper. *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* **186** (1978), no. 8–10, 339–349. (E. Kreysszig) **80c:35021** 35F20 (12B40)
- Eine Verallgemeinerung der Riccatischen Differentialgleichung in Körpern der Charakteristik  $p=2$ . *J. Reine Angew. Math.* **307/308** (1979), 257–263. (K. Okugawa) **80g:12019** 12H05 (34A34)
- Pertold, K. Die Methode der finiten Elemente bei linearen und quasilinearen elliptischen Randwertproblemen. *Ber. Math.-Statist. Sect. Forsch. Graz No. 96* (1978), ii+57 pp. (Editors) **80b:65138** 65N30
- Peri, Jürgen Entropie von Problemen. *Datenstrukturen, Graphen, Algorithmen* (3. Fachtagung über Graphentheoretische Konzepte der Informatik, Linz, 1977), pp. 179–190, *Applied Comput. Sci.*, 8, Hanser, Munich, 1978. (Ondrej Šýkora) **80a:68045** 68C25 (05C35, 68E05, 94A17)
- Perlin, P. I. (with Parton, V. Z.) ★Интегральные уравнения теории упругости. (Russian) [Integral equations in elasticity theory] With an introduction by D. I. Šerman and appendices by S. F. Stupak and N. F. Andrianov. "Nauka", Moscow, 1977. 311 pp. (Vadim Komkov) **80a:73001** 73–02 (30E25, 45–01)
- Perlis, Robert On the class numbers of arithmetically equivalent fields. *J. Number Theory* **10** (1978), no. 4, 489–509. (T. Metsänkylä) **80c:12014** 12A50 (12A70)
- (with Schinzel, A.) Zeta functions and the equivalence of integral forms. *J. Reine Angew. Math.* **309** (1979), 176–182. (B. Z. Moroz) **80j:12008** 12A70 (10C15)
- Perlman, S. (with Waterman, Daniel) Some remarks on functions of  $\Lambda$ -bounded variation. *Proc. Amer. Math. Soc.* **74** (1979), no. 1, 113–118. (A. Precupanu) **80c:26007** 26A45
- Perlow, J. The transition density for multiple neutral alleles. *Theoret. Population Biol.* **16** (1979), no. 3, 223–232. (Author's summary) **80m:92009** 92A10
- Perrg, S.-S. Rate of convergence of estimators based on sample mean. *Ann. Statist.* **6** (1978), no. 5, 1048–1056. (Reinhard Michel) **80a:62026** 62E20 (62F05)
- Perov, A. I. (with Aliev, A. B.) Almost periodic solutions of second-order differential equations in a Banach space. (Russian) *Functional analysis and its applications*, No. 3 (Russian), pp. 51–54, "Elm", Baku, 1978. (C. Corduneanu) **80c:34039** 34G10
- Potential operators. (Russian) *Mat. Zametki* **24** (1978), no. 6, 793–799, 893. (Milan Kučera) **80c:47058** 47H99
- Perović, N. (with Novaković, M.; Petralinović, Lj.; Đurić, M.) Solution of the "inverse"-problem of conduction of heat transfer by Runge-Kutta integration of the Fourier equation with one-side boundary values and no initial conditions. *Z. Angew. Math. Mech.* **58** (1978), no. 7, T429–T430. (From the introduction) **80a:65246** 65N99
- Perram, John W. (with Cummings, P. T.; Wright, C. C.; Smith, E. R.) Solution of the Ornstein-Zernike equation for a soft-core Yukawa fluid. *J. Statist. Phys.* **21** (1979), no. 6, 659–667. (Authors' summary) **80k:82059** 82A50
- (with de Leeuw, Simon W.) Electrostatic lattice sums for semi-infinite lattices. *Molecular Phys.* **37** (1979), no. 4, 1313–1322. (Authors' summary) **80c:82044** 82A67
- See also Smith, E. R., **80c:82015**
- Perraud, Jean Sur les conditions de petite simplification qui permettent d'utiliser l'algorithme de Dehn. *Math. Z.* **163** (1978), no. 2, 133–143. (Leo P. Comerford, Jr.) **80b:20043** 20F06 (20F10)
- Perret, Daniel Une propriété des graphes de Cayley 3 connexes planaires. (English summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 331–332, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Author's summary) **80m:05054** 05C25 (20F99)
- Perrier, P. (with Bristeau, M. O.; Pironneau, O.; Glowinski, Roland; Periaux, J.) On the numerical solution of nonlinear problems in fluid dynamics by least squares and finite element methods. I. Least square formulations and conjugate gradient solution of the continuous problems. *Comput. Methods Appl. Mech. Engrg.* **17/18** (1979), part 3, 619–657. (Authors' summary) **80c:65099** 65N30 (49D07, 76D05)
- Perrin, Dominique Codes asynchrones. *Proceedings of a Conference on Theoretical Computer Science* (Univ. Waterloo, Waterloo, Ont., 1977), pp. 247–254, Univ. Waterloo, Waterloo, Ont., 1978. (J. Wolfmann) **80d:94026** 94B45 (20M35)
- Séries formelles et combinatoires dans le monoïde libre. *Séries formelles en variables non commutatives et applications* (Proc. 5e École de Printemps Informat. Théorique, Vieux-Boucau les Bains, 1977), pp. 237–242, *École Nat. Sup. Tech. Avancées*, Paris, 1978. (Ronald E. Prather) **80c:20083** 20M35 (68F05, 94B05)
- Le degré minimal du groupe d'un code biprécifé fini. (English summary) *J. Combin. Theory Ser. A* **25** (1978), no. 2, 163–173. (Sami Harari) **80g:94064** 94B45
- (with De Luca, A.; Restivo, Antonio; Termini, S.) Synchronization and simplification. *Discrete Math.* **27** (1979), no. 3, 297–308. (Henry Beker) **80k:94030** 94B50
- La représentation ergodique d'un automate fini. (English summary) *Theoret. Comput. Sci.* **9** (1979), no. 2, 221–241. (J. Černý) **80k:68041** 68D30
- Perrin, M. (with Burdet, G.; Patera, J.; Winternitz, P.) Sous-algèbres de Lie de l'algèbre de Schrödinger. *Ann. Sci. Math. Québec* **2** (1978), no. 1, 81–108. (F. W. Lemire) **80b:17002** 17B05
- (with Burdet, G.; Perroud, M.) Generating functions for the affine symplectic group. *Comm. Math. Phys.* **58** (1978), no. 3, 241–254. (A. Crumeyrolle) **80d:58023** 58F05 (22E15, 81C40)
- (with Burdet, G.; Martin, Christiane) About the conformal properties of Yang-Mills fields. *Feynman path integrals* (Proc. Internat. Colloq., Marseille, 1978), pp. 403–409, *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (C. S. Sharma) **80k:81082** 81E10 (57S15)
- Perrin, M. J. (with Artigue, M.; Isambert, E.; Zalc, A.) Some remarks on bicommutability. *Fund. Math.* **101** (1978), no. 3, 207–226. (W. Marek) **80j:03019a** 03B30
- See also Marek, Wiktor, **80j:03019b**
- Perrin-Riou, Bernadette Plongements d'extensions galoisiennes. *Séminaire Delange-Pisot-Poitou, 19e année: 1977/78, Théorie des nombres, Fasc. 2, Exp. No. 38, 7 pp., Secrétariat Math., Paris, 1978. (Pierre Damey) **80g:12063** 12A40 (12F10)*
- Perron, Bernard (with Lê Dũng Tráng) Sur la fibre de Milnor d'une singularité isolée en dimension complexe trois. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 2, A115–A118. (Peter Griblin) **80c:32009** 32B30 (14J17)
- Perronnet, A. The club MODULEF. A library of subroutines for finite element analysis. *Computing methods in applied sciences and engineering* (Proc. Third Internat. Sympos., Versailles, 1977), I, pp. 127–153, *Lecture Notes in Math.*, 704, Springer, Berlin, 1979. (Author's summary) **80c:65003** 65–04 (65N30)
- Perrot, B. (with Colombeau, Jean-François) Infinite dimensional holomorphic "normal forms" of operators on the Fock spaces of Borel fields and an extension of the concept of Wick product. *Advances in holomorphy* (Proc. Sem. Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977), pp. 249–274, *North-Holland Math. Studies*, 34, North-Holland, Amsterdam, 1979. (C. J. Henrich) **80d:81061** 81E05 (47A05)
- Perrot, J.-F. Introduction aux monoïdes syntactiques des langages algébriques. *Langages algébriques* (Proc. First Meeting, Information Theory, Bonnacre, 1973), pp. 167–222, *École Nat. Sup. Tech. Avancées*, Paris, 1978. (H. Jürgensen) **80c:68192** 68F05 (20M35)
- Variétés de langages et opérations. (English summary) *Theoret. Comput. Sci.* **7** (1978), no. 2, 197–210. (A. A. Iskander) **80a:68090** 68F05 (20M30)
- On regular semigroups, finite automata and prefix codes. *Algebraic theory of semigroups* (Proc. Sixth Algebraic Conf., Szeged, 1976), pp. 393–401, *Colloq. Math. Soc. János Bolyai*, 20, North-Holland, Amsterdam, 1979. (Heinrich Seidel) **80m:20052** 20M35 (68F10)
- Perrote, A. I. (with Javrián, A. N.) The principle of least action in reliability theory. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 6, 126–131 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 6, 101–106. (Authors' summary) **80k:49027** 49H05 (90B25)
- Perroud, M. (with Burdet, G.; Perrin, M.) Generating functions for the affine symplectic group. *Comm. Math. Phys.* **58** (1978), no. 3, 241–254. (A. Crumeyrolle) **80d:58023** 58F05 (22E15, 81C40)
- (with Daumens, M.) Internal Galilei group for a two-particle system. *J. Math.*

- Phys.* 20 (1979), no. 6, 1077-1089. (Nigel B. Backhouse) 80b:81016 81C40 (22E70, 81G40)  
(with Daumens, M.) Internal Lorentz basis for two-particle states. *J. Math. Phys.* 20 (1979), no. 12, 2621-2627. (Nigel B. Backhouse) 80b:81220 81M05
- Perry, Arinonm A modified conjugate gradient algorithm. *Oper. Res.* 26 (1978), no. 6, 1073-1078. (Author's summary) 80a:65132 65K05
- Perry, E. L. Distance between partitions on a finite set. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 567-579, Congress. Numer., XXI, Utilities Math., Winnipeg, Man., 1978. (R. A. Melter) 80c:05012 05A19 (51K05)
- Perry, Malcolm J. Anomalies in supergravity. *Nuclear Phys. B* 143 (1978), no. 1, 114-124. (L. A. Takhtajan (Tahadjjan)) 80b:81125 81M05 (58G10, 81E10)  
(with Gibbons, G. W.) Black holes and thermal Green functions. *Proc. Roy. Soc. London Ser. A* 358 (1978), no. 1695, 467-494. (Michael P. Ryan, Jr.) 80b:83045 83D05 (58G10)
- TP inversion in quantum gravity. *Phys. Rev. D* (3) 19 (1979), no. 6, 1720-1731. (R. F. Biljalov) 80d:83044 83C45 (58G40, 81M05)
- Perry, W. L. (with Luning, C. D.) Positive solutions of superlinear eigenvalue problems via a monotone iterative technique. *J. Differential Equations* 33 (1979), no. 3, 359-367. (R. R. D. Kemp) 80b:34035 34B25
- Perrakis, S. (with Ioannides, I.) Einstein-Maxwell fields in asymptotically null-spherical coordinates. *Progr. Theoret. Phys.* 58 (1977), no. 3, 829-841. (W. B. Bonnor) 80j:83021 83C50 (53B50)
- Energy and momentum in general relativity. *Gen. Relativity Gravitation* 10 (1979), no. 7, 609-622. (Andrzej Trautman) 80b:83018 83C40 (53B50)  
(with Papadopoulos, D.) A covariant formulation of the Landau-Lifshitz complex. *Gen. Relativity Gravitation* 11 (1979), no. 3, 233-243. (P. C. Vaidya) 80m:83034 83C99 (53C80)
- A definition of asymptotically Minkowskian space-times. *J. Math. Phys.* 20 (1979), no. 8, 1731-1740. (Garry Ludwig) 80j:83011 83C20 (53C80)
- Persson, Jan (with Birkeland, Bent) The local Cauchy problem in  $R^2$  at a point where two characteristic curves have a common tangent. *J. Differential Equations* 30 (1978), no. 1, 64-88. (Rémi Vaillancourt) 80c:35003 35A07
- Persson, Ulf Double coverings and surfaces of general type. *Algebraic geometry (Proc. Sympos., Univ. Tromsø, Tromsø, 1977)*, pp. 168-195, Lecture Notes in Math., 687, Springer, Berlin, 1978. (I. Dolgachev) 80b:14017 14J25 (14J17)
- Pertsev, V. A. See Perceve, V. A.
- Pervulin, V. N. (with Kazakov, D. I.; Pulkin, S. V.) Invariant renormalization for theories with nonlinear symmetry. (Russian. English summary) *Teoret. Mat. Fiz.* 31 (1977), no. 2, 169-176. (I. Ju. Krivskii) 80b:81056 81E15 (35A30)  
(with Kazakov, D. I.; Pulkin, S. V.) An invariant renormalisation method for nonlinear realisations of dynamical symmetries. *J. Phys. A* 11 (1978), no. 10, 2093-2105. (Jouko Mickelsson) 80j:81051 81E15 (22E70)  
(with Rainhardt, H.; Ebert, D.) The path integral in collective variables and its application to nuclear and hadron physics. (Russian. English summary) *Fiz. Elementarn. Častic i Atom. Jadr* 10 (1979), no. 5, 1114-1155. (Authors' summary) 80i:81013 81C35  
(with Isaev, G. V.; Pulkin, S. V.) Dynamical affine symmetry and renormalisation in gravity. *J. Phys. A* 12 (1979), no. 9, 1499-1506. (Kenneth Dunn) 80b:83020 83C45 (58A99)
- Perz, Fr. (with Albrycht, J.) On uniform convergence of multiple Fourier series. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. I, pp. 39-46, Colloq. Math. Soc. János Bolyai, 19, North-Holland, Amsterdam, 1978. (R. L. Cooke) 80j:42011 42B05
- Perian, A. V. The behavior of the solution of the Cauchy problem for a hyperbolic equation as  $t \rightarrow \infty$ . (Russian) Boundary value problems for differential equations. *Mat. Issled.* No. 46 (1978), 61-74, 98. (J. Kopáček) 80a:35068 35L05 (35B40)
- Pesamocsa, G. Calculation of functions of real matrices by means of constituent matrices. (Italian. English summary) *Calcolo* 15 (1978), no. 2, 181-196. (Author's summary) 80c:65097 65F30
- Pessina, F. (with Iannotta, P.) On decision theory with auxiliary randomization. (Italian. English and French summaries) *Statistica (Bologna)* 37 (1977), no. 4, 515-524. (A. L. Rukhin) 80a:62011 62C05
- Pescatore, C. (with Cole, R. T.) Evaluation of the integral  $\int_0^{\infty} e^{-t^2} \exp(-x^2/t) dt$ . *J. Comput. Phys.* 32 (1979), no. 2, 280-287. (From the introduction) 80c:65022 65D20
- Pesch, Hans Josef Numerical computation of neighboring optimum feedback control schemes in real-time. *Appl. Math. Optim.* 5 (1979), no. 3, 231-252. (Jifi V. Outrata) 80j:93057 93C15 (49D99, 65K10)
- Peschl, Ernst (with Lehtinen, Matti) A conformal self-map which fixes three points is the identity. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 1, 85-86. (From the text) 80b:30010 30C35
- Pesenson, I. Z. Interpolation spaces on Lie groups. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 6, 1298-1303. (Jóran Bergh) 80j:22021 22E99 (46E99, 46M35)
- Petleva, Ju. H. The problem of minimization of the mean-square error for a system with lags. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1979, no. 1, 52-55, 87. (Author's summary) 80b:93101 93C99
- Peskin, Ja. B. Formulas for the entropy of the geodesic flow on a compact Riemannian manifold without conjugate points. (Russian) *Mat. Zametki* 24 (1978), no. 4, 553-570, 591. (Ju. E. Gliklikh) 80j:58059 58F17 (28D20, 58F11, 58F15)
- Peskin, C. S. (with McCracken, M. F.) A vortex-grid method for blood flow through heart valves. *Sixth International Conference on Numerical Methods in Fluid Dynamics (Proc. Conf., Tbilisi, 1978)*, pp. 377-384, Lecture Notes in Phys., 90, Springer, Berlin, 1979. (From the introduction) 80c:76013 76D05 (92A07)
- Peslak, John, Jr. Comparison of classical and quantum mechanical uncertainties. *Amer. J. Phys.* 47 (1979), no. 1, 39-45. (A. R. Marlow) 80b:81005 81B05
- Pesme, D. (with Laval, G.; Pellat, R.) Approximation des phases aléatoires et de l'élargissement de résonance en turbulence faible des plasmas. (English summary) *J. Physique* 38 (1977), no. 8 Suppl., Colloque No. 3, C3-213-C3-224. (F. C. Auluck) 80c:82035 82A45 (00A89)
- Pesotan, H. (with Raktov, B. L.; Worthley, R. G.) On main effect fold-over designs. *J. Statist. Plann. Inference* 2 (1978), no. 3, 277-291. (D. V. Chopra) 80b:62061 62K15
- Pesotchinsky, L.  $\Phi_p$ -optimal second order designs for symmetric regions. *J. Statist. Plann. Inference* 2 (1978), no. 2, 173-188. (J. Kiefer) 80a:62116 62K05
- Pesquera, L. (with Santos, Emilio) Errata: "Path integrals in stochastic electrodynamics" [Lett. Nuovo Cimento (2) 20 (1977), no. 9, 308-312; MR 56 #10626]. *Lett. Nuovo Cimento* (2) 25 (1979), no. 9, 287-288. (M. J. Goovaerts) 80b:81045 81C35 (28C20)
- Pessa, Djalma G. C. See Neyman, J., 80b:62009
- Pessa, Eliano The group of rotations of  $E_6$  and conformal transformations. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 15 (1978), no. 3, 761-770. (K. Strubecker) 80c:53007 53A30 (20F32, 22E70)
- On Sakharov's theory of gravitation. *Gen. Relativity Gravitation* 9 (1978), no. 10, 911-920. (Hsin-Yang Yeh) 80b:83037 83C99
- Pestian, Pierre (with Possen, Uri M.) A model of wealth distribution. *Econometrica* 47 (1979), no. 3, 761-772. (Authors' summary) 80b:90028 90A15
- Pestirjakov, A. K. Decomposition of linear functional control functions. *Avtomat. i Telemekh.* 1978, no. 10, 119-129 (Russian. English summary); translated as *Automat. Remote Control* 39 (1978), no. 10, part 2, 1504-1513 (1979). (A. A. Piontkovskii) 80b:93033 93C05
- Petenko, V. O. A difference solution of the Cauchy problem for a class of systems that are parabolic in the sense of G. E. Šilov. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 9 (1979), 20-25, 130. (Jaroslav Jeleň) 80f:65098 65M10
- Peterka, V. Experience accumulation for decision making in multivariate time series. *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* 7 (1978), no. 3, 143-159. (Peter M. Robinson) 80d:62085 62M10
- Peterman, A. Renormalization group and the deep structure of the proton. *Phys. Rep.* 53 (1979), no. 3, 157-248. (R. Kotěcký) 80j:81053 81E15 (81G05)
- Petermann, Elke On a method of constructing categories. *J. Pure Appl. Algebra* 15 (1979), no. 3, 271-281. (Robert Piacenza) 80b:18006 18D35
- Peters, B. Charles, Jr. (with Walker, Homer F.) The numerical evaluation of the maximum-likelihood estimate of a subset of mixture proportions. *SIAM J. Appl. Math.* 35 (1978), no. 3, 447-452. (G. S. Lingappaiah) 80b:62036 62F10
- Peters, C. A. M. Holomorphic automorphisms of compact Kähler surfaces and their induced actions in cohomology. *Invent. Math.* 52 (1979), no. 2, 143-148. (R. R. Simha) 80b:32050 32J15 (14J15, 32J25)
- Peters, Charles Feature selection for best mean square approximation of class densities. *Pattern Recognition* 11 (1979), no. 5-6, 361-364. (Author's summary) 80i:68077 68G10
- Peters, Chris On the local Torelli theorem, a review of known results. *Variétés analytiques compactes (Colloq., Nice, 1977)*, pp. 62-73, Lecture Notes in Math., 683, Springer, Berlin, 1978. (Fabrizio Catanese) 80d:14007 14C30 (14J15, 32G20, 32J25, 34A20)
- Peters, David A. (with Wu, Julian J.) Asymptotic solutions to a stability problem. *Transactions of the Twenty-Fourth Conference of Army Mathematicians (Univ. Virginia, Charlottesville, Va., 1978)*, pp. 135-165, ARO Rep., 79.1, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Authors' summary) 80b:93103 93D05 (73D30)
- Peters, G. (with Wilkinson, J. H.) Inverse iteration, ill-conditioned equations and Newton's method. *SIAM Rev.* 21 (1979), no. 3, 339-360. (Authors' summary) 80f:65040 65F10 (65F15)
- Peters, James V. Analytic multipliers of the Radon transform. *Proc. Amer. Math. Soc.* 72 (1978), no. 3, 485-491. (S. G. Gindikin) 80a:44004 44A15 (43A85)
- Peters, Jeanne M. (with Noor, Ahmed K.) Nonlinear dynamic analysis of space trusses. *Comput. Methods Appl. Mech. Engrg.* 21 (1980), no. 2, 131-151. (Authors' summary) 80m:73055 73K30
- Peters, Justin Entropy on discrete abelian groups. *Adv. in Math.* 33 (1979), no. 1, 1-13. (Robert J. Zimmer) 80b:28037 28D20 (22D40)
- Peters, R. J. (with Klein Haneveld, W. K.; van der Meer, C. L. J.) A construction method in parametric programming. *Math. Programming* 16 (1979), no. 1, 21-36. (Author's summary) 80f:90129 90C31
- Peters, Stanley A truth-conditional formulation of Karttunen's account of presupposition. *Logic and linguistics, Part III. Synthese* 40 (1979), no. 2, 301-316. (Paul Ernest) 80f:30112 03A05 (03B50, 03B99)
- Petersen, Edith Kregelius (with Meisters, G. H.) Non-Liouville numbers and a theorem of Hörmänder. *J. Funct. Anal.* 29 (1978), no. 2, 142-150. (C. Chou) 80b:46034 46F10
- Petersen, Karl (with Marcus, Brian) Balancing ergodic averages. *Ergodic theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1978)*, pp. 126-143, Lecture Notes in Math., 729, Springer, Berlin, 1979. (Yves Derriennic) 80m:28013 28D05
- The converse of the dominated ergodic theorem. *J. Math. Anal. Appl.* 67 (1979), no. 2, 431-436. (R. L. Adler) 80b:28028 28D10
- Petersohn, Uwe (with Stahn, Heinz) Discrete polyoptimization. (Russian summary) *Systems Sci.* 4 (1978), no. 2, 101-109. (Authors' summary) 80a:90159 90C99  
(with Stahn, Heinz) Näherungsverfahren zur polyoptimalen Lösung des Maschinenbelegungsproblems. *Wiss. Z. Tech. Univ. Dresden* 28 (1979), no. 1, 119-124. (Authors' summary) 80b:90020 90B35 (68C15)
- Peterson, Bo Å. (with Varadan, Vasundara V.; Varadan, Vijay K.) Scattering of acoustic waves by elastic and viscoelastic obstacles immersed in a fluid. *Wave Motion* 2 (1980), no. 1, 23-38. (Authors' summary) 80b:73022 73D25 (78A45)
- Peterson, Brian Extensions of pro-affine algebraic groups. *Pacific J. Math.* 77 (1978), no. 1, 189-231. (Mitsuhiko Takeuchi) 80c:14020 14L25 (18G99)
- Peterson, David W. (with Zalkind, Julie Herman) A review of direct sufficient conditions in optimal control theory. *Internat. J. Control* 28 (1978), no. 4, 589-610. (Authors' summary) 80a:49021 49B05
- Petersen, Elmor L. Optimality conditions in generalized geometric programming. *J. Optim. Theory Appl.* 26 (1978), no. 1, 3-13. (Siegfried Schaible) 80a:90126 90C30
- Saddle points and duality in generalized geometric programming. *J. Optim. Theory Appl.* 26 (1978), no. 1, 15-41. (Siegfried Schaible) 80b:90068 90C25
- Constrained duality via unconstrained duality in generalized geometric programming. *J. Optim. Theory Appl.* 26 (1978), no. 1, 43-50. (Siegfried Schaible) 80a:90127 90C30
- Fenchel's duality theorem in generalized geometric programming. *J. Optim. Theory Appl.* 26 (1978), no. 1, 51-57. (Author's summary) 80b:90126 90C25  
(with Asmuth, Richard; Eaves, B. Curtis) Computing economic equilibria on affine



- networks with Lemke's algorithm. *Math. Oper. Res.* 4 (1979), no. 3, 209-214. (James R. Evans) **80e:90021** 90A14 (90C33)
- Peterson, F. P. (with Brown, E. H., Jr.) A universal space for normal bundles of  $n$ -manifolds. *Comment. Math. Helv.* 54 (1979), no. 3, 405-430. (David Handel) **80e:57055** 57R42 (57R20)
- Peterson, G. M. A sequence algebra associated with distributions. *Bull. Austral. Math. Soc.* 19 (1978), no. 1, 39-49. (Kenneth A. Jukes) **80e:40003** 40D05
- Peterson, Karl M. See Phillips, Esther R., **80e:01015**
- Peterson, Mark A. Analogy between thermodynamics and mechanics. *Amer. J. Phys.* 47 (1979), no. 6, 488-490. (Author's summary) **80e:80014** 80A99
- Peterson, Philip L. On the logic of "few", "many", and "most". *Notre Dame J. Formal Logic* 20 (1979), no. 1, 155-179. (Charles F. Kielkopf) **80g:03019** 03B45
- Peterson, Roger (with Costello, Daniel J., Jr.) Binary convolutional codes for a multiple-access channel. *IEEE Trans. Inform. Theory* 25 (1979), no. 1, 101-105. (Authors' summary) **80e:94029** 94B35
- Peterson, W. C. On error evaluation and non-unity feedback. *J. Franklin Inst.* 308 (1979), no. 4, 371-380. (Author's summary) **80g:93057** 93C99
- Peterson, William C. Generalized Liapunov functions. *J. Math. Anal. Appl.* 66 (1978), no. 2, 333-338. (T. A. Burton) **80a:34076** 34D20
- Pette, P. V. (with Thakare, Nimbakrishna) Applications of Riesz representation theorem in semi-inner product spaces. *Indian J. Pure Appl. Math.* 7 (1976), no. 9, 1024-1031. (Authors' summary) **80d:46042** 46C99 (46B99, 47A15)
- (with Thakare, Nimbakrishna) Remarks on: "Admissible sets in Banach spaces" (Rev. Roumaine Math. Pures Appl. 18 (1973), 25-31) by C. Franchetti. *J. Indian Math. Soc. (N.S.)* 41 (1977), no. 3-4, 371-373 (1978). (John R. Giles) **80e:46028** 46B20
- Petit, Jean-Claude (with Hurtevent, Jacques) Construction de plans par remplacement de sections. *Math. Z.* 167 (1979), no. 3, 283-298. (T. G. Ostrom) **80k:51004** 51E15 (51A35)
- Petit, Jean-Pierre (with Morin, Bernard) Problématique du retournement de la sphère. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 10, A767-A770. (Authors' summary) **80e:57005** 57N05
- Le retournement non trivial du tore. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 14, A927-A930. (Editors) **80e:57006** 57N05
- Pettit, J. Caustiques et catastrophes. (English summary) *Math. Sci. Humaines* No. 64 (1978), 9-26, 101 (1979). (I. Stewart) **80j:58014** 58C28
- Sur le modèle historique de Thom-Pomian. (English summary) *Math. Sci. Humaines* No. 64 (1978), 43-70, 101 (1979). (I. Stewart) **80j:58015** 58C28 (92A20)
- Petkau, Albert John (with Koziol, James A.) Sequential testing of the equality of two survival distributions using the modified Savage statistic. *Biometrika* 65 (1978), no. 3, 615-623. (S. Blumenthal) **80a:62059** 62G10 (62G30, 62L10)
- (with Chernoff, Herman) Optimal control of a Brownian motion. *SIAM J. Appl. Math.* 34 (1978), no. 4, 717-731. (G. N. Mil'štejn) **80a:93108** 93E20
- (with Chernoff, Herman) A satellite control problem. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977)*, pp. 89-124, Academic Press, New York, 1979. (From the introduction) **80j:93130** 93E20
- Petkov, Petko Hr. (with Konstantinov, M. M.; Patarinski, S. P.; Hristov, Nikola D.) Mutual observation in linear systems and synthesis in the case of incomplete information. (Russian) *Math. Balkanica* 6 (1976), 88-98 (1978). (From the text) **80f:93095** 93E20
- (with Konstantinov, M. M.; Patarinski, S. P.; Hristov, Nikola D.) Design of linear control systems with incomplete state information. *Automat. i Telemekh.* 1978, no. 9, 68-78 (Russian); translated as *Automat. Remote Control* 39 (1978), no. 9, part 1, 1316-1325 (1979). (Authors' introduction) **80g:93033** 93B99
- (with Konstantinov, M. M.; Hristov, Nikola D.) Sequential canonical form and the synthesis of linear control systems. I. (Bulgarian. Russian and English summaries) *Automat. i Telemekh.* 12 (1978), no. 4, 13-21, 1, 4. (Editors) **80d:93047** 93C99
- (with Konstantinov, M. M.; Hristov, Nikola D.) Sequential canonical form and the synthesis of linear control systems. II. (Bulgarian. Russian and English summaries) *Automat. i Telemekh.* 12 (1978), no. 5, 11-17, 2, 3. (Authors' summary) **80j:93034** 93B10
- (with Konstantinov, M. M.; Patarinski, S. P.; Hristov, Nikola D.) An algebraic criterion for the stability of linear systems with lag. (Bulgarian. Russian and English summaries) *Automat. i Telemekh.* 12 (1978), no. 6, 5-13, 2, 3. (D. Bobrowski) **80d:34106** 34K35 (34K20, 93D15)
- (with Konstantinov, M. M.; Hristov, Nikola D.) The serial canonical form and synthesis of linear multivariable systems. (Polish and Russian summaries) *Podstawy Sterowania* 9 (1979), no. 3, 295-307. (Hsi-han Yeh) **80j:93035** 93B10
- Petkov, V. B. (with Todorov, I. T.; Minchev, M. C.)  $\star$  Conformal invariance in quantum field theory. *Scuola Normale Superiore Pisa, Pisa*, 1978. vi + 273 pp. (Charles L. Hammer) **80f:81061** 81E05 (32A25)
- (with Dobrev, V. K.) Elementary representations and intertwining operators for the group  $SU^*(4)$ . *Rep. Math. Phys.* 13 (1978), no. 2, 233-277. (A. J. Coleman) **80e:22016** 22E45
- Petrovski, Dj. B. Calculation of optimum feedback gains for output-constrained regulators. *Internat. J. Numer. Methods Engrg.* 12 (1978), no. 12, 1873-1878. (B. P. Molinari) **80g:93036** 93C05 (93A15)
- Peton, A. Étude variationnelle des décalages spectraux. (English summary) *Astrophys. and Space Sci.* 62 (1979), no. 1, 117-134. (D. ter Haar) **80m:70019a** 70G05 (58E30, 70H30)
- Étude variationnelle des décalages spectraux. II. Aspect relativiste. (English summary) *Astrophys. and Space Sci.* 64 (1979), no. 2, 433-442. (D. ter Haar) **80m:70019b** 70G05 (58E30, 70H30)
- Petrak, L. V. A method for the solution of the problem of the best rational approximation. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 18 (1978), no. 4, 860-869, 1066. (A. B. Pevnyi) **80d:65032** 65D15
- Petrak, G. I. Foundations of the mathematical theory of the propagation of elastic waves. (Russian) *Questions in the dynamical theory of seismic wave propagation*, No. 18 (Russian), pp. 6-248, Nauka Leningrad. Otdel., Leningrad, 1978. (R. S. Anderssen) **80m:73033b** 73D99 (73D20, 86A15)
- Petrilović, Lj. (with Novaković, M.; Perović, N.; Đurić, M.) Solution of the "inverse" problem of conduction of heat transfer by Runge-Kutta integration of the Fourier equation with one-side boundary values and no initial conditions. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T429-T430. (From the introduction) **80a:65246** 65N99
- Petrzickiewicz, W. Some relations of the nonlinear Reissner theory of shells. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 1, 115-124, 135. (M. Mišicu) **80e:73062** 73L99 (35Q99)
- Petruskas, A. A mathematical model for the choice of a technological process and method of purification of polluted waste water. (Russian. Lithuanian and English summaries) *Mat. Metody v Social. Nauk.—Trudy Sem. Procezy Optimal. Upravleniya II Sekcija* No. 10 (1978), 63-74, 121. (From the summary) **80e:90047** 90A30
- Petravčuk, A. P. (with Černikov, M. S.) A complementarity condition. (Russian) *Structures of groups and properties of their subgroups (Russian)*, pp. 131-147, 154, Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev, 1978. (E. M. Pal'čik) **80e:20036** 20D15
- Petréllis, N. (with Loyalka, S. K.; Storvik, T. S.) Some exact numerical results for the BGK model: Couette, Poiseuille and thermal creep flow between parallel plates. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 3, 514-521. (Carlo Cercignani) **80j:76047** 76P05 (65R20)
- Petrenjak, A. Ja. (with Kurek, H. E.) Covering of graphs with stars. (Russian) *Graph theory (Russian)*, pp. 145-156, Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev, 1977. (G. Akopjan (RZMat 1979:1 V643)) **80f:05037** 05C10 (05B30)
- Petrenko, V. P.  $\star$  Рост мероморфных функций. (Russian) [Growth of meromorphic functions] *Izdat. pri Har'kov. Gos. Univ. Izdat. Ob'ed. "Vishša Škola", Kharkov*, 1978. 136 pp. (W. H. J. Fuchs) **80d:30027** 30D35
- (with Boiko, S. S.) Asymptotic properties of the solutions of linear differential equations with entire coefficients. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 11, 1923-1934, 2106. (Shlomo Strelitz) **80d:34007** 34A20 (30D35)
- On a regularity in the growth of meromorphic functions and of entire curves. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 5, 627-633, 717. (Shlomo Strelitz) **80a:30031** 30D35
- Petrescu, Ioana Model-companions for logical functors. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 3, 413-417. (Hugo Volger) **80e:03090** 03G30 (18C10)
- Petri, Carl Adam See *Aussätze zur Organisations-theorie rechnergestützter Informationssysteme*, **80j:94001**
- Petri, J. Une représentation matricielle quaternionique de l'algèbre de Dirac-Clifford et celle de Cayley. *Acad. Roy. Belg. Bull. Cl. Sci. (5)* 65 (1979), no. 1-2, 6-15. (F. D. Veldkamp) **80m:15009** 15A33 (17D05, 81C40)
- Petric, Mario Commutative semigroups. *Rend. Sem. Mat. Fis. Milano* 47 (1977), 61-66 (1979). (M. Yamada) **80b:20077** 20M10
- Congruences on inverse semigroups. *J. Algebra* 55 (1978), no. 2, 231-256. (P. G. Trotter) **80d:20055** 20M10
- The ladder relation in groups, rings, lattices, and semigroups. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 403-432, *Colloq. Math. Soc. János Bolyai*, 20, North-Holland, Amsterdam, 1979. (J. L. Brenner) **80a:20035** 20Fxx (06Bxx, 20Mxx)
- Congruences on simple  $\omega$ -semigroups. *Glasgow Math. J.* 20 (1979), no. 2, 87-101. (M. Yamada) **80d:20042** 20M10
- (with Reilly, N. R.) A representation of  $E$ -unitary inverse semigroups. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 119, 339-350. (I. S. Ponizovskii) **80j:20067** 20M10
- Petriczek, Grazyna On the use of the  $\epsilon$ -technique in two-level dynamic optimization. (Polish and Russian summaries) *Arch. Automat. Telemekh.* 23 (1978), no. 4, 443-460. (S.-C. Huang) **80e:93053** 93C15 (49D99)
- Petrie, Chris J. S.  $\star$  Elongational flows. Aspects of the behavior of model elasticoviscous fluids. Research Notes in Mathematics, 29. Pitman Publishing, Ltd., London-San Francisco, Calif., 1979. ix + 254 pp. ISBN 0-273-08406-2 (E. Zeidler) **80e:76006** 76A10
- Petrie, Ted Pseudoequivalences of  $G$ -manifolds. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976)*, Part 1, pp. 169-210, *Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I.*, 1978. (Czes Kosniowski) **80e:57039** 57R67 (20C10, 57S15)
- G surgery. I. A survey. *Algebraic and geometric topology (Proc. Sympos., Univ. California, Santa Barbara, Calif., 1977)*, pp. 197-233, *Lecture Notes in Math.*, 664, Springer, Berlin, 1978. (Czes Kosniowski) **80g:57049** 57R65 (57R67, 57S17)
- (with tom Dieck, Tammo) Geometric modules over the Burnside ring. *Invent. Math.* 47 (1978), no. 3, 273-287. (A. Dold) **80e:57045** 57S15 (55Q45)
- Petrila, Titus Méthode pratique pour la détermination de l'écoulement produit par un déplacement d'un profil d'aile à point anguleux dans un fluide idéal. *Mathematica (Cluj)* 19(42) (1977), no. 2, 195-201 (1978). (From the text) **80a:76013** 76B99 (00A89)
- Petrina, D. Ja. (with Bogoljubov, N. N., Jr.) A class of model systems that admit a lowering of the degree of the Hamiltonian in the thermodynamical limit. II. (Russian. English summary) *Teoret. Mat. Fiz.* 37 (1978), no. 2, 246-257. (M. Dragănu) **80e:82027** 82A35
- Mathematical description of the evolution of infinite systems of classical statistical physics. I. Locally perturbed one-dimensional systems. (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 2, 230-262. (V. P. Kalashnikov) **80e:82013** 82A05
- Petriz Calvo, F. (with Camarena Badia, V.; Ribera Pascual, J.) Problems of convergence in the theory of perturbations of canonical systems. (Spanish. English summary) *Rev. Mat. Hisp.-Amer. (4)* 38 (1978), no. 4-5, 208-228. (Mauro Francaviglia) **80f:70017** 70H15 (58F05)
- Petrolo de Melo Jorge, Laquesio The classical Plateau problem: generic questions. (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. II (Portuguese), pp. 489-504, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (J. S. Joel) **80f:58020** 58E12 (53A10)
- Cufaro Petroni, N. See Cufaro Petroni, N.
- Petrozjan, A. I. Solution with bound of the  $\delta$ -equation in certain domains. (Russian. Armenian summary) *Akad. Nauk Armjen. SSR Dokl.* 67 (1978), no. 1, 13-17. (Guy Laville) **80e:35047** 35N15 (32F20)
- (with Henkin, G. M.) Solution with a uniform estimate of the  $\delta$ -equation in a real nondegenerate Weil polyhedron. (Russian. Armenian and English summaries) *Izv.*

- Akad. Nauk Armjan. SSR Ser. Mat.* **13** (1978), no. 5-6, 428-441, 542. (Harold P. Boas) **80j:32087** 32A25 (32F20, 35N15)
- Petrošjan, L. A.** (with Zenkevič, N. A.) Differential games with discrete progression of information receiving by one of the players. (Russian) *Control of dynamical systems (Russian)*, pp. 78-90, 314, Leningrad. Univ., Leningrad, 1978. (Authors' summary) **80j:90154** 90D26
- Nonantagonistic differential games. (Russian) *Control of dynamical systems (Russian)*, pp. 173-181, 319, Leningrad. Univ., Leningrad, 1978. (Author's summary) **80j:90165** 90D25
- (with Slobodinskaja, T. V.) Antagonistic pursuit game with several participants and incomplete information. (Russian) *Control of dynamical systems (Russian)*, pp. 195-213, 320, Leningrad. Univ., Leningrad, 1978. (Authors' summary) **80j:90172** 90D26
- Petrošjan, N. S.** Asymptotic behavior of the solution of the Cauchy problem for a first-order quasilinear equation as  $t \rightarrow +\infty$ . (Russian) *Dinamika Splošn. Sredy No. 36 Dinamika Židkosti so Svoobodnymi Granicami* (1978), 86-96, 161. (Author's summary) **80d:35097** 35L99
- Petrov, A. A.** (with Beklarjan, L. A.; Ter-Krikorov, A. M.) A linear dynamic production model. (Russian) *Ekonom. i Mat. Metody* **14** (1978), no. 2, 312-325. (From the introduction) **80a:90017** 90A11
- Petrov, A. I.** Statistical synthesis of adaptive systems of terminal control with a reference model. (Russian) *Dokl. Akad. Nauk SSSR* **242** (1978), no. 2, 298-301. (From the introduction) **80a:93096** 93C40 (93E12)
- Synthesis of feedback regulators for stochastic plants using available measurements. *Automatika* **1978**, no. 5, 72-77, 94 (Russian. English summary); translated as *Societ Automat. Control* **11** (1978), no. 5, 57-61. (From the summary) **80f:93099** 93E20
- Petrov, A. N.** (with Kažihov, A. V.) Well-posedness of the initial-boundary value problem for a model system of equations of a multicomponent mixture. (Russian) *Dinamika Splošn. Sredy No. 35 Dinamičeskie Zadachi Mehaniki Splošnyh Sred* (1978), 61-73, 174. (From the summary) **80e:76056** 76V05
- Petrov, B. N.** (with Aleksandrov, A. D.; Andreev, V. P.; Bulekov, V. P.; Viktorov, B. V.; Izvol'skii, E. G.; Kudrjavcev, P. S.; Kuzin, V. P.; Mahan'ko, A. V.; Mihalov, F. A.; Muravleva, G. A.; Nikolaev, Ju. P.; Pobedonosov, G. V.; Pohvalenskii, V. L.; Sadykov, F. R.; Serpionov, G. V.; Salikova, I. M.; Ul'jašenko, A. E.; Frolov, P. A.; Červjakov, V. P.; Čaturjan, K. T.) ★Многообразные и нестационарные системы автоматического управления. (Russian) [Multistate and nonstationary automatic control systems] "Машиностроение", Moscow, 1978. 240 pp. (Publisher's summary) **80e:93073** 93C40
- (with Ul'janov, S. V.; Gol'denblat, I. I.; Ul'janov, S. V.) ★Теория моделей в процессах управления. (Russian) [The theory of models in control processes] Информационный и термодинамический аспекты. [Informational and thermodynamic aspects] "Nauka", Moscow, 1978. 223 pp. (From the text) **80f:93083** 93-02 (94D05)
- (with Ulanov, G. M.; Gol'denblat, I. I.; Ul'janov, S. V.) Informational and thermodynamical aspects of the qualitative theory of evolutionary models of developing dynamical control systems. (Russian) *Engineering cybernetics*, Vol. 10 (Russian), pp. 5-119, 322, VINITI, Moscow, 1978. (Vadim Komkov) **80e:93010** 93A10
- (with Čerkasov, B. A.; Il'jasov, B. G.; Kulikov, G. G.) Frequency method of analysis and synthesis of the multidimensional systems of automatic control. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 2, 304-307. (From the text) **80j:93043** 93C99
- (with Krut'ko, P. D.; Popov, E. P.) On the theory of construction of motion control algorithms. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 3, 575-577. (From the text) **80j:93044** 93C99
- (with Il'jasov, B. G.; Kaba'nov, Ju. S.) On the synthesis of a class of automatic control systems. (Russian) *Dokl. Akad. Nauk SSSR* **248** (1979), no. 3, 542-545. (From the text) **80j:93021** 93B99 (49B99)
- See also *Engineering cybernetics*, **80d:93009**
- Petrov, E. G.** (with Teslenko, V. I.) Relaxation in a system of oscillation levels of a harmonic oscillator. (Russian. English summary) *Teoret. Mat. Fiz.* **38** (1979), no. 1, 128-138. (G. Lassner) **80i:82016** 82A05
- Petrov, Ju. A.** (with Sobol', I. M.) The use of similar trajectories in computations by the Monte Carlo method. (Russian) *Z. Vyčisl. Mat. i Mat. Fiz.* **19** (1979), no. 1, 238-242, 271. (Authors' summary) **80j:65017** 65C05
- Petrov, Ju. P.** (with Veremel', E. I.) Limit possibilities of linear control systems optimization. (Russian) *Control of dynamical systems (Russian)*, pp. 23-28, 310, Leningrad. Univ., Leningrad, 1978. (Authors' summary) **80e:49027** 49D99
- Petrov, N. N.** A remark on plane analytic control systems. (Russian) *Differencial'nye Uravnenija* **15** (1979), no. 4, 743-744, 767. (From the text) **80i:93045** 93C99
- Symmetric completely controllable control systems. (Russian) *Differencial'nye Uravnenija* **15** (1979), no. 11, 1980-1986, 2108. (Author's summary) **80j:93025** 93B05
- Petrov, S. V.** Graph grammars and automata (survey). *Avtomat. i Telemekh.* **1978**, no. 7, 116-136 (Russian. English summary); translated as *Automat. Remote Control* **39** (1978), no. 7, part 2, 1034-1050. (Václav Rajlich) **80d:68095** 68F05 (68C01)
- Petrov, V. A.** (with Logunov, A. A.; Mestvirivili, M. A.) General principles of quantum field theory and strong interactions at high energies. *Ann. Physics* **114** (1978), no. 1-2, 46-92. (From the introduction) **80m:81093** 81G05 (81F20)
- (with Džaparidze, G. Š.) Deser-Gilbert-Sudarshan representation for functions with an isolated branch in the spectrum. (Russian. English summary) *Teoret. Mat. Fiz.* **40** (1979), no. 1, 137-139. (Authors' summary) **80f:81050** 81D05
- Petrov, V. I.** (with Bondarenko, A. I.; Gulamov, K. G.; Černov, G. M.) Associated multiplicities of secondary particles in a statistical model of multiple creation. (Russian) *Dokl. Akad. Nauk UzSSR* **1978**, no. 6, 39-41. (Vladimir Šipš) **80a:81107** 81G25 (00A89)
- Petrov, V. V.** (with Gordeev, A. A.; Dianova, R. S.) Nonlinear multivariate systems with lag and a generalized reference-frame theorem. (Russian) *Engineering cybernetics*, Vol. 10 (Russian), pp. 302-319, 322, VINITI, Moscow, 1978. (Andrzej W. Olbrot) **80f:93018** 93A99 (94A15)
- The lower limit of the absolute values of sums of independent random variables. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* **1978**, vyp. 2, 49-54, 162. (S. A. Book) **80b:60046** 60F15
- A limit theorem for sums of independent nonidentically distributed random variables. (Russian. English summary) *Investigations in the theory of probability distributions*, IV. *Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **8** (1979), 188-192, 242, 247. (R. J. Tomkins) **80b:60041** 60F15 (60G50)
- Petrova, Irina** See Zubov, V. I., **80a:93005** and Vladimirov, V., **80k:46046**
- Petrovann, Dan** Holomorphic solutions of linear total differential systems at a singular point. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **24** (1978), no. 2, 289-298. (James M. D'Archangelo) **80e:34003** 34A20
- Petrović, A. Ju.** The summability of generalized Fourier series. (Russian. English summary) *Anal. Math.* **4** (1978), no. 4, 303-311. (S. Aljančić) **80b:42003** 42A24
- Petrović, V. Ju.** (with Babenko, K. I.) The Rayleigh-Taylor instability. (Russian) *Dokl. Akad. Nauk SSSR* **245** (1979), no. 3, 551-554. (Ilija Lukačević) **80f:76014** 76E20
- Petrovskaja, M. S.** Solution of the geodetic boundary value problem. *Bull. Géodésique* **53** (1979), no. 1, 37-51. (Author's summary) **80d:86006** 86A30
- Petrovskii, A. B.** (with Britov, G. S.) Subdiagonal canonical representation and its application to dynamic systems. *Avtomat. i Telemekh.* **1978**, no. 6, 182-188 (Russian); translated as *Automat. Remote Control* **39** (1978), no. 6, part 2, 926-935. (Authors' summary) **80a:93084** 93C15
- Petrovskii, G. N.** The construction of coefficient tests for the G-orthogonal reducibility and G-spherical compatibility of systems of linear differential equations. (Russian) *Differencial'nye Uravnenija* **14** (1978), no. 4, 637-645, 764. (E. Barvinek) **80b:34009** 34A30 (34C20)
- (with Martynov, I. I.) The asymptotic behavior of the solutions of a linear differential system with a periodic coefficient matrix of the second kind. (Russian) *Differencial'nye Uravnenija* **14** (1978), no. 12, 2279-2281, 2304. (G. P. Los') **80k:34067** 34D05
- A system of linear differential equations with shocks at prescribed moments of time. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* **1978**, no. 2, 7-10, 93. (M. Ráb) **80a:34009** 34A30
- Petrovskii, I. G.** See All-Union Conference: Partial Differential Equations, **80f:35002**
- Petrus, Ann** Contractibility of Whitney continua in  $C(X)$ . *General Topology Appl.* **9** (1978), no. 3, 275-288. (Michel Smith) **80a:54010** 54B20 (54F15)
- Petrus, O.** Contributions to the quantum kinetic theory of biatomic molecular gases. (Russian. English summary) *Stud. Cerc. Fiz.* **30** (1978), no. 5, 449-519. (Editor) **80d:82047** 82A40
- Petrusev, P. P.** (with Hristov, Vladimir H.) Sufficient conditions for convergence of Fourier series. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 392-396, "Nauka", Moscow, 1977. (A. Oleviskii) **80k:42002** 42A20
- (with Hristov, Vladimir H.) An improvement of Dini-Lipschitz condition. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. 1, pp. 255-264, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (B. L. Gupta) **80j:42013** 42A20 (42A15)
- (with Sendov, Blagovest; Tašev, Spas P.) Characterization of S-derivatives of Lipschitzian functions. (Russian) *Serdica* **4** (1978), no. 2-3, 260-266. (J. S. Lipiński) **80i:26008** 26A24
- Petruska, Gy.** (with Laczovich, M.) On the transformers of derivatives. *Fund. Math.* **100** (1978), no. 3, 179-199. (A. M. Bruckner) **80b:26005** 26A24 (26A27)
- (with Laczovich, M.) Differentiable functions have sparse graphs. *Real Anal. Exchange* **4** (1978/79), no. 1, 91-96. (James Foran) **80b:26012** 26A48
- Petrusko, I. M.** The behavior of solutions of parabolic equations near the boundary. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst. No. 334* (1977), 124-129. (V. G. Kravčenko) **80j:35046** 35K10
- Boundary and initial values of the solutions of parabolic equations. (Russian) *Mat. Sb. (N.S.)* **106(148)** (1978), no. 3, 409-439, 496. (R. Guenther) **80c:35044** 35K20
- Petruszczyk, M.** A. A. Markov, ses probabilités en chaîne et les statistiques linguistiques. (English summary) *Math. Sci. Humaines* **No. 66** (1979), 5-42, 91-97, 113. (J. S. Joel) **80j:68072** 68G10 (01A60, 60-03, 68-03)
- Quelques exercices d'utilisation des critères de A. A. Markov. (English summary) *Math. Sci. Humaines* **No. 66** (1979), 51-97, 115. (J. S. Joel) **80j:68073** 68G10 (01A60)
- Pétry, André** On the typed properties in Quine's "New Foundations". *Z. Math. Logik Grundlag. Math.* **25** (1979), no. 2, 99-102. (M. Boffa) **80b:03074** 03E70
- Petry, Herbert Rainer** Exotic spinors in superconductivity. *J. Math. Phys.* **20** (1979), no. 2, 231-240. (Helaman R. P. Ferguson) **80c:55011** 55R10 (58G10, 81J05)
- See also *Differential geometrical methods in mathematical physics*, **80b:81056**
- Petry, Walter** Lorentz-covariant theory of gravitation. *Gen. Relativity Gravitation* **10** (1979), no. 7, 599-608. (Andrzej Trautman) **80b:83032** 83D05 (53B50)
- Petryshyn, Walter V.** Nonlinear eigenvalue problems and the existence of nonzero fixed points for A-proper mappings. *Theory of nonlinear operators (Proc. Fifth Internat. Summer School, Central Inst. Math. Mech. Acad. Sci. GDR, Berlin, 1977)*, pp. 215-227. *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1978, 6, Akademie-Verlag, Berlin, 1978. (J. Kolomý) **80j:47076** 47H12 (47H09, 47H10)
- (with Fitzpatrick, P. M.) On the nonlinear eigenvalue problem  $T(u) = \lambda C(u)$ , involving noncompact abstract and differential operators. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **15** (1978), no. 1, 80-107. (P. P. Zabrejko) **80b:47083** 47H15 (35J65)
- (with Conjura, E.) Extension of nonlinear densely defined operators, rates of convergence for the error and the residual, and application to differential equations. *J. Math. Anal. Appl.* **64** (1978), no. 3, 651-694. (J. Kučera) **80c:47056** 47H17 (34B15, 35G30, 65J15)
- On the solvability of nonlinear equations involving abstract and differential operators. *Functional analysis methods in numerical analysis (Proc. Special Session, Annual Meeting, Amer. Math. Soc., St. Louis, Mo., 1977)*, pp. 209-247, *Lecture Notes in Math.*, 701, Springer, Berlin, 1979. (A. Ramm) **80c:65126** 65J15 (47H17, 65P05)
- Existence of nonzero fixed points for noncompact mappings in wedges and cones. *J. Funct. Anal.* **33** (1979), no. 1, 36-46. (J. Daneš) **80j:47077** 47H09 (47H07)
- Petschek, A. G.** (with Williamson, R. E.; Krauser, W. J.; White, P. C.) Monte Carlo functional expansion calculation of free molecular flows. *Math. Comp.* **33** (1979), no. 146, 765-777. (Authors' summary) **80d:82071** 82A70 (65C05)
- Pettipher, M. A.** (with Nisbet, R. M.; Gurney, W. S. C.) Environmental fluctuations and the theory of the ecological niche. *J. Theoret. Biol.* **75** (1978), no. 2, 223-237. (Authors' summary) **80a:92054** 92A15



- Pettit, M. E., Jr. (with Ratliff, Louis J., Jr.) Characterizations of  $H_2$ -local rings and of  $C_2$ -local rings. *Amer. J. Math.* 100 (1978), no. 6, 1213-1234. (P. Schenzel) 80a:13004 13C15 (13H99)
- Pettit, M. E., Jr. See Gianini-Pettit, Jacqueline
- Petukhov, Ju. M. (with Ahljustin, V. I.) Application of the averaging method in the problem of the interaction of atoms with radio frequency fields. (Russian. English summary) *Izv. Vys. Učebn. Zaved. Radiofizika* 21 (1978), no. 10, 1443-1450. (S. D. Miluseva) 80a:34026 34C29 (78A35)
- Petunin, Ju. I. (with Krohin, V. V.) A study of the efficiency of estimates of coefficients of linear regression by the computer simulation method. I. (Russian. English summary) *Vys. Prikl. Mat. (Kiev) No. 34* (1978), 106-115, 167. (László Györfi) 80a:62083a 62M10
- (with Krohin, V. V.) A study of the efficiency of estimates of coefficients of linear regression by the computer simulation method. II. (Russian. English summary) *Vys. Prikl. Mat. (Kiev) No. 35* (1978), 52-62, 164. (László Györfi) 80a:62083b 62M10
- (with Pogribnii, V. D.) A theorem on isomorphisms. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 8* (1979), 612-614; 686. (I. Tweddle) 80a:46003 46A15
- Petz, D. On a problem of D. Newman. *Acta Math. Acad. Sci. Hungar.* 32 (1978), no. 1-2, 161-162. (N. Passell) 80a:41016 41A30
- Petzelová, Hana (with Vrbová, Pavla) Factorization in the algebra of rapidly decreasing functions on  $\mathbb{R}^n$ . *Comment. Math. Univ. Carolin.* 19 (1978), no. 3, 489-499. (Mohammed Akkar) 80a:46056 46J15 (46E25)
- Petzold, J. (with Maass, Wolfgang) On the stability of motion of a radiating electron. *J. Phys. A* 11 (1978), no. 7, 1211-1219. (Anton Z. Capri) 80a:81019 81C05 (45J05)
- Petzsch, Hans-Joachim Die Nuklearität der Ultradistributionsräume und der Satz vom Kern. I. (English summary) *Manuscripta Math.* 24 (1978), no. 2, 133-171. (K. Floret) 80a:46045a 46F05 (46A12, 46A45)
- Die Nuklearität der Ultradistributionsräume und der Satz vom Kern. II. (English summary) *Manuscripta Math.* 27 (1979), no. 3, 221-251. (K. Floret) 80a:46045b 46F05 (46A12, 46A45)
- Pevac, Lazar Some results about approximation of sets by finite sets in normed spaces. *Publ. Inst. Math. (Beograd) (N.S.)* 25(39) (1979), 138-142. (D. E. Wulbert) 80a:41023 41A46 (41A65)
- Pevnyi, A. B. (with Malozemov, V. N.) Spline approximation of an arbitrary defect. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 3, 572-575. (J. Girshovich) 80a:41018 41A15
- Convergence of the Newton-Seidel method. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* 1978, no. 1(188), 88-90. (J. W. Schmidt) 80a:65101 65H10
- Pevzner, L. V. Program and SM-grammars. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* 1979, no. 2, 50-54, 87. (Authors' summary) 80a:68193 68F05
- Pexton, Robert L. (with Steiger, Arno D.) Degenerate roots of three transcendental equations involving spherical Bessel functions. *Math. Comp.* 33 (1979), no. 147, 1041-1048, loose microfiche suppl. (Authors' summary) 80a:65057 65H10 (65D20)
- Peyrerimhoff, A. (with Balser, W.; Jurkat, W. B.) On linear functionals and summability factors for strong summability. *Canad. J. Math.* 30 (1978), no. 5, 983-996. (Gokulananda Das) 80a:40002 40F05
- (with Jurkat, W. B.) Characteristic approximation properties of quadratic irrationals. *Internat. J. Math. Math. Sci.* 1 (1978), no. 4, 479-496. (Maurice Mignotte) 80a:10050 10F35 (10F20)
- Peyraud, J. (with Coste, J.; Couillet, Pierre; Chenciner, A.) Quelques propriétés des systèmes de Volterra. (English summary) *J. Physique* 39 (1978), no. 8 suppl., Colloque C-5, C5-45-C5-47. (W. S. C. Gurney) 80a:92027 92A15
- (with Coste, J.; Couillet, Pierre; Chenciner, A.) About the theory of competing species. *Theoret. Population Biol.* 14 (1978), no. 2, 165-184. (Authors' summary) 80a:92041 92A15 (58F13)
- (with Coste, J.; Couillet, Pierre) Asymptotic behaviors in the dynamics of competing species. *SIAM J. Appl. Math.* 36 (1979), no. 3, 516-543. (H. A. DeKleine) 80a:92022 92A15
- Peyret, Roger Une méthode aux différences finies de haute précision pour la résolution des équations de Navier-Stokes stationnaires. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 1, A59-A62. (Author's summary) 80a:65205 65N05 (65N20)
- Peyrière, Jacques (with Sjölin, Per) Regularity of spherical means. *Ark. Mat.* 16 (1978), no. 1, 117-126. (Hans P. Heine) 80a:46061 46E35
- Sur les colliers aléatoires de B. Mandelbrot. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 20, A937-A939. (Author's summary) 80a:60119 60K99 (52A22, 60D05, 60J15)
- Processus de naissance avec interactions des voisins. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 3, A223-A224. (Author's summary) 80a:60120 60J80 (60J10)
- A singular random measure generated by splitting [0, 1]. *Z. Wahrsch. Verw. Gebiete* 47 (1979), no. 3, 289-297. (Eric V. Slud) 80a:60006 60B10 (60F15)
- Peyser, Gideon The projection theorem for spaces of negative order. *Bull. Calcutta Math. Soc.* 70 (1978), no. 1, 29-31. (L. J. Wallen) 80a:46018 46C05
- Pfaff, Rainer Gewöhnliche lineare Differentialgleichungen zweiter Ordnung mit Distributionskoeffizienten. *Arch. Math. (Basel)* 32 (1979), no. 5, 469-478. (Angelo Favini) 80a:34010 34A10 (34A30)
- Pfanzagl, J. (with Wefelmeyer, W.) A third-order optimum property of the maximum likelihood estimator. *J. Multivariate Anal.* 8 (1978), no. 1, 1-29. (R. Ponnappalli) 80a:62037 62F10 (62F12)
- Conditional distributions as derivatives. *Ann. Probab.* 7 (1979), no. 6, 1046-1050. (M. M. Rao) 80a:60007 60A10 (28A15)
- Pfeiffer, Washek F. (with Gruenhage, Gary) When inner regularity of Borel measures implies regularity. *J. London Math. Soc. (2)* 17 (1978), no. 1, 165-171. (A. G. A. Babiker) 80a:28010 28C15
- (with van Douwen, Eric K.) Some properties of the Sorgenfrey line and related spaces. *Pacific J. Math.* 81 (1979), no. 2, 371-377. (D. J. Lutzer) 80a:54027 54D20 (54F05)
- Pfeiffer, Charles G. (with Enis, Peter) Dorfman-type group testing for a modified binomial model. *J. Amer. Statist. Assoc.* 73 (1978), no. 363, 588-592. (Frank K. Hwang) 80a:62038 62F10 (62N10)
- Pfeifer, E. Zur diskreten Konvergenz von Mehrstellenverfahren bei Eigenwertaufgaben für gewöhnliche Differentialgleichungen 2. Ordnung. (Russian summary) *Ž. Vyš. Mat. i Mat. Fiz.* 19 (1979), no. 3, 622-630, 797. (Siegfried Filippi) 80a:65098 65L15
- Pfeiffer, E. See Müller-Pfeiffer, E.
- Pfeiffer, H. (with Reinhard, P.-G.; Drechsel, D.) A model study of Hartree-Fock and linear response in coordinate space. *Z. Phys. A* 292 (1979), no. 4, 375-383. (Authors' summary) 80a:81071 81G35
- Pfeiffer, Paul E. ★ Concepts of probability theory. Second edition. Dover Publications, Inc., New York, 1978. ix + 405 pp. ISBN 0-486-63677-1 (Editors) 80a:60003 60-01
- Pfeuffer, Horst Über die reelle Spiegelungsgruppe  $S_2$  und die Klassenzahl der sechsdimensionalen Einheitsform. *Arch. Math. (Basel)* 31 (1978/79), no. 2, 126-132. (Donald Maurer) 80a:10037 10C07 (10E45)
- On a conjecture about class numbers of totally positive quadratic forms in totally real algebraic number fields. (German summary) *J. Number Theory* 11 (1979), no. 2, 188-196. (Donald Maurer) 80a:10036 10C07 (10C04, 12A95)
- Pfister, Albrecht Systems of quadratic forms. Colloque sur les Formes Quadratiques, 2 (Montpellier, 1977). *Bull. Soc. Math. France Mém. No. 59* (1979), 115-123. (Donald Maurer) 80a:10033 10C10 (10C01, 12B99)
- Pfister, Charles E. (with Bricmont, Jean; Lebowitz, Joel L.; Olivieri, Enzo) Nontranslation-invariant Gibbs states with coexisting phases. I. Existence of sharp interface for Widom-Rosinowski type lattice models in three dimensions. *Comm. Math. Phys.* 66 (1979), no. 1, 1-20. (K. S. Viswanathan) 80a:82023a 82A25
- (with Bricmont, Jean; Lebowitz, Joel L.) Nontranslation-invariant Gibbs states with coexisting phases. II. Cluster properties and surface tension. *Comm. Math. Phys.* 66 (1979), no. 1, 21-36. (K. S. Viswanathan) 80a:82023b 82A25
- Pflug, Rolf Peter Functions of polynomial growth and domains of holomorphy. *Fonctions de plusieurs variables complexes, III (Sém. François Norguet, 1975-1977)*, pp. 224-232, *Lecture Notes in Math.*, 670, Springer, Berlin, 1978. (Jan Chmielewski) 80a:32029 32D05
- Ein  $C^\infty$ -glattes, streng pseudokonvexes Gebiet in  $C^1$  mit nicht holomorph-konvexer Projektion. Special issue dedicated to the seventieth birthday of Erich Kähler. *Abh. Math. Sem. Univ. Hamburg* 47 (1978), 92-94. (Claudio Rea) 80a:32018 32F15 (32D05)
- Pfister, Albert See Contributions to analysis, 80a:30002
- Pfister, Ernst-Adam Zum Beweis des Carathéodory-Theorems für Kegel. *Wiss. Z. Tech. Univ. Dresden* 27 (1978), no. 5, 931-933. (C. M. Petty) 80a:52007 52A20
- Pfütz, Franz Verallgemeinerte Bayes-Verfahren bei sequentiellen Testproblemen. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 9 (1978), no. 2, 195-209. (L. B. Klebanov) 80a:62098 62L05 (62C10)
- Phadia, Ewar G. (with Ferguson, Thomas S.) Bayesian nonparametric estimation based on censored data. *Ann. Statist.* 7 (1979), no. 1, 163-186. (L. B. Klebanov) 80a:62008 62C10 (62G05)
- (with Susarla, V.) An empirical Bayes approach to two-sample problems with censored data. *Comm. Statist. A—Theory Methods* 8 (1979), no. 13, 1327-1351. (R. S. Singh) 80a:62008 62C12 (62G10)
- Phadke, B. B. (with Busemann, H.) Minkowskian geometry, convexity conditions and the parallel axiom. *J. Geom.* 12 (1979), no. 1, 17-33. (J. K. Beem) 80a:53043 53C70 (51K10)
- Phadke, S. V. (with Thakare, Nimbakrishna) Numerical principal and  $p$ -principal points of an operator. *Kyungpook Math. J.* 18 (1978), no. 2, 201-205. (Takayuki Furuta) 80a:47005 47A10
- (with Thakare, Nimbakrishna) Generalized inverses and operator equations. *Linear Algebra Appl.* 23 (1979), 191-199. (Charles W. Groetsch) 80a:47017 47A62 (15A09)
- Phadke, S. S. ★ Hexотопия топология теория основанная. (Russian) [Some questions of notation theory] With Georgian and English summaries. *Izdat. Tbilis. Univ., Tbilis.* 1977. 195 pp. (A. A. Mullin) 80a:03010 03B30 (03B05, 68C20)
- See also Studies in mathematical logic and the theory of algorithms, 80a:03006
- Pham Canh Du'ong (with Hoàng Tuy) Stability, surjectivity and local invertibility of nondifferentiable mappings. *Acta Math. Vietnam.* 3 (1978), no. 1, 89-105. (M. M. Cvetanov) 80a:49016 49A50 (46G99, 58C99)
- Pham Dinh Tuan Sur l'adéquation du modèle de processus auto-régressif multivarié. Séries chronologiques: approches fréquentielle et temporelle (Colloq., Brussels, 1977). *Cahiers Centre Études Recherche Opér.* 19 (1977), no. 3-4, 309-322. (E. J. Hannan) 80a:62070 62M09
- Estimation of parameters in the ARMA model when the characteristic polynomial of the MA operator has a unit zero. *Ann. Statist.* 6 (1978), no. 6, 1369-1389. (T. Pitcher) 80a:62062 62M10 (62Fxx)
- (with Nguyen, Hung Trung) Loi des grands nombres pour les martingales et application à la statistique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 4, A303-A305. (Authors' summary) 80a:60041 60F15 (60G42, 62M05)
- (with Nguyen, Hung Trung) Sur l'utilisation du temps local en statistique des processus. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 3, A165-A168. (Authors' summary) 80a:62081 62M05 (60J55, 62G05)
- (with Nguyen, Hung Trung) Estimation non paramétrique par la méthode de Grenander dans les modèles de diffusion linéaires et non stationnaires. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 4, A197-A200. (Authors' summary) 80a:62082 62M05 (62G05)
- Pham Ngoc Anh Die additive Struktur der im engeren Sinne linear kompakten Ringe. *Studia Sci. Math. Hungar.* 11 (1976), no. 1-2, 205-210 (1978). (Jean Guérindon) 80a:16051 16A80
- (with Wiegandt, Richard) Linearly compact semisimple rings and regular modules. *Math. Japon.* 23 (1978/79), no. 4, 335-338. (V. I. Arnautov) 80a:16026 16A80
- Pham Phu Hien Sur un sous-espace vectoriel de points quasi-réguliers relatifs à un système dynamique défini sur un espace vectoriel topologique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 15, A747-A750. (Author's summary) 80a:46078 46L55 (28C05, 54H20)
- Pham The Lai (with Robert, Didier) Valeurs propres d'une classe d'équations différentielles singulières sur une demi-droite. *Équations aux dérivées partielles (Proc. Conf., Saint-Jean-de-Monts, 1977)*, pp. 164-171, *Lecture Notes in Math.*, 660, Springer, Berlin, 1978. (Patrick J. Browne) 80a:34026 34B25

- Comportement asymptotique des valeurs propres d'une classe d'opérateur de type "Schrödinger". *Acta Math. Vietnam.* 3 (1978), no. 2, 123-137. (Woodford W. Zachary) **80b:35115** 35P20
- Problème de Dirichlet dans un cône avec paramètre spectral pour une classe d'espaces de Sobolev à poids. *Comm. Partial Differential Equations* 4 (1979), no. 4, 389-445. (G. Geymonat) **80j:35028** 35J25
- See also *Équations aux dérivées partielles*, **80c:35001**
- Pham Tran Nhu Optimal stabilization of stochastic discrete-time systems. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 1, 129-151. (Author's summary) **80c:93138** 93E20
- Phan, C. S. (with Kim, H. K.) A new set of realizability conditions for a class of multivariable functions. *J. Franklin Inst.* 300 (1979), no. 6, 523-532. (Authors' summary) **80k:34047** 94C10
- Phan Dinh Dieu (with Le Cong Thanh) Asymptotic estimates for some parameters of finite graphs, and their applications. (Russian) *Acta Math. Vietnam.* 3 (1978), no. 1, 51-79. (E. Stockii) **80k:05071** 05C35 (68C25, 68D05)
- Phan Van Chu'ng Two variational problems on a two-dimensional torus. (Russian) *Acta Math. Vietnam.* 3 (1978), no. 1, 80-88. (A. D. Ioffe) **80d:49018** 49B10
- Phan Van Hap Application of generalized quadrature formulas to the approximate solution of operator equations. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 9(196), 89-96. (V. V. Salaev) **80f:65067** 65J15 (47H17)
- Phares, Alain J. (with Maurone, Philip A.) On the asymptotic behavior of the derivatives of Airy functions. *J. Math. Phys.* 20 (1979), no. 11, 2191. (Authors' summary) **80j:33014** 33A60
- Phatarfod, R. M. (with Pakes, Anthony G.) The limiting distribution for the infinitely deep dam with a Markovian input. *Stochastic Process. Appl.* 8 (1978), no. 2, 199-209. (Emlyn Lloyd) **80a:60126** 60K30
- See also *Balagopal, K.*, **80b:60129**
- Phelps, E. S. (with Riley, John G.) Rawlsian growth: dynamic programming of capital and wealth for intergenerational "maximin" justice. *Rev. Econom. Stud.* 45 (1978), no. 1, 103-120. (From the conclusion) **80j:90048** 90A16 (90A10)
- Phelps, J. S., III (with Siewert, C. E.) On the solution of a  $\tan(\xi - k\pi) + \tanh \xi = 0$ . *J. Comput. Appl. Math.* 5 (1979), no. 2, 99-101. (Authors' summary) **80c:65112** 65H05 (65D20)
- (with Siewert, C. E.) On solutions of a transcendental equation basic to the theory of vibrating plates. *SIAM J. Math. Anal.* 10 (1979), no. 1, 105-111. (Authors' summary) **80b:73020** 73D30 (30E99)
- Phelps, R. T. A note on partial  $S(s-1, s+1, v)$  subsystems of a  $S(s, s+1, v)$ . *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 581-586. *Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978*. (R. C. Mullin) **80c:05032** 05B05
- (with Lindner, Charles C.) A note on partial parallel classes in Steiner systems. *Discrete Math.* 24 (1978), no. 1, 109-112. (A. Rosa) **80c:05054** 05B30
- Conjugate orthogonal quasigroups. *J. Combin. Theory Ser. A* 25 (1978), no. 2, 117-127. (Charles C. Lindner) **80f:05016** 05B15
- Phelps, R. R. Gaussian null sets and differentiability of Lipschitz map on Banach spaces. *Pacific J. Math.* 77 (1978), no. 2, 523-531. (P. Mankiewicz) **80m:46040** 46G05 (58C20)
- (with Larman, D. G.) Gâteaux differentiability of convex functions on Banach spaces. *J. London Math. Soc.* (2) 20 (1979), no. 1, 115-127. (J. Bourgain) **80m:46017** 46B20 (46G05)
- Phillip, J. R. Corrigendum: "Inverse power law potentials about polygonal prisms and in polygonal cavities" [*J. Austral. Math. Soc. Ser. B* 20 (1977/78), no. 2, 241-253; MR 58 #14244]. *J. Austral. Math. Soc. Ser. B* 20 (1977/78), no. 4, 508. (Editors) **80k:76073** 76S05
- Note on the Kelvin phase functions. *Math. Comp.* 33 (1979), no. 145, 337-341. (F. Götze) **80b:33006** 33A70
- Phillip, Varughese A double integral transform of the  $H$ -function of two variables. (Hindi. English summary) *Vijnana Parishad Amsandhan Patrika* 21 (1978), no. 3, 197-203. (R. S. Dahiya) **80b:33009** 33A35
- Phillip, Klaus (with Rudolph, Stefan) Über die Komplexiertheit formaler Zuweisungsprobleme und die Effizienz der den Problemlöseprozess steuernden Strategien. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* 20 (1978), no. 4, 425-435. (Authors' summary) **80c:90150** 90C50 (90C15)
- Phillip, Walter (with Kaufman, Robert P.) A uniform law of the iterated logarithm for classes of functions. *Ann. Probab.* 6 (1978), no. 6, 930-952 (1979). (Shigeru Takahashi) **80a:60034** 60F15 (42A55)
- (with Berkes, István) An a.s. invariance principle for lacunary series  $f(n_k x)$ . *Acta Math. Acad. Sci. Hungar.* 34 (1979), no. 1-2, 141-155. (Shigeru Takahashi) **80f:60042** 60F17 (42A55)
- (with Berkes, István) Approximation theorems for independent and weakly dependent random vectors. *Ann. Probab.* 7 (1979), no. 1, 29-54. (M. Csörgö) **80k:60008** 60B10 (60F15)
- Phillips, C. (with Dewdney, C.; Hiley, B. J.) Quantum interference and the quantum potential. (Italian and Russian summaries) *Nuovo Cimento B* (11) 52 (1979), no. 1, 15-28. (Lawrence P. Horwitz) **80j:81045** 81D99 (10K99)
- Phillips, Gérard A. A minimum principle for the problem of torsional creep. *J. Math. Anal. Appl.* 68 (1979), no. 2, 526-535. (L. G. Makar-Limanov) **80f:73042** 73E25 (35B50, 35J15)
- (with Payne, L. E.) Some maximum principles for nonlinear elliptic equations in divergence form with applications to capillary surfaces and to surfaces of constant mean curvature. *Nonlinear Anal.* 3 (1979), no. 2, 193-211. (E. Giusti) **80k:35056** 35J60 (49F10)
- Phillipson, Andreas N. On the existence and consistency of the MLE in the INID case. *Math. Balkanica* 6 (1976), 161-167 (1978). (Author's summary) **80g:62017** 62F12
- A note on convergence in probability uniformly in a parameter. *Bull. Soc. Math. Grèce (N.S.)* 19 (1978), no. 2, 260-264. (Reinhard Michel) **80g:60021** 60F05 (62E20, 62F12)
- Asymptotic normality of the maximum likelihood estimate in arbitrary stochastic processes. *Trabajos Estadist. Investigación Oper.* 29 (1978), no. 3, 71-82. (Paul I. Nelson) **80b:62068** 62M09 (62E20)
- Phillips, Esther R. Karl M. Peterson: the earliest derivation of the Mainardi-Codazzi equations and the fundamental theorem of surface theory. (Russian and French summaries) *Historia Math.* 6 (1979), no. 2, 137-163. (Esther Portnoy) **80c:81015** 01A55 (53-03)
- Phillips, F. (with Armstrong, Ronald D.; Charnes, Abraham) Page cuts for integer interval linear programming. *Discrete Appl. Math.* 1 (1979), no. 1-2, 1-14. (F. Giannini) **80i:90064** 90C10
- Phillips, G. D. A. (with Harvey, A. C.) Maximum likelihood estimation of regression models with autoregressive-moving average disturbances. *Biometrika* 66 (1979), no. 1, 49-58. (Peter M. Robinson) **80j:62086** 62M10 (62J05)
- Phillips, G. M. (with Cheney, E. W.; McCabe, J. H.) A mixed-norm bivariate approximation problem with applications to Lewanowicz operators. *Multivariate approximation (Sympos., Univ. Durham, Durham, 1977)*, pp. 315-323. *Academic Press, London, 1978*. (Werner Haussmann) **80i:41027** 41A63 (65J05)
- (with Holland, A. S. B.; McCabe, J. H.; Sahney, Badri N.) Best simultaneous  $L_1$  approximations. *J. Approx. Theory* 24 (1978), no. 4, 361-365. (Geetha S. Rao) **80j:41028** 41A28
- Best polynomial approximations: a corrected proof. *BIT* 19 (1979), no. 1, 95-97. (Author's summary) **80b:41002** 41A10 (41A50)
- Seventh degree integration rules for the cube. *BIT* 19 (1979), no. 1, 98-103. (T. N. L. Patterson) **80d:65038** 65D32
- (with McCabe, J. H.; Cheney, E. W.) On simultaneous Chebyshev approximation. *J. Approx. Theory* 27 (1979), no. 1, 93-98. (Anthony Holland) **80m:41014** 41A28
- Phillips, John (with Raeburn, Iain) Perturbations of  $C^*$ -algebras. II. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 1, 45-48. (Horst Behncke) **80c:46037** 46L05
- (with Raeburn, Iain) Automorphisms of  $C^*$ -algebras and second Cech cohomology. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 3, 129-132. (Editors) **80c:46038** 46L05 (46M20)
- Automorphisms of full  $II_1$  factors. II. *Canad. Math. Bull.* 21 (1978), no. 3, 325-328. (H. Halpern) **80c:46067** 46L40
- Phillips, Keith Extensibility of convolution operators and convergence of Fourier series on local fields; integral homogeneity of distributions. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 2, pp. 337-344. *Proc. Sympos. Pure Math., XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979*. (C. W. Onneweer) **80j:43006** 43A70 (46P05)
- Phillips, Ralph S. (with Lax, Peter D.) The time delay operator and a related trace formula. *Topics in functional analysis (essays dedicated to M. G. Krein on the occasion of his 70th birthday)*, pp. 197-215. *Advances in Math., Suppl. Studies*, 3, Academic Press, New York, 1978. (P. A. Mišnaevskii) **80j:47010** 47A40 (35P25)
- (with Lax, Peter D.) Scattering theory for domains with non-smooth boundaries. *Arch. Rational Mech. Anal.* 68 (1978), no. 2, 93-98. (M. M. Skraganov) **80a:35096** 35P25
- Phillips, Richard E. Corrigendum: "Embedding methods for periodic groups" [*Proc. London Math. Soc.* (3) 35 (1977), no. 2, 238-256; MR 58 #16896]. *Proc. London Math. Soc.* (3) 38 (1979), no. 1, 152. (Editors) **80k:20043** 20F50
- (with Hickin, Kenneth K.) Joins of periodic groups. *Proc. London Math. Soc.* (3) 39 (1979), no. 1, 176-192. (Giovanni Zacher) **80g:20053** 20F50
- Phillips, Thomas M. Centered bases, nested bases, and completeness of Aronszajn spaces. *Canad. J. Math.* 30 (1978), no. 6, 1331-1335. (V. I. Mal'gin) **80a:54057** 54E99
- Primitive extensions of Aronszajn spaces. *Pacific J. Math.* 77 (1978), no. 1, 233-242. (Aleksander Blaszczyk) **80a:54055** 54E65
- Phillips, Veril L. Infinite groups with a subnormality condition on infinite subgroups. *Rocky Mountain J. Math.* 9 (1979), no. 2, 327-335. (John S. Wilson) **80f:20027** 20E15
- Philokyprou, George (with Halatsis, Constantine; Sigala, Maria) Polylinear decomposition of synchronous sequential machines. *IEEE Trans. Comput.* 27 (1978), no. 12, 1144-1152. (A. T. Amin) **80f:68072** 68D37
- Philos, Christos G. An oscillatory and asymptotic classification of the solutions of differential equations with deviating arguments. (Italian summary) *Atti Accad. Nat. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 3-4, 195-203 (1978). (T. L. Herdman) **80g:34079** 34K15
- (with Staikos, V. A.) Nonoscillatory phenomena and damped oscillations. *Nonlinear Anal.* 2 (1978), no. 2, 197-210. (M. I. Kamenskii) **80g:34080** 34K15
- Oscillatory and asymptotic behaviour of all solutions of differential equations with deviating arguments. *Proc. Roy. Soc. Edinburgh Sect. A* 81 (1978), no. 3-4, 195-210. (M. M. Konstantinov) **80a:34110** 34K15
- On the oscillatory and asymptotic behavior of the bounded solutions of differential equations with deviating arguments. *Ann. Mat. Pura Appl.* (4) 119 (1979), 25-40. (I. Ćanturia) **80k:34098** 34K15
- A comparison result in oscillation theory. *Indian J. Pure Appl. Math.* 11 (1980), no. 1, 1-7. (V. Staikos) **80m:34033** 34K15 (34C10)
- Phoenix, S. Leigh The asymptotic distribution for the time to failure of a fiber bundle. *Adv. in Appl. Probab.* 11 (1979), no. 1, 153-187. (Richard A. Johnson) **80c:62114** 62N99
- Phoa, Shashi An algorithm for linear prediction of a Banach space valued stationary stochastic process. *Ann. Probab.* 6 (1978), no. 5, 891-898. (H. Salehi) **80a:60053** 60G25
- bui minh Phong See Bui Minh Phong
- Phong, D. H. (with Fefferman, Charles Louis) On positivity of pseudo-differential operators. *Proc. Nat. Acad. Sci. U.S.A.* 75 (1978), no. 10, 4673-4674. (Ju. V. Egorov) **80b:47064** 47G05 (35S05)
- On integral representations for the Neumann operator. *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 4, 1554-1558. (Ju. V. Egorov) **80b:32038** 32F20 (35N15, 47G05)
- Phovellvil, Z. I. (with Eremenko, I. V.) An approximate and exact method for searching the Hamiltonian "cycle of minimal length. (Russian) *Sakharth. SSR Mecn. Akad. Gamotbl. Centr. Šrom.* 18 (1978), no. 2 Voprosy Vyčisl. Tehn. i Upravlenija, 20-33. (From the text) **80c:90040** 90B10 (90C50)
- (with Eremenko, I. V.) On the question of perfecting a numerical scheme for solving a transportation problem by the Hungarian method. (Russian) *Sakharth. SSR Mecn.*



- Akad. Gamothol. Centr. Šrom. 18 (1978), no. 2 Voprosy Vyčisl. Tehn. i Upravleniya, 34-41. (From the text) **80a:90086** 90C05  
 Pham Phu Hien See Pham Phu Hien  
 Phinoc Loc See Ta Phinoc Loc  
 Phung Phung Cúc See Nguyễn Phung Cúc  
 Piacentini, Maurizio (with Bellini, Sandro; Cafforio, Ciro; Rocca, Fabio) Compensation of tissue absorption in emission tomography. *IEEE Trans. Acoust. Speech Signal Process.* 27 (1979), no. 3, 213-218. (Authors' summary) **80a:94007** 94A12 (68G10)  
 Pianigiani, Giulio A density result for differential equations in Banach spaces. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astron. Phys.* 26 (1978), no. 9-10, 791-793. (Author's summary) **80a:34081** 34G20  
 Absolutely continuous invariant measures for the process  $x_{n+1} = Ax_n(1 - x_n)$ . (Italian summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 2, 374-378. (Detlef Plachky) **80a:28016** 28C10 (28D05)  
 (with Yorke, James A.) Expanding maps on sets which are almost invariant. Decay and chaos. *Trans. Amer. Math. Soc.* 252 (1979), 351-366. (L. A. Bunimovich) **80a:58030** 58F11 (28D15, 34C35, 58F12)  
 Plascaki, J. Kinetic theory of dense gases. *Fundamental problems in statistical mechanics, IV (Proc. Fourth Internat. Summer School, Jadwinia, 1977)*, pp. 345-383, Ossolineum, Wrocław, 1978. (Reinhard Illner) **80a:82027** 82A40  
 Platnick-Shapiro, I. L. (with Jacquet, Hervé; Shalika, Joseph) Automorphic forms on GL(3). I. *Ann. of Math.* (2) 109 (1979), no. 1, 169-212. (Stephen Gelbart) **80a:10034a** 10D40 (22E50, 22E55)  
 (with Jacquet, Hervé; Shalika, Joseph) Automorphic forms on GL(3). II. *Ann. of Math.* (2) 109 (1979), no. 2, 213-258. (Stephen Gelbart) **80a:10034b** 10D40 (22E50, 22E55)  
 Piazese, Franco Clifford formulation of classical field equations. (Italian summary) *Riv. Mat. Univ. Parma* (4) 4 (1978), 205-213 (1979). (From the introduction) **80a:81044** 81E05 (15A66)  
 Plé, A. See Pletsch, Albrecht  
 Pica, G. Enumeration of maximal outer-planar graphs with four vertices of degree two and the examination of the group of their automorphisms. (Italian. English summary) *Riv. Mat. Univ. Parma* (4) 4 (1978), 123-133 (1979). (R. C. Read) **80a:05052** 05C30 (05C25)  
 Picard, Claude-François (with Aggarwal, N. L.) Functional equations and information measures with preference. *Kybernetika (Prague)* 14 (1978), no. 3, 174-181. (Eberhard Lüdde) **80a:94012** 94A17  
 Une théorie de l'expérimentation: les modèles de fort dépendance. (Italian summary) *Rend. Mat.* (6) 11 (1978), no. 4, 479-494 (1979). (From the conclusion) **80a:94008** 94A17  
 Picard, Dominique (with Deshayes, Jean) Tests de rupture dans un modèle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 10, A563-A566. (Authors' summary) **80a:62030** 62F03 (62M99)  
 (with Deshayes, Jean) Tests de rupture dans un modèle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 17, A851-A854. (Authors' summary) **80a:62029** 62G20  
 Picard, Rainer Ein Beitrag zur Theorie der harmonischen Differentialformen. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T389-T391. (J. Lawrynowicz) **80a:58002** 58A10 (35Q99)  
 Zur Theorie der harmonischen Differentialformen. (English summary) *Manuscripta Math.* 27 (1979), no. 1, 31-45. (J. Lawrynowicz) **80a:58002** 58A14 (58A10)  
 Picardello, Massimo A. A unimodular non-type-I group with purely atomic regular representation. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 2, 331-334. (Jonathan M. Rosenberg) **80a:22003** 22D10  
 Picard, Sophie Le groupe  $G_{100}$  de toutes les transformations périodiques, de période entière quelconque, de l'ensemble  $Z$  des entiers rationnels. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 12, A803-A805. (Author's summary) **80a:20043** 20G99  
 Une proposition fondamentale concernant les groupes de transformations périodiques, de période entière, de l'ensemble  $Z$  des entiers rationnels. *Publ. Centre Rech. Math. Pures* (I) No. 13 (1978), 1-10. (Michael Klemm) **80a:20048** 20E34  
 Picel, Giorgio (with Lindquist, Anders; Ruckebusch, Guy) On minimal splitting subspaces and Markovian representations. *Math. Systems Theory* 12 (1978/79), no. 3, 271-279. (M. V. Kartasov) **80a:60048** 60G12 (46C99, 93E03)  
 (with Lindquist, Anders) On the stochastic realization problem. *SIAM J. Control Optim.* 17 (1979), no. 3, 365-389. (Benson Kurtaran) **80a:93157** 93E12  
 Picinato, Ludovico Predictive distributions and noninformative priors. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 399-407, Academia, Prague, 1978. (G. S. Lingappaiah) **80a:62025** 62F15  
 Picinini, Renzo A. (with Booth, Peter I.; Heath, Philip R.) Fibre preserving maps and functional spaces. *Algebraic topology (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 158-167, *Lecture Notes in Math.*, 673, Springer, Berlin, 1978. (P. W. H. Lemmens) **80a:55011** 55P05  
 (with Booth, Peter I.; Heath, Philip R.) Characterizing universal fibrations. *Algebraic topology (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 168-184, *Lecture Notes in Math.*, 673, Springer, Berlin, 1978. (P. W. H. Lemmens) **80a:55029** 55R05  
 (with Booth, Peter I.; Heath, Philip R.) Characterizing universal fibrations. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 1, 25-27. (John Roy Dennett) **80a:55028** 55R05  
 See also Algebraic topology, **80a:55002**  
 Picco Botta, Luciana (with Verra, Alessandro) Some duality properties for geometrically linked schemes. (Italian. English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 24 (1979), 137-145. (D. Kirby) **80a:14026** 14M10 (14F10)  
 Piccoletta, Lia Fioravanti Algebraic surfaces with multiple lines. (Italian) *Pubbl. Istit. Mat. Appl. Fac. Ingeg. Univ. Studi. Roma Quaderno* 1977, no. 10, 3-11. (D. Gallarati) **80a:14050** 14N10  
 Hyperspatial planes in the neighborhood of a point of inflexion. (Italian. English summary) *Rend. Mat.* (6) 11 (1978), no. 2, 271-293. (E. J. F. Primrose) **80a:14012** 14J17  
 Pichler, Franz R. See Progress in cybernetics and systems research, **80a:68005**  
 Pichorides, S. K. On a conjecture of Littlewood concerning exponential sums. I. *Bull. Soc. Math. Grèce (N.S.)* 18 (1977), no. 1, 8-16. (E. Stankus) **80a:10057a** 10G10  
 On a conjecture of Littlewood concerning exponential sums. II. *Bull. Soc. Math. Grèce (N.S.)* 19 (1978), no. 2, 274-277. (E. Stankus) **80a:10057b** 10G10  
 Pick, James B. (with Holladay, John C.) An alternate approach to analyzing convergence by Leslie matrices. *J. Math. Sociol.* 6 (1978/79), no. 2, 283-324. (Authors' summary) **80a:92034** 92A15  
 Pickard, David K. Asymptotic inference for an Ising lattice. III. Nonzero field and ferromagnetic states. *J. Appl. Probab.* 16 (1979), no. 1, 12-24. (David J. Strauss) **80a:60121** 60K35 (62F12, 82A67)  
 Pickel, P. F. (with Grunewald, Fritz J.; Segal, Daniel) Finiteness theorems for polycyclic groups. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 3, 575-578. (Kenneth S. Brown) **80a:20026** 20E15  
 Pickens, Gary (with Mode, Charles J.) An analysis of postpartum contraceptive strategies—policies for preventive medicine. *Math. Biosci.* 47 (1979), no. 1-2, 91-113. (Authors' summary) **80a:92017** 92A15  
 Pickering, W. M. (with Burley, D. M.) The oscillations of a simple castor. *Bull. Inst. Math. Appl.* 33 (1977), no. 2, 47-50. (Editors) **80a:70009** 70E15 (34C15)  
 (with Sozou, C.) The round laminar jet in a spherical envelope. *J. Fluid Mech.* 94 (1979), no. 1, 1-12. (Authors' summary) **80a:76035** 76D25  
 Pickert, Günter Bifurkationsdiagramme, orthogonale lateinische Quadrate und 2-Assoziationschemata. *Geom. Dedicata* 7 (1978), no. 3, 281-285. (J. J. Seidel) **80a:05012** 05B15 (51A35)  
 Stärker als jeder Schnellere und schneller als jeder Stärkere; ein Beispiel zum Arbeiten mit zwei Ordnungsrelationen. *Math.-Phys. Semesterber.* 25 (1978), no. 2, 194-206. (Hartmut Hölt) **80a:06003** 06A10  
 Picone, P. A. Sur certaines suites récurrentes cubiques ayant deux ou trois termes nuls. *Discrete Math.* 21 (1978), no. 3, 285-296. (Volker Strehl) **80a:10010** 10A35  
 Picone, Mauro See Tanzi Cattabianchi, Luigi, **80a:01046**  
 Pidstrigal, Ya. S. (with Švec, R. M.) Термостатирование тонких оболочек. (Russian) [Thermostaticity of thin shells] "Naukova Dumka", Kiev, 1978.

- Pierre, Michel Invariant closed subsets for nonlinear semigroups. *Nonlinear Anal.* 2 (1978), no. 1, 107-117. (Simeon Reich) **80b:47093** 47H20
- Pierskalla, William P. (with Deurmeyer, Bryan L.) A by-product production system with an alternative. *Management Sci.* 24 (1977/78), no. 13, 1373-1383. (Roman Słowiński) **80a:90076** 90B30 (90A11)
- Pierucci, Mariano See Pignedoli, Antonio, **80b:01023**
- Piest, J. Korrelationsfunktionen des Gleichgewichts und kinetische Theorie turbulenter Strömungen. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T299-T301. (Author's introduction) **80j:76040** 76F99
- Pietraszkiewicz, W. Consistent second approximation to the elastic strain energy of a shell. *Z. Angew. Math. Mech.* 59 (1979), no. 5, T206-T208. (Tommaso Ruggeri) **80i:73056** 73L99 (65P05)
- di Pietro, N. D. See Di Pietro, N. D.
- Pietruszka, W. D. Zur Berechnung periodischer Lösungen in Systemen mit Reibung. *Z. Angew. Math. Mech.* 59 (1979), no. 5, T150-T152. (Author's summary) **80f:70024** 70K99 (34C25)
- Pietsch, Albrecht Recent progress and open problems in the theory of operator ideals. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics* (Leipzig, 1977), pp. 23-32, Teubner, Leipzig, 1978. (Editors) **80f:47036** 47D30 (46M99, 47B10)
- Rosenthal's inequality and its application in the theory of operator ideals. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics* (Leipzig, 1977), pp. 80-88, Teubner, Leipzig, 1978. (N. Tomczak-Jaegermann) **80m:47041** 47D30 (46H10)
- (with Carl, B.) Some contributions to the theory of s-numbers. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 1 (1978), 65-76. (Bernd Rosenberger) **80g:47025** 47B10 (47D30)
- Essential operators in Banach spaces. *Integral Equations Operator Theory* 1 (1978), no. 4, 589-591. (R. Pfaffenberger) **80c:47023** 47B05
- s-numbers and eigenvalues of operators in Banach spaces. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 5, 1053-1056. (M. Otelbaev) **80k:47022** 47A70
- Eigenvalues of integral operators. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 6, 1324-1327. (M. Otelbaev) **80k:47023** 47A70 (47G05)
- (with Heinrich, Stefan) A characterization of  $(\alpha, p, q)$ -integral operators. *Math. Nachr.* 89 (1979), 197-202. (D. J. H. Garling) **80j:47056** 47D30
- See also Proceedings: International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics, **80a:47002**
- Pignedoli, Antonio Mesonic scalar field in theory of Jordan-Thiry. *Proceedings of the International Symposium on Relativity and Unified Field Theory* (Calcutta, 1975-1976), pp. 107-110, Bose Inst. Phys. Sci., Univ. Calcutta, Calcutta, 1978. (Kenneth Dunn) **80a:83070** 83E15 (53B50)
- Unified fields in pentadimensional theory. *Rep. Math. Phys.* 14 (1978), no. 2, 261-284. (F. J. Flaherty) **80h:83035** 83E15 (53C50)
- Pignedoli, Antonio Mariano Pierucci, 28 October 1893-19 December 1976. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* 26 (1977), no. 1, v-ix (1978). (Editors) **80b:01023** 01A70 (78-03, 81-03)
- Pigo, Louis (with Dressler, Robert E.) Interpolation of Fourier transforms on sums of Fibonacci numbers. *Fibonacci Quart.* 16 (1978), no. 3, 193-194. (L. Thomas Ramsey) **80a:43009** 43A25 (10A35)
- (with Gardner, Patrick) The two sides of a Fourier-Stieltjes transform. *Arch. Math. (Basel)* 32 (1979), no. 1, 75-78. (Yves Meyer) **80f:43017** 43A46 (43A25)
- Pigozzi, Diego Kinematic geometric properties of precession motions. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 6, 518-521 (1978). (Author's summary) **80e:70008** 70E15 (15A90)
- Pflü, L. (with Kikas, Eve) Gravitational interaction of spherically symmetric scalar waves. (Russian. Estonian and English summaries) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* 27 (1978), no. 3, 307-318. (From the summary) **80a:83062** 83D05 (53B35)
- Pik, Jiří A note on connections between OL-languages and context-free languages. *Kybernetika (Prague)* 15 (1979), no. 2, 136-140. (Author's summary) **80g:68096** 68F05
- Pike, E. R. (with McWhirter, J. G.) On the numerical inversion of the Laplace transform and similar Fredholm integral equations of the first kind. *J. Phys. A* 11 (1978), no. 9, 1729-1745. (Authors' summary) **80a:65277** 65R10 (65Dxx)
- Pikulin, V. P. A mixed problem for a weakly linear inhomogeneous hyperbolic equation. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst.* No. 334 (1977), 120-123. (V. G. Kravchenko) **80j:35069** 35L70
- The global solution of weakly nonlinear hyperbolic equations in a Hilbert space. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 9, 1659-1669, 1724. (A. Ramm) **80f:34059** 34G20 (35L10)
- A global solution of a nonlinear noncoercive parabolic equation. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst.* No. 357 (1978), 71-74. (J. Král) **80j:35055** 35K55
- Pileckas, K. I. (with Solonnikov, V. A.) Some spaces of solenoidal vectors, and the solvability of a boundary value problem for a system of Navier-Stokes equations in domains with noncompact boundaries. (Russian. English summary) Investigations on linear operators and the theory of functions, VIII. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 73 (1977), 136-151, 233 (1978). (Authors' summary) **80f:35109** 35Q10
- Pillbousian, Philippe Régression du minimax. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 19, A921-A923. (Author's summary) **80e:62047** 62J02
- Pillidi, V. S. (with Sazonov, L. I.) Bisingular integral operators in spaces of Hölder functions. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 2, 278-282. (T. A. Ebanoidze) **80b:47056** 47G05 (45E05)
- Invariant subspaces of multiple weighted shift operators. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 2, 373-398, 480. (D. Sarason) **80k:47036** 47B37
- Similarity of multiple weighted shift operators. (Russian) *Izv. Serebro-Kavkaz. Nauchn. Centra Vysht. Shkoly Ser. Estestv. Nauk.* 1979, no. 3, 8-10, 107. (D. Sarason) **80k:47032** 47B37
- Pillipović, S. (with Pap, E.) A sequential theory of some spaces of generalized functions. *Publ. Inst. Math. (Beograd) (N.S.)* 25(39) (1979), 122-130. (G. Marinescu) **80b:46055** 46F05
- Piljugin, S. Ju. (with Pliss, V. A.) The boundary of a stable invariant set of the Morse-Smale system. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 11, 1997-2001, 2107. (P. Brunovsky) **80j:58044** 58F09 (58F20)
- Phase diagrams of Morse-Smale systems with connected connections. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 2, 55-56, 162. (J. S. Joel) **80d:58037** 58F10 (34D20)
- Simple connectedness with preservation of the phase diagram. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 3, 408-416, 571. (M. I. Brin) **80b:58036** 58F10 (34D30)
- The number of periodic points of a diffeomorphism. (Russian) *Mat. Zametki* 25 (1979), no. 6, 933-938, 958. (A. Morimoto) **80g:58043** 58F20
- Piljugin, V. B. Behavior of trajectories on the center manifold of a system with one zero root. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 10, 1907-1908, 1920. (A. Morimoto) **80k:58069** 58F10 (34D99, 58F35)
- Pillai, K. C. S. (with Chu, S. Sylvia) Power comparisons of two-sided tests of equality of two covariance matrices based on six criteria. *Ann. Inst. Statist. Math.* 31 (1979), no. 2, 185-205. (P. R. Krishnaiah) **80m:62046** 62H10
- Pillay, Anand Number of countable models. *J. Symbolic Logic* 43 (1978), no. 3, 492-496. (John Rosenthal) **80a:03037** 03C15 (03C35)
- de Pillis, John Faster convergence for iterative solutions to systems via three-part splitting. *SIAM J. Numer. Anal.* 15 (1978), no. 5, 888-911. (L. W. Ehrlich) **80a:65069** 65F10
- Improved convergence for linear systems using three-part splittings. *Functional analysis methods in numerical analysis (Proc. Special Session, Annual Meeting, Amer. Math. Soc., St. Louis, Mo., 1977)*, pp. 97-114, *Lecture Notes in Math.*, 701, Springer, Berlin, 1979. (I. M. Sheffer) **80d:65071** 65J10 (47A50, 65F10)
- di Pillo, G. See Di Pillo, G.
- Pilsworth, B. W. (with Baldwin, J. F.) A theory of fuzzy probability. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979)*, pp. 53-61, IEEE, Long Beach, Calif., 1979. (S. K. Pal) **80m:94119** 94D05 (03E72, 60A99)
- (with Baldwin, J. F.) Axiomatic approach to implication for approximate reasoning with fuzzy logic. *Fuzzy Sets and Systems* 3 (1980), no. 2, 193-219. (Authors' summary) **80m:03058** 03B52 (68G15)
- Pimentel, B. M. (with Zimmerman, A. H.) A note on the energy moments. *J. Phys. A* 13 (1980), no. 2, 757-760. (Authors' summary) **80k:81072** 81D99 (82A15)
- Pimsner, Mihail On the Ext-group of an AF-algebra. II. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 7, 1085-1088. (P. A. Fillmore) **80j:46113** 46M20 (46L05)
- Pin, J.-E. Sur un cas particulier de la conjecture de Cerny. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978)*, pp. 345-352, *Lecture Notes in Comput. Sci.*, 62, Springer, Berlin, 1978. (J. Cerny) **80d:68074** 68D50 (68D30)
- Sur le monoïde syntactique de  $L^*$  lorsque  $L$  est un langage fini. (English summary) *Theoret. Comput. Sci.* 7 (1978), no. 2, 211-215. (André Lentini) **80b:20086** 20M35 (68F05)
- Piña, E. On the De Donder-Meixner transformations in nonequilibrium thermodynamics. *Phys. A* 98 (1979), no. 3, 613-619. (M. Dutta) **80k:80012** 80A99 (82A35)
- Pinar, Jean-Paul (with McMenamin, J. Stuart) Specification and estimation of dynamic demand systems incorporating polynomial price response functions. An application to U. S. clothing imports. *J. Econometrics* 7 (1978), no. 2, 147-162. (Authors' summary) **80g:62083** 62P20
- Pinchon, Didier (with Moulin-Ollagnier, Jean) Une nouvelle démonstration du théorème de E. Følner. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 7, A557-A560. (Authors' summary) **80a:43004** 43A07 (28D15)
- (with Moulin-Ollagnier, Jean) Groupes pavables et principe variationnel. *Z. Wahrsch. Verw. Gebiete* 48 (1979), no. 1, 71-79. (Manfred Denker) **80g:28019** 28D20 (22D40, 58F99)
- Pinchuk, B. (with Beller, E.) Minimal  $H^2$  interpolation in the Carathéodory class. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 289-293. (Y. Komatu) **80b:30027** 30D50
- Pinchuk, S. I. Proper holomorphic mappings of strictly pseudoconvex domains. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 1, 30-33. (Jan Chmielowski) **80d:32019** 32F15
- Holomorphic mappings of real-analytic hypersurfaces. (Russian) *Mat. Sb. (N.S.)* 105(147) (1978), no. 4, 574-593, 640. (G. M. Henkin) **80k:32022** 32F25 (32H99)
- Pincus, David A note on the cardinal factorial. *Fund. Math.* 98 (1978), no. 1, 21-24. (Gabriel Lollj) **80e:03060** 03E25 (03E10)
- Pincus, Joel D. Symmetric singular integral operators with arbitrary deficiency. *Topics in functional analysis (essays dedicated to M. G. Krein on the occasion of his 70th birthday)*, pp. 241-281, *Advances in Math., Suppl. Studies*, 3, Academic Press, New York, 1978. (N. K. Karapetjan) **80f:45024** 45P05 (45E99, 47G05)
- Pincon, Georges (with Simon, Jacques) Non-linear representations of inhomogeneous groups. *Lett. Math. Phys.* 2 (1977/78), no. 6, 499-504. (J. F. Cornwell) **80a:22018** 22E45 (81C40)
- Pinder, George F. (with Frind, Emil O.) A collocation finite element method for potential problems in irregular domains. *Internat. J. Numer. Methods Engng.* 14 (1979), no. 5, 681-701. (Ranbir S. Sandhu) **80e:65100** 65N30
- Pindor, Maciej Padé approximants and an electromagnetic formfactor in  $\Phi^4$  model. *Acta Phys. Polon. B* 9 (1978), no. 7, 617-637. (Nadine Bessis) **80i:81068** 81G25
- Matrix variational Padé approximants and multistep square-well potentials. *Lett. Math. Phys.* 3 (1979), no. 3, 223-228. (Author's summary) **80b:81036** 81C99 (41A21)
- Pinedo, Michael (with Weiss, Gideon) Scheduling of stochastic tasks on two parallel processors. *Naval Res. Logist. Quart.* 26 (1979), no. 3, 527-535. (Andrew Yao) **80h:90089** 90B35 (68C05)
- Pinelis, I. F. Distribution of sums of independent random variables with values in a Banach space. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 3, 630-637. (W. A. Woyczynski) **80f:60010** 60B11
- Pingree, David Islamic astronomy in Sanskrit. (Arabic summary) *J. Hist. A.-Sci.* 2 (1978), no. 2, 315-330, 425. (R. C. Gupta) **80g:01002** 01A30 (01A32, 70-01)
- Pinkava, Václav On some manipulative properties of the  $\pi$ -algebras. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979)*, pp. 139-142, IEEE, Long Beach, Calif., 1979. (János Bagyinszki) **80m:03056** 03B50 (03G25)



- Pinas, Allan** (with Micchelli, Charles A.) Some problems in the approximation of functions of two variables and  $n$ -widths of integral operators. *J. Approx. Theory* 24 (1978), no. 1, 51–77. (Bl. Sendoff) **80a:41020** 41A35  
(with de Boor, Carl) Proof of the conjectures of Bernstein and Erdős concerning the optimal nodes for polynomial interpolation. *J. Approx. Theory* 24 (1978), no. 4, 289–303. (A. Ramm) **80d:41003** 41A05  
(with Micchelli, Charles A.) The  $n$ -widths of rank  $n+1$  kernels. *J. Integral Equations* 1 (1979), no. 2, 111–130. (T. Bojanov) **80g:41019** 41A46 (46E99)  
Matrices and  $n$ -widths. *Linear Algebra Appl.* 27 (1979), 245–278. (Donald Kershaw) **80k:15026** 15A45 (41A46)
- Pinas, R.** (with Gerlein, O. V.) Goodness-of-fit tests based on a measure of divergence between two scalar products. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 2, 263–274. (W. Hoeffding) **80a:62055** 62G10 (62E20)
- del Pino, Guido E.** On the asymptotic distribution of  $k$ -spacings with applications to goodness-of-fit tests. *Ann. Statist.* 7 (1979), no. 5, 1058–1065. (Richard A. Johnson) **80f:62053** 62G20 (62E20)
- Pinaker, A. G.** Linear optimization in ordered spaces. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 5, 1012–1015. (Editors) **80a:90090** 90C05  
The transportation problem in function spaces. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 6, 1418–1420, 1440. (Stefan Tigan) **80a:90158** 90C48 (90C08)
- Pinaker, M. S.** (with Bassalygo, L. A.) Correction of errors in channels with defects. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 6, 1361–1364. (S. Guisgu) **80d:94015** 94A40
- Pinskii, A. I.** (with Levin, B. P.) Classification of random collections. (Russian) *Learning algorithms in control systems and in data processing systems* (Russian), pp. 8–15, 125, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (Authors' summary) **80e:62044** 62H30 (68G10)
- Pinsky, Mark A.** Large deviations for diffusion processes. *Stochastic analysis* (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1978), pp. 271–283, Academic Press, New York, 1978. (A. D. Wentzell (Ventcel')) **80b:60101** 60J60  
The spectrum of the Laplacian on a manifold of negative curvature. I. *J. Differential Geom.* 13 (1978), no. 1, 87–91. (P. Günther) **80g:58049** 58G25 (35P15)  
Averaging an alternating series. *Math. Mag.* 51 (1978), no. 4, 235–237. (B. E. Rhoades) **80b:40005** 40G99  
See also *Stochastic analysis*, **80b:60006**
- Pinsky, Stephen S.** (with Palmer, William F.) Dense and dilute instanton–anti-instanton pair configurations. *Phys. Rev. D* (3) 21 (1980), no. 2, 551–552. (Authors' summary) **80k:81108** 81E10  
(with Palmer, William F.) The effect of instanton–anti-instanton interactions on current correlation functions in massless QCD. *Z. Phys. C* 3 (1980), no. 3, 209–222. (Authors' summary) **80k:81158** 81G05 (82A40)
- Pinter, Charles C.** Cylindric algebras with a property of Rasiowa and Sikorski. *Mathematical logic* (Proc. First Brazilian Conf., State Univ. Campinas, Campinas, 1977), pp. 225–231, *Lecture Notes in Pure and Appl. Math.*, 39, Dekker, New York, 1978. (D. Monk) **80c:03076** 03G15  
Properties preserved under definitional equivalence and interpretations. *Z. Math. Logik Grundlag. Math.* 24 (1978), no. 6, 481–488. (W. Schwabhauser) **80b:03039** 03C52
- Pinter, János** ★ Evaluation of a stochastic gradient optimization algorithm. With Hungarian and Russian summaries. *ESZK*, 23. *Computing Center for Universities, Department of Applied Mathematics, Budapest*, 1978. 54 pp. ISBN 963-451-031-0 (J. Mockus) **80d:90060** 90C15  
On the convergence and computational efficiency of random search optimization. *Third Symposium on Operations Research* (Univ. Mannheim, Mannheim, 1978), Section 3, pp. 347–362, *Operations Research Verfahren*, 33, Hain, Meisenheim, 1979. (Istvan Deak) **80g:65072** 65K05 (65K10, 90C99)
- Pintz, János** Siegel roots and the prime number theorem. (Hungarian. English summary) *Mat. Lapok* 27 (1976/79), no. 3-4, 355–360. (András Sárközi) **80k:10040** 10H10 (12A70)  
See also *Turán, Pál*, **80k:10060**
- Pins, A. G.** The cardinality of models of the theories of the calculus with the Härtig quantifier. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 6, 1349–1356, 1439. (Martin Weese) **80c:03041** 03C80  
A certain enumeration of one-place predicates. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 1, 54–60. (Martin Weese) **80j:03053** 03C80 (03B25)  
Collections of pairwise incomparable linear orders of a given degree of dispersal. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 7, 62–65. (O. V. Belegradsk) **80m:06001** 06A05 (03E05)  
Elementary equivalence of topological spaces. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 2, 433–439, 464. (B. Weglorz) **80b:03050** 03C65 (54A25)  
The Hanf number for a calculus with the Härtig quantifier. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 2, 440–441, 462. (Martin Weese) **80d:03034** 03C80 (03C85)
- Pinzani, R.** (with Cesarini, F.; Soda, G.; Sprugnoli, R.) A bottom-up approach to binary trees paging. *Les arbres en algèbre et en programmation* (4ème Colloq. Lille, Lille, 1979), pp. 44–55, Univ. Lille I, Lille, 1979. (Authors' summary) **90m:68028** 68B20 (68E10)
- Piórek, Józef** On integral equations in a Banach space. *Ann. Polon. Math.* 36 (1979), no. 2, 111–121. (J. M. Cushing) **80d:45003** 45D05 (47G05)
- Piotrowski, Wolf-Lothar** (with Köhler, Egmont) Einige Bemerkungen zur Theorie der  $i$ -designs. VIII. Oberwolfach-Tagung über Operations Research (1976), pp. 108–122, *Operations Research Verfahren*, XXIII, Hain, Königstein, 1977. (Luc Teirlinck) **80c:05029** 05B05
- Piperrski, Boro M.** On a class of homogeneous linear third-order differential equations. (Macedonian. French summary) *Prirod.-Mat. Fak. Univ. Kiril Metodij Skopje Godišen Zb.* 28 (1977), 73–81. (Editors) **80k:34007** 34A05
- Pippard, Brian** The magnetoresistance of polycrystalline copper. *Philos. Trans. Roy. Soc. London Ser. A* 291 (1979), no. 1385, 569–598. (A. K. Rajagopal) **80g:82041** 82A65
- Pippenger, Nicholas** On rearrangeable and nonblocking switching networks. *J. Comput. System Sci.* 17 (1978), no. 2, 145–162. (Michitaka Kameyama) **80d:94036** 94C10  
(with Kleiman, Mark) An explicit construction of short monotone formulae for the monotone symmetric functions. *Theoret. Comput. Sci.* 7 (1978), no. 3, 325–332.
- (Claus-Peter Schnorr) **80a:68031** 68C05 (94C10)  
(with Fischer, Michael J.) Relations among complexity measures. *J. Assoc. Comput. Mach.* 26 (1979), no. 2, 361–381. (Eugene Levner) **80f:68052** 68C25 (03D15, 68J05)  
(with Miller, Raymond E.; Rosenberg, Arnold L.; Snyder, Lawrence) Optimal 2,3-trees. *SIAM J. Comput.* 8 (1979), no. 1, 42–59. (Richard A. DeMillo) **80c:68050** 68E10 (68B10)
- Isni-Piquard, F.** See *Last-Piquard, F.*
- Piragas, K. A.** (with Aleksandrov, A. N.) Geodesic structure. I. Reciprocal dynamics of geodesics. (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 1, 71–83. (S. G. Mamaev) **80d:83019** 83C10 (53C80, 58F17)
- Piragas, L. E.** Nonlinear effects in the relative dynamics of test bodies in general relativity. I. The second approximation for unperturbed systems. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1978, no. 11, 74–81. (S. G. Mamaev) **80f:83012a** 83C10 (53C80, 58F17)  
Nonlinear effects in the relative dynamics of test bodies in general relativity. II. The influence of small perturbing forces. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1978, no. 12, 21–30. (S. G. Mamaev) **80f:83012b** 83C10 (53C80, 58F17)
- Pirashvili, Z. A.** (with Sulaberidze, T. G.) On optimal prediction and filtering of nonlinearly transformed Gaussian random processes. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* 91 (1978), no. 2, 313–316. (Ju. M. Kabanov) **80m:60051** 60G25 (62M20)
- Pirashvili, George** Inner functions with a level-set of infinite length. *Complex analysis* Joensuu 1978 (Proc. Colloq., Univ. Joensuu, Joensuu, 1978), pp. 309–313, *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (R. McLaughlin) **80j:30045** 30D50  
(with Belna, Charles; Bonar, D. D.; Carroll, F. W.; Colwell, P.) Strongly annular Tauji functions. *J. London Math. Soc.* (2) 19 (1979), no. 1, 79–92. (V. I. Gavrilov) **80c:30011** 30D30 (30D40)
- Pirashvili, T. I.** Algebraic Karoubi-Villamayor and Bass functors for ringoids. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* 92 (1978), no. 3, 573–576. (Daniel R. Grayson) **80k:18015** 18F25
- Piroux, Rémi** (with de Bivar-Weinholtz, António) Formule de Trotter pour l'opérateur de Schrödinger avec un potentiel singulier complexe. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 10, A539–A542. (Authors' summary) **80c:47040** 47F05 (35P05)  
L'opérateur de Schrödinger sur  $\mathbb{R}$  avec un potentiel mesurable positif. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 5, A221–A224. (Author's summary) **80m:35022** 35J10
- Pirdžanov, B.** Time of attainment of a positive level. (Russian. English summary) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* 1978, no. 5, 3–7. (J. G. Wendel) **80c:60091** 60J15  
Random walk generated by two renewal processes. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 5, 680–685, 718. (Walter Warmuth) **80f:60086** 60K25 (60J15)
- Piret, Philippe** Generalized permutations in convolutional codes. (Russian) *Inform. and Control* 38 (1978), no. 2, 213–239. (Ian Blake) **80b:94025** 94B10  
Sliding block implementation of block codes. *IEEE Trans. Inform. Theory* 25 (1979), no. 6, 725–728. (Author's summary) **80m:94038** 94A34  
Addendum to: "Generalized permutations in convolutional codes" [Inform. and Control 38 (1978), no. 2, 213–239; MR 80b:94025]. *Inform. and Control* 40 (1979), no. 3, 332–334. (Ian Blake) **80j:94028** 94B10
- Pirlić, P.** (with Prešnjajder, P.) Static spherically symmetric solutions of the classical Yang-Mills equations. *Nuclear Phys. B* 142 (1978), no. 3, 229–235. (P. K. Smeets) **80a:81060** 81E10 (58D30)
- Pirou, A.** Propagation et réflexion de la propriété de transmission des distributions de Fourier. *Équations aux dérivées partielles* (Proc. Conf., Saint-Jean-de-Monts, 1977), pp. 172–180, *Lecture Notes in Math.*, 660, Springer, Berlin, 1978. (P. Schapira) **80e:58041b** 58G15 (35E99)  
(with Hirschowitz, André) Propriétés de transmission pour les distributions intégrales de Fourier. *Comm. Partial Differential Equations* 4 (1979), no. 2, 113–217. (P. Schapira) **80c:58041a** 58G15 (35E99)
- Piri, Udo** See *Bicadze, A. V.*, **80c:30002**
- Pirogov, S. A.** Phase diagrams of quantum lattice systems. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 2, 284–286. (Etang Chen) **80m:82014** 82A15
- Piróg-Rzepecka, Krystyna** (with Ślupski, Jerzy; Halkowska, Katarzyna) ★ Logika i teoria mnogości. (Polish) [Logic and set theory] *Państwowe Wydawnictwo Naukowe (PWN), Warsaw*, 1978. 309 pp. (Mieczysław Omyła) **80a:03001** 03-01 (04-01)
- Piron, C.** (with Aerts, Dirk) The role of the modular pairs in the category of complete orthomodular lattice. *Lett. Math. Phys.* 3 (1979), no. 1, 1–10. (E. G. Beltrametti) **80f:81008** 81B10 (06C10)
- Pironneau, O.** (with Glowinski, Roland) Sur la résolution, via une approximation par éléments finis mixtes, du problème de Dirichlet pour l'opérateur biharmonique, par une méthode "quasi-directe" et diverses méthodes itératives. *Étude numérique des grands systèmes* (Proc. Sympos., Novosibirsk, 1976), pp. 151–181, *Méthodes Math. de l'Informatique*, 7, Dunod, Paris, 1978. (Georges A. Lebaud) **80b:65085** 65N30  
(with Glowinski, Roland; Mantel, B.; Periaux, J.)  $H^{-1}$  least squares method for the Navier-Stokes equations. *Numerical methods in laminar and turbulent flow* (Proc. First Internat. Conf., Univ. College Swansea, Swansea, 1978), pp. 29–42, Halsted, New York, 1978. (J. P. Hennart) **80d:76021** 76D05 (65P05)  
(with Glowinski, Roland) Application of the "quasidirect" method and iteration methods to the solution of the Dirichlet problem for a biharmonic operator in mixed approximation by finite elements. (Russian) *Numerical methods in mathematical physics, geophysics and optimal control* (Sympos., Novosibirsk, 1976) (Russian), pp. 34–57, 231, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (G. W. Hedstrom) **80b:65064** 65N30 (35J35)  
(with Glowinski, Roland) On numerical methods for the Stokes problem. *Energy methods in finite element analysis*, pp. 243–264, Wiley, Chichester, 1979. (R. Manohar) **80j:76024** 76D05 (65N30)  
(with Marocco, A.) Optimum design of a magnet with finite elements. *Modelling and optimization of complex systems* (Proc. IFIP-TC 7 Working Conf., Novosibirsk, 1978), pp. 253–263, *Lecture Notes in Control and Information Sci.*, 18, Springer, Berlin, 1979. (Authors' introduction) **80m:93035** 93C20

- (with Bristeau, M. O.; Glowinski, Roland; Periaux, J.; Perrier, P.) On the numerical solution of nonlinear problems in fluid dynamics by least squares and finite element methods. I. Least square formulations and conjugate gradient solution of the continuous problems. *Comput. Methods Appl. Mech. Engrg.* 17/18 (1979), part 3, 619-657. (Authors' summary) **80c:65099** 65N30 (49D07, 76D05)
- (with Sharma, O. P.) Sur le découpage de problèmes elliptiques dans des ouvertures cylindriques de  $\mathbb{R}^3$  avec des éléments finis prismatiques. (English summary) *RAIRO Anal. Numér.* 13 (1979), no. 1, 55-66, ii. (J. P. Hennart) **80c:65103** 65N30
- (with Glowinski, Roland) Numerical methods for the first biharmonic equation and the two-dimensional Stokes problem. *SIAM Rev.* 21 (1979), no. 2, 167-212. (From the summary) **80c:65101** 65N30 (76D99)
- Piro Vernier, Stella** On numerical method for a linear parabolic  $2n$ -order problem. (Italian summary) *Rend. Sem. Fac. Sci. Univ. Cagliari* 48 (1978), suppl., 51-60. (Author's summary) **80c:65119** 65P05
- Pirronello, V.** (with Anile, A. M.) High-frequency gravitational waves in a dissipative fluid. (Italian summary) *Nuovo Cimento B* (11) 48 (1978), no. 1, 90-101. (Gérard A. Maugin) **80b:83019** 83C35
- Pisani, Raffaele** Positive solutions for the Dirichlet problem for equations of parabolic type. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) 45 (1979), 43-57. (Jan Prüsa) **80m:35040** 35K20
- Pisanski, T.** Computability and solvability. (Slovenian. English summary) *Obzornik Mat. Fiz.* 25 (1978), no. 1, 41-54. (Editors) **80m:03004** 03-01
- Pisarenko, V. G.** The exact solution of the nonlinear Schrödinger equation describing the self-channeling of a laser beam. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 7* (1979), 554-560, 591. (D. ter Haar) **80g:78006** 78A40 (35Q20, 81C05)
- Almost circular orbits of a two-body system in general relativity. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 8* (1979), 656-662, 688. (Author's summary) **80g:83008** 83C15
- Pisarev, V. N.** (with Gadžiev, A. D.) The implicit finite difference method "rhombus" for numerical solution of the gas dynamics equations with heat conduction. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 2* (1979), 34 pp. (Authors' summary) **80g:76035** 76N15 (65N05)
- (with Gadžiev, A. D.) "ROMB": an implicit finite-difference method for the numerical solution of equations of gas dynamics with heat conduction. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 5, 1288-1303, 1358. (Authors' summary) **80g:76062** 76N15 (65M99)
- Pisareva, N. M.** (with Germanov, O. S.; Jakovlev, E. I.) The first integral of geodesic lines and symmetry groups. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 7 (194), 5-12. (Ju. E. Glikh) **80c:53006** 53A45 (58F99)
- Plick, Milan** Use of Bernstein polynomials in the Monte Carlo method. (Czech. English summary) *Ekonom.-Mat. Obzor* 14 (1978), no. 2, 199-203. (Author's summary) **80c:65022** 65C05
- Pisello, Daniel M.** Unified field theory with homotopic charge. *Internat. J. Theoret. Phys.* 17 (1978), no. 2, 143-147. (George S. Whiston) **80c:83049** 83E05 (57R25)
- (with de Ritis, R.; Finkelstein, David; Weil, D.) Local conserved currents in unified field theory. (Italian summary) *Nuovo Cimento A* (11) 48 (1978), no. 2, 184-188. (Authors' summary) **80c:83052** 83C99 (58D30)
- ★Gravitation, electromagnetism and quantized charge—the Einstein insight. *Ann Arbor Science Publishers, Inc., Ann Arbor, Mich.*, 1979. 96 pp. ISBN 0-250-40286-6 (Victor Wong) **80b:83038** 83E99
- (with de Ritis, R.; Platania, G.; Scudellaro, P.) A variational formulation for the Newtonian cosmology. (Italian summary) *Nuovo Cimento B* (11) 54 (1979), no. 2, 446-454. (Authors' summary) **80c:83052** 83F05
- recillas Pishnash, Sevin** See **Recillas Pishnash, Sevin**
- Pisier, Gilles** (with Marcus, Michael B.) ★Necessary and sufficient conditions for the uniform convergence of random trigonometric series. Lecture 1977/78. Lecture Notes Series, 50. Aarhus Universitet, Matematisk Institut, Aarhus, 1978. 38 pp. (not consecutively pagged). (J.-P. Kahane) **80j:42009** 42A20 (60G15)
- Topics on Grothendieck's theorem. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics* (Leipzig, 1977), pp. 44-57. *Teubner, Leipzig*, 1978. (S. V. Kisiljakov) **80j:47026** 47B10 (46B25)
- Ensembles de Sidon et espaces de cotype 2. *Séminaire sur la Géométrie des Espaces de Banach* (1977-1978), Exp. No. 14, 12 pp., *École Polytech., Palaiseau*, 1978. (Colin C. Graham) **80b:43010** 43A46 (60B11)
- Sur l'espace de Banach des séries de Fourier aléatoires presque sûrement continues. *Séminaire sur la Géométrie des Espaces de Banach* (1977-1978), Exp. No. 17-18, 33 pp., *École Polytech., Palaiseau*, 1978. (J.-P. Kahane) **80j:60054** 60G17 (42A16, 43A46)
- Some results on Banach spaces without local unconditional structure. *Compositio Math.* 37 (1978), no. 1, 3-19. (T. Figiel) **80c:46012** 46B20
- Grothendieck's theorem for noncommutative  $C^*$ -algebras, with an appendix on Grothendieck's constants. *J. Funct. Anal.* 29 (1978), no. 3, 397-415. (S. V. Kisiljakov) **80j:47027** 47B10 (46B25, 46L05)
- Some applications of the complex interpolation method to Banach lattices. *J. Analyse Math.* 35 (1979), 264-281. (Hermann König) **80m:46020** 46B30
- Pitl, Milan** Břetislav Šikola has died. (Czech) *Pokroky Mat. Fyz. Astronom.* 23 (1978), no. 6, 353. (Editors) **80j:01033** 01A70
- Pis'mennyi, I. L.** Harmonic linearization of single-valued nonlinear characteristics in the case of two-frequency oscillations. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 1, 183-191, 223 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 1, 135-143. (From the summary) **80b:93129** 93D99
- Pisot, Charles** See *Séminaire: Delange-Pisot-Poitou*, **80c:10002a**; *Séminaire: Delange-Pisot-Poitou*, **80c:10002b**; *Séminaire: Delange-Pisot-Poitou*, **80c:10003a**; *Séminaire: Delange-Pisot-Poitou*, **80c:10003b** and *Kahane, Jean-Pierre*, **80j:10058**
- Pister, K. S.** (with Ray, D.; Polak, Elijah) Sensitivity analysis for hysteretic dynamic systems: theory and applications. *Comput. Methods Appl. Mech. Engrg.* 14 (1978), no. 2, 179-208. (Authors' summary) **80c:93056** 93B35 (73K05)
- Pistone, G.** (with Bellomo, N.) Direct solution methods for a class of integral equations with random distribution of the inhomogeneous part. *Volterra equations* (Proc. Helsinki Sympos. Integral Equations, Otaniemi, 1978), pp. 24-34, *Lecture Notes in Math.*, 737, Springer, Berlin, 1979. (M. Z. Nashed) **80m:45021** 45L05 (93C22)
- Pistunov, V. I.** (with Vabičević, P. N.; Degjarëv, L. M.; Polehonov, Ju. Ju.; Šafranov, V. D.) Evolution of the equilibrium of a toroidal plasma string in the casing of a complex form. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 119* (1978), 33 pp. (V. P. Milant'ev) **80i:82036** 82A45
- Pitaevskii, L. P.** (with Lifšic, E. M.) ★Теоретическая физика ["Landau-Lifshits"]. Том IX. (Russian) [Theoretical physics. ["Landau-Lifshits"] Vol. IX] Статистическая физика. Часть 2. Теория конденсированного состояния. [Statistical physics. Part 2. The theory of a condensed state] "Nauka", Moscow, 1978. 448 pp. (errata). (Editors) **80d:82002** 82-02
- Pitcher, Everett** Counting focal points and characteristic roots. Memorial issue for Marston Morse. *Bull. Inst. Math. Acad. Sinica* 6 (1978), no. 2, part 1, 389-413. (U. D'Ambrosio) **80g:58020** 58E05 (34B25)
- Pitcher, Tom S.** An approximation theorem for likelihood ratios. *J. Multivariate Anal.* 8 (1978), no. 2, 324-327. (Robert Chen) **80b:60057** 60G30
- Piterburg, V. I.** Asymptotic expansions for the probabilities of large excursions of Gaussian processes. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 6, 1248-1251. (M. I. Jadrenko) **80b:60046** 60G15
- Pit'ev, N. P.** Coefficients of the gradient of the direction field in systems that permit separation of variables. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, no. 2, 99-103, 121. (J. Chrastina) **80k:70015** 70F15 (35C05, 70H05)
- Piticu, Maria Elena** Les choix doubles imaginaires dans le problème restreint des trois corps. *Ann. Fac. Sci. Univ. Nat. Zaire (Kinshasa) Sect. Math.-Phys.* No. 2 3 (1977), 205-214 (1978). (E. Leimanis) **80k:70011** 70F07
- Les singularités imaginaires dans le problème restreint des trois corps. *An. Univ. București Mat.* 28 (1979), 75-83. (George Bozis) **80k:70005** 70F07 (58F14)
- Pitig, Gh.** (with Simionescu, C.; Cocan, A.) Groupes discrets complets de certains groupes  $G$  résolubles. (Romanian summary) *Bul. Univ. Braşov Ser. C* 19 (1977), 65-70 (1978). (V. Oproiu) **80b:22015** 22E40
- Pitkaranta, Juhani** On the differential properties of solutions to Fredholm equations with weakly singular kernels. *J. Inst. Math. Appl.* 24 (1979), no. 2, 109-119. (Author's summary) **80i:65157** 65R20
- Asymptotic behavior of the solution of the integral transport equation in the vicinity of a curved material interface. *SIAM J. Appl. Math.* 36 (1979), no. 2, 200-218. (A. G. Gibbs) **80k:82080** 82A70 (45M05)
- Pitman, Jim** (with Dubins, Lester E.) A pointwise ergodic theorem for the group of rational rotations. *Trans. Amer. Math. Soc.* 251 (1979), 299-308. (R. T. Smythe) **80i:60062** 60G42 (28D99)
- Pitt, Loren D.** (with Tran, Lan H.) Local sample path properties of Gaussian fields. *Ann. Probab.* 7 (1979), no. 3, 477-493. (Robert J. Adler) **80g:60035** 60G15 (60G60)
- A compactness condition for linear operators of function spaces. *J. Operator Theory* 1 (1979), no. 1, 49-54. (Editors) **80b:47044** 47B38
- Pittaluga, Giovanna** (with Scarpante, Laura) Estimate of the Christoffel constants in the ultraspherical case. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 1, 107-113. (Authors' summary) **80c:65019** 65D30
- Pittenger, Arthur O.** (with Karr, Alan F.) An inverse balayage problem for Brownian motion. *Ann. Probab.* 7 (1979), no. 1, 186-191. (Michèle Mastrangelo-Dehen) **80b:60106** 60J65 (31B99, 60J50)
- Note on a square function inequality. *Ann. Probab.* 7 (1979), no. 5, 907-908. (Roger L. Jones) **80j:60069** 60G42
- (with Houck, David J.) Analytic proofs of a network feasibility theorem and a theorem of Fulkerson. *Linear Algebra Appl.* 24 (1979), 151-156. (Edward Minieka) **80b:90056** 90B10 (15A99)
- (with Karr, Alan F.) The inverse balayage problem for Markov chains. II. *Stochastic Process. Appl.* 9 (1979), no. 1, 35-53. (Hermann Rost) **80i:60105** 60J45
- Pittl, Jan** On two subclasses of real-time grammars. *Mathematical foundations of computer science, 1978* (Proc. Seventh Sympos., Zakopane, 1978), pp. 426-435, *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (I. M. Havel) **80c:68097** 68F05
- Pittman, Franz** (with Reimer, Manfred) Intervallfunktionale vom Gauss-Legendre-Typ. *Math. Nachr.* 87 (1979), 239-248. (K. Jetter) **80c:65030** 65D30
- Pittner, L.** (with Gesztesy, F.) Diffraction of non-relativistic electron waves by a cylindrical capacitor. *J. Phys. A* 12 (1979), no. 7, 1091-1104. (Authors' summary) **80d:78005** 78A15
- Piva, R.** (with Di Carlo, A.; Guj, G.) A study on curvilinear coordinates and macro-elements for multiply connected flow fields. *Sixth International Conference on Numerical Methods in Fluid Dynamics* (Proc. Conf., Tbilisi, 1978), pp. 161-168, *Lecture Notes in Phys.*, 90, Springer, Berlin, 1979. (William H. H. Banks) **80b:76012** 76D05 (65-04)
- Piwnicki, Konrad** Some applications of the theory of entire functions to the analysis of band-limited signals. (Polish. Russian and English summaries) *Arch. Elektrotech. (Warsaw)* 27 (1978), no. 4, 773-788. (Authors' summary) **80c:94016** 94A12
- Piwowski, Marek** (with Welnicki, Ludwik) Finding a complete word for a finite set. (Polish. English and Russian summaries) *Podstawy Sterowania* 8 (1978), no. 4, 375-387. (Authors' summary) **80c:68049** 68B15
- Pitxley, A. F.** (with Fried, Ervin) The dual discriminant function in universal algebra. *Acta Sci. Math. (Szeged)* 41 (1979), no. 1-2, 83-100. (R. W. Quackenbush) **80g:08007** 08A40
- Characterizations of arithmetical varieties. *Algebra Universalis* 9 (1979), no. 1, 87-98. (Jaroslav Ježek) **80d:08012** 08B10
- Pitxley, Carl P.** A note on the dimensions of projections of cells in  $E^n$ . *Israel J. Math.* 31 (1979), no. 2-3, 117-123. (J. W. Maxwell) **80k:57023** 57N15 (57N75)
- Pizer, Arnold** A note on a conjecture of Hecke. *Pacific J. Math.* 79 (1978), no. 2, 541-548. (A. N. Andrianov) **80j:10028** 10D24
- Pizlak, Robert** Orthomodular lattices and quantum physics. *Math. Mag.* 51 (1978), no. 5, 299-303. (A. R. Marlow) **80a:81004** 81B05 (06C05)
- Pjarna, K.** Optimal scaling of nominal attributes. (Russian) *Trudy Vyčisl. Centra Tartu. Gos. Univ.* No. 42 (1978), 36-52. (F. Pecka) **80a:62080** 62H20 (62-07)
- Pjartil, A. S.** Cycles of a system of two complex differential equations in the vicinity of a stationary point. (Russian) *Trudy Moskov. Mat. Obšč.* 37 (1978), 95-106, 270. (Franz



- Kappel 80:34005 34A20 (34D30, 58F14)
- Knecht, V. S. Convex cones of  $T$ -finite type. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 5(203), 197-198. (I. Dolgachev) 80:32021 32M10 (22E45, 53C30, 57S25)
- Knecht, E. S. (with Alzerman, M. A.) Foundations of the theory of discontinuous systems. (Russian) *VII. Internationale Konferenz über Nichtlineare Schwingungen* (Berlin, 1975), Band I, Teil 1, pp. 25-34. *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977, 3, Akademie-Verlag, Berlin, 1977. (J. M. Skowronski) 80:93005 93A10 (49B10, 93C99)
- Krasniansky, Antonas See Petrasukas, A.
- Krich, Detlef (with Baringhaus, Ludwig; Schmitz, Norbert) ★Stochastik I. Eine elementare Einführung in Grundbegriffe der Wahrscheinlichkeitsrechnung und Statistik. Studien-Texte: Mathematik. Akademische Verlagsgesellschaft, Wiesbaden, 1978. 250 pp. ISBN 3-400-00390-5 (From the author's forward and chapter headings) 80:60002 60-01 (62-01)
- (with Diepenbrock, F. R.) A statistical characterization of localizable measure spaces. *Game theory and related topics* (Proc. Sem., Bonn and Hagen, 1978), pp. 239-242. North-Holland, Amsterdam, 1979. (J. R. Blum) 80:62006 62B20 (62C99)
- Krich, R. L. (with Paul, S. R.) Inference sensitivity for Poisson mixtures. *Biometrika* 65 (1978), no. 3, 591-602. (I. N. Volodin) 80:62040 62F35
- Krich, A. M. (with Kamenek, M. I.; Nozdin, I. V.) A function of the production capacity of construction-assembly organization. (Russian) *Ekonom. i Mat. Metody* 14 (1978), no. 2, 290-301. (From the introduction) 80:90044 90B30
- Krich, N. P. The method of two-frequency representation in the theory of periodically perturbed quasilinear systems. (Russian) *Mat. Fiz. No. 25* (1979), 53-61, 119. (R. R. Ahmerov) 80:34050 34C29
- Krich, David A. Some polynomial and integer divisibility problems are NP-hard. *SIAM J. Comput.* 7 (1978), no. 4, 458-464. (Jan van Leeuwen) 80:68055 68C25
- Fast verification, testing, and generation of large primes. *Theoret. Comput. Sci.* 9 (1979), no. 1, 1-16. (J. L. Selfridge) 80:10012 10A25 (68C25)
- Krich, O. A. Characterization of the spectra of quasiperiodic problems for a Sturm-Liouville equation. (Russian) *Teor. Funkcii Funktsional. Anal. i Prilozhen. No. 31* (1979), 129-134, 168. (Author's summary) 80:34035 34B25
- Krich, B. A. (with Maz'ya, V. G.; Morozov, N. F.) The stressed-strained state in the neighborhood of a crack apex at nonlinear bending of a plate. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 4, 889-892. (R. Kodnar) 80:35121 35Q99 (73M05)
- Meromorphic pseudodifferential operator-valued functions. (Russian) *Izv. Vys. Ucheb. Zaved. Matematika* 1978, no. 4(191), 79-90. (V. L. Roytburd) 80:35186 35S05 (47G05)
- On the algebra of pseudo-differential operators in spaces with weight norms. (Russian) *Mat. Sb. (N.S.)* 106(148) (1978), no. 2, 296-320. (Rémil Vaillancourt) 80:47082 47G05 (35S05)
- Planchar, J. (with Hutzler, D.) La méthode de Wittrick et Williams pour calculer les fréquences propres des structures élastiques. Application aux structures répétitives. (English summary) *Bull. Direction Études Rech. Sér. C Math. Inform.* 1978, no. 2, 41-63, 3. (D. Isen) 80:73052 73K99 (73C99)
- Planitz, M. (with Glencross, M. J.; Wong, Edward T.) Three slants on the generalised inverse. *Math. Gaz.* 63 (1979), no. 425, 173-185. (M. Lotkin) 80:15002 15A09 (65F05)
- Plant, Richard E. Crustacean cardiac pacemaker model—an analysis of the singular approximation. *Math. Biosci.* 36 (1977), no. 1-2, 149-171. (Author's summary) 80:92018 92A05
- Plante, J. F. Foliations of 3-manifolds with solvable fundamental group. *Invent. Math.* 51 (1979), no. 3, 219-230. (Elmar Vogt) 80:57020 57R30
- Plass, Michael F. (with Aspöhl, Bengt; Tarjan, Robert Endre) A linear-time algorithm for testing the truth of certain quantified Boolean formulas. *Inform. Process. Lett.* 8 (1979), no. 3, 121-123. (Henry S. Warren, Jr.) 80:68050 68C25
- Plattino, A. (with Hernández, E. S.; Szysz, L.) Self-consistent pseudopotentials in the thermodynamic limit. I. The correlation field. *Phys. Rev. C* (3) 20 (1979), no. 4, 1572-1577. (Authors' summary) 80:82007 82A05
- Plastrin, F. Connectedness and local connectedness of simple extensions. *Bull. Soc. Math. Belg.* 28 (1976), no. 1, 43-51. (Editors) 80:54003 54A10 (54D05)
- Platania, G. (with de Ritis, R.; Pisello, Daniel M.; Scudellaro, P.) A variational formulation for the Newtonian cosmology. (Italian summary) *Nuovo Cimento B* (11) 54 (1979), no. 2, 446-454. (Authors' summary) 80:83052 83F05
- Plath, P. J. See *Proceedings: Bremer Konferenz zur Chemie, 80:92018a* and *Proceedings: Bremer Konferenz zur Chemie, 80:92018b*
- von Plato, Jan The interpretation of probability in statistical physics. (Finnish. English summary) *Arkhimedes* 31 (1979), no. 1, 23-29. (Author's summary) 80:82022 82A05
- Platone Garroni, Maria Giovanna (with Troianiello, Giovanni Maria) Some regularity results and a priori estimates for solutions of variational and quasi-variational inequalities. A survey. *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis* (Rome, 1978), pp. 493-518. *Pitagora, Bologna*, 1979. (Alexander A. Pankov) 80:35060 35J65 (35K60, 47H05, 49A29)
- (with Vivaldi, Maria Agostina) Existence, regularity and dual estimates for the solution of a quasivariational inequality relative to a quasilinear operator. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 1, 154-167. (Carlo Sbordone) 80:35062 35J20
- (with Lamberti, Lamberto) A variational problem for population dynamics with a unilateral constraint. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 3, 876-896. (Authors' summary) 80:49007 49A22 (92A15)
- (with Vivaldi, Maria Agostina) Régularité de la solution forte de problèmes non linéaires d'évolution. *Czechoslovak Math. J.* 29(104) (1979), no. 3, 430-450. (Jacques Robert) 80:35095 35K22
- Platonov, V. P. (with Bondarenko, A. A.; Rapinčuk, A. S.) Numbers of classes of algebraic groups. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 1, 28-31. (Author's review (A. A. B.)) 80:10035 10C30 (20G15)
- Platonova, O. A. The shadow and terminator of a hypersurface in general position. (Russian) *Funktsional. Anal. i Prilozhen.* 13 (1979), no. 1, 77-78. (V. Oproiu) 80:58012 58C27
- Platte, Erich Ein elementarer Beweis des Zariiski-Lipman-Problems für gradierte analytische Algebren. *Arch. Math. (Basel)* 31 (1978/79), no. 2, 143-145. (Y. Nakai) 80:13005 13B10 (13H05, 14B07)
- Platzeck, Maria Inés On algebras stably equivalent to an hereditary Artin algebra. *Canad. J. Math.* 30 (1978), no. 4, 817-829. (C. M. Ringel) 80:16017 16A35 (16A45)
- (with Auslander, Maurice; Bautista Ramos, Raymundo; Reiten, Idun; Smalø, S. O.) Almost split sequences whose middle term has at most two indecomposable summands. *Canad. J. Math.* 31 (1979), no. 5, 942-960. (Manabu Harada) 80:16021 16A64
- (with Auslander, Maurice; Reiten, Idun) Coxeter functors without diagrams. *Trans. Amer. Math. Soc.* 250 (1979), 1-46. (P. Donovan) 80:16027 16A64 (16A35)
- Platzman, Loren Kerry Comments on: "Optimal and suboptimal stationary controls for Markov chains" (IEEE Trans. Automat. Control 23 (1978), no. 3, 388-394) by P. Varaiya. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 375. (Editors) 80:93005 93E20
- See also Looze, Douglas P., 80:93004b
- Plazzi, Piero An  $L^2$ -continuity theorem for certain pseudodifferential operators. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* 57 (1977), 217-230 (1978). (Cesare Parenti) 80:47044 47G05
- Plessants, P. A. B. Addendum: "Rearrangements that preserve convergence" (J. London Math. Soc. (2) 15 (1977), no. 1, 134-142). *J. London Math. Soc.* (2) 18 (1978), no. 3, 576. (Editors) 80:05006 05A05 (40A05)
- (with Lunn, W. F.; Stephens, N. M.) Arithmetic properties of Bell numbers to a composite modulus. I. *Acta Arith.* 35 (1979), no. 1, 1-16. (L. Carlitz) 80:05006 05A10 (10A40)
- (with Gupta, Hansraj) Partitions into powers of  $m$ . *Indian J. Pure Appl. Math.* 10 (1979), no. 6, 655-694. (G. L. Alexanderson) 80:10014 10A45
- Pleban, Jerzy F. (with Kowalczyński, Jerzy K.) Errata: "A few properties of a certain class of degenerate space-times" (Internat. J. Theoret. Phys. 16 (1977), no. 5, 357-370). *Internat. J. Theoret. Phys.* 17 (1978), no. 5, 387-388. (Editors) 80:83039 83C99
- (with Boyer, Charles P.) General relativity and G-structures. I. General theory and algebraically degenerate spaces. *Rep. Math. Phys.* 14 (1978), no. 1, 111-145. (Virgil Obădeanu) 80:58075 58H10 (53C10, 83C99)
- (with Przanowski, M.) Generalized Goldberg-Sachs theorems in complex and real space-times. I. Algebraic classifications of the conformal tensor and the energy-momentum tensor on complex and real space-times. *Acta Phys. Polon. B* 10 (1979), no. 6, 485-514. (Authors' summary) 80:83031 83C99 (53B30)
- (with Hacyan, Shahan) Some exceptional electrovac type D metrics with cosmological constant. *J. Math. Phys.* 20 (1979), no. 6, 1004-1010. (I. Robinson) 80:83034 83C50 (53B50)
- The algebra generated by Hodge's star and external differential. *J. Math. Phys.* 20 (1979), no. 7, 1415-1422. (C. S. Sharma) 80:16016 16A28 (58A10, 83C50)
- (with Finley, J. D., III) The classification of all  $\mathcal{K}$  spaces admitting a Killing vector. *J. Math. Phys.* 20 (1979), no. 9, 1938-1945. (P. C. Vaidya) 80:83005 83C05 (35C99, 53C80)
- The nondiverging and nonwitting type D electrovac solutions with  $\lambda$ . *J. Math. Phys.* 20 (1979), no. 9, 1946-1962. (P. C. Vaidya) 80:83007 83C05 (53B20, 53B50)
- Plemmons, Robert J. (with Neumann, Michael) Convergent nonnegative matrices and iterative methods for consistent linear systems. *Numer. Math.* 31 (1978/79), no. 3, 265-279. (L. W. Ehrlich) 80:65047 65F10
- (with Ortega, James M.) Extensions of the Ostrowski-Reich theorem for SOR iterations. *Linear Algebra Appl.* 28 (1979), 177-191. (E. R. Hansen) 80:65037 65F10
- Plešinská, N. B. (with Čibrikova, L. I.) Integral equations with generalized logarithmic and power kernels. III. (Russian) *Izv. Vys. Ucheb. Zaved. Matematika* 1978, no. 6(193), 129-146. (R. V. Dudučava) 80:45004 45E05
- Plesner, G. S. Recognition of formal languages on one-dimensional iterative automata. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 4, 29-36. (I. M. Havel) 80:68068 68D20 (68F05)
- (with Saparov, M. S.) The average number of exact coverings. (Russian. English summary) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* 1979, no. 2, 9-16. (I. E. Strazdinskii) 80:05040 05B40 (60D05, 68C25)
- Plesniak, W. Invariance of the  $L$ -regularity of compact sets in  $C^n$  under holomorphic mappings. *Trans. Amer. Math. Soc.* 246 (1978), 373-383. (John E. Forness) 80:32011 32E30 (32E20)
- On a theorem of S. N. Bernstein in  $F$ -spaces. *Zeszyty Nauk. Uniw. Jagielloń. Prace Mat.* 20 (1979), 7-16. (Ivan Singer) 80:41062 41A65
- A criterion of the  $L$ -regularity of compact sets in  $C^n$ . *Zeszyty Nauk. Uniw. Jagielloń. Prace Mat.* 21 (1979), 97-103. (Anne-Marie Chollet) 80:32020 32E30
- Plesniak, Jan Bounds on chromatic numbers of multiple factors of a complete graph. *J. Graph Theory* 2 (1978), no. 1, 9-17. (E. A. Nordhaus) 80:05096 05C15
- The NP-completeness of the Hamiltonian cycle problem in planar digraphs with degree bound two. *Inform. Process. Lett.* 8 (1979), no. 4, 199-201. (David A. Plaisted) 80:68043 68C25 (05C20, 68E10)
- Pless, Vera (with Indik, R.) Code graphs. *Combinatorics* (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II, pp. 623-627. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (Henry Beker) 80:94029 94B05 (05B05, 05C50)
- The children of the (32, 16) doubly even codes. *IEEE Trans. Inform. Theory* 24 (1978), no. 6, 738-746. (Author's summary) 80:94028 94B25
- When is a cycle an information set? *Second International Conference on Combinatorial Mathematics* (New York, 1978), pp. 429-435. *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (Author's introduction) 80:94057 94B15
- (with Conway, John H.; Sloane, Neil J. A.) Self-dual codes over  $GF(3)$  and  $GF(4)$  of length not exceeding 16. *IEEE Trans. Inform. Theory* 25 (1979), no. 3, 312-322. (V. A. Zinov'ev) 80:94026 94B05
- Plessner, Theodor (with Erle, Dieter; Mayer, Karl Heinz) The existence of stable limit cycles for enzyme catalyzed reactions with positive feedback. *Math. Biosci.* 44 (1979), no. 3-4, 191-208. (Kuang-Ho Chen) 80:92002 92A05 (34C25, 80A30, 92A40)
- Pleszczyńska, E. (with Kowalski, A.; Matuszewski, A.) Decision schemes of parameter

- identification in time series analysis. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 9 (1978), no. 1, 73-83. (Roch Roy) **80d:62086** 62M10
- (with Kowalczyk, T.; Kowalski, A.; Matuszewski, A.) Screening and monotonic dependence functions in the multivariate case. *Ann. Statist.* 7 (1979), no. 3, 607-614. (Rashid Ahmad) **80d:62040** 62G99 (62H20)
- Pletn'ova, T. G. (with Eidel'man, S. D.) Harnack inequalities, integral representation, and the Fatou theorem for classical positive solutions of parabolic equations with weight  $2(q+1)$ . (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 4, 498-506, 571. (J. Kačur) **80b:35071** 35K25 (35C15)
- Pliska, A. M. (with Menhies, L. D.) Conditions for linear and finite-dimensional regularizability of linear inverse problems. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 5, 1027-1030. (Ja. I. Al'ber) **80b:65069** 65J05 (47A50)
- The existence of a bounded M-basis in a weakly compactly generated space. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* No. 32 (1979), 61-69, 4. (W. H. Ruckle) **80b:46020** 46B15
- Pliskun, A. E. Large deviations for some nonlinear transformations of a stationary Gaussian process. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 4, 773-776. (Ju. M. Ryžov) **80d:60047** 60G15 (60F10)
- Pliska, Stanley R. On the transient case for Markov decision chains with general state spaces. *Dynamic programming and its applications (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 335-349, Academic Press, New York, 1978. (L. C. Thomas) **80b:90096** 90C40
- (with Deshmukh, Sudhakar D.) Optimal consumption and exploration of nonrenewable resources under uncertainty. *Econometrica* 48 (1980), no. 1, 177-200. (Authors' summary) **80j:90053** 90A30 (92A17)
- Pliskin, Joseph S. (with Mendelson, Haim; Yechiali, Uri) Optimal storage allocation for serial files. *Comm. ACM* 22 (1979), no. 2, 124-130. (Authors' summary) **80b:68032** 68B15
- (with Shepard, Donald S.; Weinstein, Milton C.) Utility functions for life years and health status. *Oper. Res.* 28 (1980), no. 1, 206-224. (Authors' summary) **80e:92004** 92A07 (90A10)
- Plisko, V. E. Some variants of the notion of realizability for predicate formulas. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 3, 636-653. (L. L. Maksimova) **80b:03035** 03B99
- Pliss, V. A. (with Pilugin, S. Ju.) The boundary of a stable invariant set of the Morse-Smale system. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 11, 1997-2001, 2107. (P. Brunovsky) **80j:58044** 58F09 (58F20)
- Pliacko, R. M. (with Ivanickaja, O. S.) The effects of the influence of a gravitational wave on a test particle and their comparison. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1978, no. 4, 50-58, 136. (A. K. Guc) **80d:83033** 83C35
- Plijumov, A. V. Splinters and Turing degrees. (Russian) *Mat. Zametki* 25 (1979), no. 2, 307-310, 319. (Igor Lavrov) **80g:03040** 03D25
- Plisotnikov, K. E. A mathematical model of three-dimensional migrations of zooplankton. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 116* (1978), 41 pp. (Author's summary) **80d:92030** 92A15
- Plisov, A. G. On the question of the existence of optimal control in the problem of extremal stabilization. (Russian) *Differentsial'nye Uravnenija (Ryazan)* No. 11 (1978), 138-139. (Author's summary) **80a:93128** 93D05
- Plonka, Jerzy (with Halkowska, Katarzyna) On formulas preserved by the sum of a direct system of relational systems. *Math. Nachr.* 86 (1978), 117-120. (M. Yasuhara) **80g:03033** 03C40
- Plomsey, R. (with Collin, R. E.) A note on dipole sources in conducting biological tissues. *Bull. Math. Biol.* 40 (1978), no. 2, 201-209. (Gail A. Carpenter) **80b:92002** 92A05
- Plotkin, B. I. Remarks on small varieties of representations of groups. (Russian) *A collection of papers on algebra (Russian)*, pp. 246-257, Minist. Oborony SSSR, 1978. (N. G. Šahova) **80m:20012** 20C99 (20E10)
- Varities in representations of finite groups. Locally stable varieties. Matrix groups and varieties of representations. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 4(208), 65-95, 256. (N. G. Šahova) **80j:20017** 20C99
- Plotkin, G. T<sup>m</sup> as a universal domain. *J. Comput. System Sci.* 17 (1978), no. 2, 209-236. (V. Ju. Meitus) **80d:68105** 68F20 (03B40, 06C15, 18B20)
- Plotkin, Ja. D. (with Turbin, A. F.) Decomposition of singularly perturbed analytic semigroups of operators. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 19* (1978), 44 pp. (A. B. Buche) **80j:47058** 47D05 (34E15)
- Plotnikov, P. I. On spatial free-boundary flows. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stas.)* 30 (1978), no. 4-5, 595-601. (Author's summary) **80e:76009** 76B99
- (with Nalimov, V. I.) Boundary value problems in the theory of the motion of a fluid with free boundaries. (Russian) *Dinamika Splošn. Sredy* No. 38 *Nestacionar. Problemy Gidrodinamiki* (1979), 111-142, 176. (Authors' summary) **80b:76026** 76B99
- Plotnikov, V. A. (with Zverkova, T. S.) Averaging of boundary value problems in terminal optimal control problems. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 8, 1381-1387, 1530. (Constantin Vărsan) **80b:93102** 93C99 (49B99)
- Averaging method for differential inclusions and its application to optimal control problems. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 8, 1427-1433, 1533. (Pavel Krbec) **80b:34014** 34A60 (34C29, 49B27)
- (with Jarovoi, A. T.) Justification of a certain averaging scheme for systems of standard form on a finite interval. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 2, 166-171, 222. (D. Bainov) **80g:34042** 34C29
- Averaging of differential inclusions. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 5, 573-576, 621. (V. G. Zadorozhnyi) **80j:34017** 34A60 (34C29)
- Ploumham, M. T. (with Hautot, André) Perspectives actuelles d'applications de la théorie des récurrences linéaires d'ordre  $n$ . (English summary) *Bull. Soc. Roy. Sci. Liège* 48 (1979), no. 1-2, 5-32. (Duncan A. Buell) **80i:10017** 10A35 (10A32)
- Pluchinska, Agnieszka Some transformations of multi-dimensional quasidiffusion processes. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 8, 1199-1210. (D. Kannan) **80d:60072** 60G99 (60J60)
- Plykin, R. V. (with Kamaev, D. A.; Zirov, A. Ju.) One-dimensional attractors of A-diffeomorphisms on  $S^2$  and diffeomorphisms with infinitely many sinks. *Dynamical systems, Vol. III—Warsaw*, pp. 355-394, *Astérisque*, 51, Soc. Math. France, Paris, 1978. (Zbigniew Nitecki) **80b:58072** 58F12 (58F15)
- Plymen, R. J. Automorphic group representations: the hyperfinite  $\Pi_1$  factor and the Weyl algebra. *Algèbres d'opérateurs (Sém., Les Plans-sur-Bex, 1978)*, pp. 291-306, *Lecture Notes in Math.*, 725, Springer, Berlin, 1979. (Raymond Streater) **80m:46056** 46L10 (22D30)
- Some recent results on infinite-dimensional spin groups. *Studies in algebra and number theory*, pp. 159-171, *Advances in Math., Suppl. Studies*, 6, Academic Press, New York, 1979. (Pierre de la Harpe) **80g:22021** 22E65 (46L40, 81C99)
- (with de la Harpe, Pierre) Automorphic group representations: a new proof of Blattner's theorem. *J. London Math. Soc.* (2) 19 (1979), no. 3, 509-522. (Jonathan M. Rosenberg) **80g:22022** 22E65 (46L40, 81C99)
- Plyevskaja, T. K. (with Drahlin, M. E.) On the theory of functional-differential equations. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 8, 1347-1361, 1529. (M. I. Kamenskii) **80g:34075** 34K10
- Pneumatikou, Spyros N. Sur les 2-formes génériques et la propriété des zéros. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 14, A699-A701. (Author's summary) **80b:58003** 58A10 (58C27)
- le Poac, P. See Le Poac, P.
- Pobedonoev, G. V. (with Petrov, B. N.; Aleksandrov, A. D.; Andreev, V. P.; Bulekov, V. P.; Viktorov, B. V.; Izvol'skii, E. G.; Kudryavcev, P. S.; Kuzin, V. P.; Mahan'ko, A. V.; Mikhailov, F. A.; Muravlev, G. A.; Nikolaev, Ju. P.; Pohvalenskii, V. L.; Sadykov, F. R.; Serpionov, G. V.; Salikova, I. M.; Ul'jastenko, A. E.; Frolov, P. A.; Červjakov, V. P.; Caturjan, K. T.) ★Многомерные и нестационарные системы автоматического управления. (Russian) [Multistate and nonstationary automatic control systems] "Mašinstroenie", Moscow, 1978. 240 pp. (Publisher's summary) **80c:93073** 93C40
- Pobednja, B. E. See Kees, W.; et al., **80d:00032**
- Pochcial, Jan On the quasi-superlinear functionals. *Demonstratio Math.* 11 (1978), no. 2, 425-434. (S. Dubuc) **80d:46003** 46A05
- Počtman, Ju. M. (with Volynskii, È. I.) Some smoothing algorithms of random search. A survey. (Russian) *Problemy Slučain. Poiska* No. 6 *Zadači Optimizacii* (1978), 95-120, 332. (G. S. Tarasenko) **80b:90091** 90B40 (90C99)
- Podaru, V. (with Pascu, N. N.; Rotaru, P.) Calculation of the alpha-starlike radius for starlike functions of order beta. (Romanian. German summary) *Bul. Univ. Braşov Ser. C* 19 (1977), 41-46 (1978). (A. W. Goodman) **80j:30022** 30C45 (30C30, 65E05)
- Poddar, S. N. Stress intensity factors for two coplanar Griffith cracks in an infinitely long elastic strip, perpendicular to the edges of the strip, for any variable distribution of pressure. *Indian J. Pure Appl. Math.* 7 (1976), no. 9, 1047-1061. (From the summary) **80b:73009** 73C45 (73M05)
- Podewski, K.-P. (with Reineke, Joachim) Algebraically closed commutative local rings. *J. Symbolic Logic* 44 (1979), no. 1, 89-94. (Paul C. Eklof) **80c:03039** 03C60 (13H99)
- Podhorodnyński, Marian (with Brückner, Damian; Skalmierski, Bogdan) Stochastic processes via a sequential approach. (Polish. English summary) *Uniw. Śląski w Katowicach Prace Nauk.-Prace Mat.* No. 8 (1978), 80-87. (A. I. Ponomarenko) **80b:60047** 60G05
- Podil'čuk, Ju. N. ★Трёхмерные задачи теории упругости. (Russian) [Three-dimensional problems of elasticity theory] "Naukova Dumka", Kiev, 1979. 240 pp. (Vadim Komkov) **80b:73021** 73C99 (35Q99)
- Podinovskii, V. V. Two-criteria problems with unequally rated criteria. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1977, no. 5, 44-59 (NO LANGUAGE GIVEN); translated as *Engng. Cybernetics* 15 (1977), no. 5, 30-36 (1978). (From the summary) **80j:90130** 90D99
- Importance coefficients of criteria in decision-making problems. Serial, or ordinal importance coefficients. *Automat. i Telemekh.* 1978, no. 10, 130-141. (Russian. English summary); translated as *Automat. Remote Control* 39 (1978), no. 10, part 2, 1514-1524 (1979). (Author's summary) **80f:90009** 90A05 (90A07)
- Construction of a set of effective strategies in multicriterion problems with criteria that are ordered with respect to importance. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 4, 908-915, 1067. (E. Vilkas) **80f:90013** 90A06 (90A05)
- Podio-Guidugli, Paolo Elastic bodies in a Signorini-type environment. *Contemporary developments in continuum mechanics and partial differential equations (Proc. Internat. Sympos., Inst. Mat., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 225-236, North-Holland Math. Studies, 30, North-Holland, Amsterdam, 1978. (Author's summary) **80e:73006** 73B30
- (with Martins, L. C.) A new proof of the representation theorem for isotropic, linear constitutive relations. *J. Elasticity* 8 (1978), no. 3, 319-322. (J. Dunwoody) **80a:73005** 73B10 (22E43)
- Podkolzin, A. S. Universal homogeneous structures. (Russian) *Problemy Kibernet.* No. 34 (1978), 109-131, 272. (Albert Jugel) **80b:68073** 68D20
- Podkopaeva, N. A. On the indications of boundedness of the solutions of a two-dimensional periodic system. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 2, 108-111, 188. (Editors) **80b:34036** 34C11
- Podlovčenko, R. I. Correctness and inclusiveness of certain equivalence relations between Janov schemes. (Russian) *Problemy Kibernet.* No. 2 (1978), 179-207, 232. (V. V. Byč) **80m:68015** 68B05
- Models of sequential programs used to study functional equivalence of programs. *Kibernetika (Kiev)* 1979, no. 1, 20-28 (Russian); translated as *Cybernetics* 15 (1979), no. 1, 22-31. (From the introduction) **80j:68012** 68B10 (68J10)
- Functional and other equivalences of program schemes. (Russian) *Problemy Kibernet.* No. 35 (1979), 185-198, 208. (A. V. Anisimov) **80j:68013** 68B10
- Podolski, E. (with Westreich, David) Systems of first order differential equations with global periodic solutions. *Indiana Univ. Math. J.* 28 (1979), no. 6, 869-882. (J. R. Ockendon) **80k:34059** 34C25 (58F14, 58F22)
- Podoljan, S. V. An algorithm for the construction of a solution to a linear periodic boundary value problem. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 6, 829-833, 863. (C. Avramescu) **80b:34013** 34B05
- Additive structure of a perturbed fundamental matrix. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 7, 585-588, 668. (A. A. Martinjuk) **80e:34020** 34A45



- Podolskii, V. G.** Motions in the tangent bundle of Riemannian spaces. I. (Russian) *Gravitacija i Teor. Otnositel'nosti* No. 12 (1977), 131-141. (M. C. Chaki) **80h:53020** 53B20 (83C99)
- Podporin, V. P.** On the question of the representation of linear operators in the form of infinite order differential operators with generalized differentiation. (Russian) *Izv. Severo-Kavkaz. Nauch. Centra Vysš. Školy Ser. Estestv. Nauk.* 1978, no. 1, 14-15. (From the text) **80a:47042** 47B37 (34A35)
- Podraza, E. N.** Nonparametric representation of a complete hypersurface in spaces of constant curvature. (Russian) *Geometry*, No. 6 (Russian), pp. 80-86, Leningrad. Gos. Ped. Inst., Leningrad, 1977. (M. C. Chaki) **80g:53042** 53C40 (53A07)
- Spherically univalent pipes in Euclidean space  $E^{n+1}$ . (Russian) *Ukrain. Geom. Sb.* No. 22 (1979), 122-127, 5. (Leo Boček) **80j:53005** 53A05 (51H05)
- Podtrigai, Ja. S.** See **Podtrigai, Ja. S.**
- Podsypanin, E. V.** The length of the period of a quadratic irrationality. (Russian) *Studies in number theory*, 5. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 82 (1979), 95-99, 166. (Harvey Cohn) **80h:12002** 12A25 (10A30)
- The number of integer points in an elliptic region (a note on a theorem of A. V. Mal'nev). (Russian) *Studies in number theory*, 5. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 82 (1979), 100-102, 166-167. (Eckehard Krätzel) **80g:10050** 10J25
- Poinaru, V.** The three big theorems of Papakyriakopoulos. *Bull. Soc. Math. Grèce (N.S.)* 18 (1977), no. 1, 1-71 (1 plate). (J. P. Levine) **80d:57005** 57M35 (01A70)
- Poggio, A. J.** (with Miller, E. K.) Moment-method techniques in electromagnetics from an applications viewpoint. *Electromagnetic scattering*, pp. 315-357, Academic Press, New York, 1978. (Magdi M. Shourci) **80g:78012** 78A45
- Pogoda, Zdzisław** Algorithms for the operation of digital regulators. (Polish. English and Russian summaries) *Podstawy Sterowania* 9 (1979), no. 2, 207-223. (Author's summary) **80k:68002** 68A05
- Pogorelov, A. V.** ★Hilbert's fourth problem. Translated by Richard A. Silverman. *Scripta Series in Mathematics*, V. H. Winston & Sons, Washington, D.C.; A Halsted Press Book, John Wiley & Sons, New York-Toronto, Ont.-London, 1979. vi+97 pp. ISBN 0-470-26735-6 (Editors) **80j:53066** 53C70 (51K05)
- Buckling of cylindrical shells. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 2, 330-332. (V. T. Fomenko) **80h:73039** 73H05 (53C45, 73L05)
- Pogorelov, D. Ju.** (with Beletskii, V. V.) Probabilistic investigation of the passive stabilization time of a satellite. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 94 (1979), 32 pp. (Authors' summary) **80k:70032** 70M05
- Pogosjan, G. S.** (with Ter-Antonyan, V. M.) Connection between Cartesian and polar wave functions of a nonrelativistic charged particle in a homogeneous magnetic field. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 1, 140-143. (Authors' summary) **80i:81052** 81D05
- Pogosjan, S. K.** Asymptotic behavior of the distribution of the number of particles in the Gibbsian ensemble. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 66 (1978), no. 3, 142-144. (Dietrich A. Uhlenbrock) **80k:82013** 82A05 (60K35)
- Asymptotic expansion of the logarithm of a partition function. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* 13 (1978), no. 3, 238-263, 266. (Author's summary) **80a:82014** 82A05 (28D05)
- Pogrebinskii, B. M.** Finite groups in which all maximal subgroups with nonidentity cores are Frobenius groups. (Russian. Georgian and English summaries) *Trudy Tbiliss. Univ.* 185 (1977), 43-49. (S. S. Levičenko) **80j:20026** 20D25
- Pogrebkov, A. K.** Global solutions of Cauchy problems for the Liouville equation  $\varphi_t - \varphi_{xx} = -\frac{1}{2}m^2 \exp \varphi$  in the case of singular initial data. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 4, 873-876. (V.-V. Olariu) **80c:35043** 35L70
- (with Džordžadze, G. P.; Polivanov, M. K.) Singular solutions of the equation  $\square \varphi + (m^2/2) \exp \varphi = 0$  and the dynamics of singularities. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 2, 221-234. (L. A. Takhtajan (Tahadžjan)) **80j:81058** 81E99 (35B99)
- Pogribii, V. D.** (with Petunin, Ju. I.) A theorem on isomorphisms. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 8 (1979), 612-614, 686. (I. Tweddle) **80m:46003** 46A15
- Pogn, Marc** (with Ciavaldini, Jean-François; Tournemine, Georges) A method for computing compressible flows past a profile set between permeable walls. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* 30 (1978), no. 4-5, 367-381. (J. F. Heyda) **80a:76037** 76G99 (76M05)
- (with Ciavaldini, Jean-François; Tournemine, Georges) Sur l'existence et l'unicité d'écoulements compressibles autour d'un profil en présence de parois à perméabilité variable. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 2, A177-A179. (Authors' summary) **80h:76009a** 76B99 (49H05)
- (with Ciavaldini, Jean-François; Tournemine, Georges) Erratum: "Sur l'existence et l'unicité d'écoulements compressibles autour d'un profil en présence de parois à perméabilité variable" [C. R. Acad. Sci. Paris Sér. A-B 288 (1979), no. 2, 177-179]. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 9, A523-A525. (Editors) **80h:76009b** 76B99
- (with Ciavaldini, Jean-François; Tournemine, Georges) Nouvelle estimation de l'erreur de troncature pour le calcul d'écoulements compressibles portants. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 4, B79-B82. (V. Girault) **80m:76058** 76N10
- Pogutke, Detlev** Well-bounded semigroups in connected groups. *Semigroup Forum* 15 (1977/78), no. 2, 159-167. (From the introduction) **80a:22003** 22A15
- Nichtsymmetrische sechsdimensionale Liesche Gruppen. *J. Reine Angew. Math.* 306 (1979), 154-176. (L. Corwin) **80i:43006** 43A20
- Pogutke, Werner** (with Bauer, Heinz) Lattices of width three: an example and a theorem. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 47-54, Heyn, Klagenfurt, 1979. (D. Duffus) **80g:06008** 06B99
- (with Day, Alan; Gaskill, Herb) Distributive lattices with finite projective covers. *Pacific J. Math.* 81 (1979), no. 1, 45-59. (Ralph Freese) **80k:06004** 06B25 (06D05)
- Pohler, V. O.** (with Kaidan, V. O.) Some properties of arcs of level curves outside the circle of the radius of convexity. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 74-79, 212. "Naukova Dumka", Kiev, 1978. (V. Liniš) **80a:30012** 30C45
- (with Kaidan, V. O.) The ranges of values of certain functionals on special classes of analytic functions. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 2, 192-200, 282. (P. Ju. Alekna) **80m:30050** 30E25
- Pohl, Fritz C.** Glättung von Ungleichheitsrestriktionen bei konvexen Optimierungsproblemen. (English and French summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 2, 185-191. (Author's summary) **80c:90120** 90C25
- Pohl, Hans W.** Analysis and synthesis of asynchronous stochastic automata. *Found. Comput. Engrg.* 3 (1978), no. 3, 119-123. (R. G. Buharaev) **80a:68057** 68D25
- Pohlmeyer, K.** Solitons and breathers. *Many degrees of freedom in field theory (Proc. Eighth Internat. Summer Inst. Theoret. Phys., Univ. Bielefeld, Bielefeld, 1976)*, pp. 63-116, NATO Adv. Study Inst. Ser., Ser. B: Physics, 30, Plenum, New York, 1978. (Editors) **80e:81049** 81E05 (35Q20)
- Pohodzei, B. B.** (with Pavlov, A. I.; Ravkin, I. A.) A method for the modeling of the exponential distribution based on the properties of the Poisson process. (Russian) *Ž. Vyšš. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1316-1320, 1359. (V. Dupac) **80d:65018** 65C10
- (with Pavlov, A. I.) Pseudorandom numbers generated by linear recurrent relations over a finite field. (Russian) *Ž. Vyšš. Mat. i Mat. Fiz.* 19 (1979), no. 4, 836-842, 1080. (P. Neumann) **80j:65006** 65C10 (68J99)
- Pohozhaev, S. I.** Equations of nonisotropic motion of gases. (Russian) *Trudy Maskov. Orden. Lenin. Energet. Inst. No. 357* (1978), 81-87. (Author's summary) **80h:76036** 76N15
- An approach to nonlinear equations. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 6, 1327-1331. (V. V. Obuhovskii) **80j:47004** 47H15 (35G20, 58E30)
- Pohvalenskii, V. L.** (with Petrov, B. N.; Aleksandrov, A. D.; Andreev, V. P.; Bulekov, V. P.; Viktorov, B. V.; Izvol'skii, E. G.; Kudrjavcev, P. S.; Kuzin, V. P.; Mahan'ko, A. V.; Mihailov, F. A.; Muravlev, G. A.; Nikolaev, Ju. P.; Pobedonosev, G. V.; Sadykov, F. R.; Serpionov, G. V.; Salikova, I. M.; Ul'jabsenko, A. E.; Frolov, P. A.; Červjakov, V. P.; Caturjan, K. T.) ★Мультирежимные и нестационарные системы автоматического управления. (Russian) [Multistate and nonstationary automatic control systems] "Mašinstroenie", Moscow, 1978. 240 pp. (Publisher's summary) **80c:93073** 93C40
- Poiné, A.** (with Huwig, H.) A generalization of the theory of magmoids. *Les arbres en algèbre et en programmation (4ème Colloq. Lille, Lille, 1979)*, pp. 122-133, Univ. Lille I, Lille, 1979. (Authors' summary) **80m:68036** 68C20
- Poirier, Dale J.** (with Melino, Angelo) A note on the interpretation of regression coefficients within a class of truncated distributions. *Econometrica* 46 (1978), no. 5, 1207-1209. (Charles F. Manski) **80c:62072** 62P20
- vigue-Poirier, Micheline** See **vigue-Poirier, Micheline**
- Polito, Georges** Conditions globales pour les problèmes de plongement à noyau abélien. (English summary) *Ann. Inst. Fourier (Grenoble)* 29 (1979), no. 1, xiii, 1-14. (Jack Sonn) **80g:12006** 12A55
- See also **Séminaire: Delange-Pisot-Polito**, **80a:10002a**; **Séminaire: Delange-Pisot-Polito**, **80a:10002b**; **Séminaire: Delange-Pisot-Polito**, **80i:10003a** and **Séminaire: Delange-Pisot-Polito**, **80i:10003b**
- Politz, Bruno** Suites d'indiscernables dans les théories stables. *Groupe d'Étude de Théories Stables, 1re année (Univ. Pierre et Marie Curie, Paris, 1977/78)*, Exp. No. 5, 7 pp., Secrétariat Math., Paris, 1978. (John T. Baldwin) **80c:03030** 03C45
- Rangs des types dans les corps différentiels. *Groupe d'Étude de Théories Stables, 1re année (Univ. Pierre et Marie Curie, Paris, 1977/78)*, Exp. No. 6, 13 pp., Secrétariat Math., Paris, 1978. (G. Cherlin) **80c:03036** 03C50 (12H05)
- Une théorie  $\omega_1$ -catégorique à  $\omega_1$  fini. *Groupe d'Étude de Théories Stables, 1re année (Univ. Pierre et Marie Curie, Paris, 1977/78)*, Exp. No. 8, 3 pp., Secrétariat Math., Paris, 1978. (Luiz Paulo de Alcantara) **80j:03043** 03C45
- Étude d'un forcing en théorie des modèles. *Z. Math. Logik Grundlagen Math.* 24 (1978), no. 4, 347-356. (G. Georgescu) **80c:03030** 03C25
- Le "forcing" de Fraïssé dans un contexte arithmétique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 7, A409-A412. (Author's summary) **80i:03043** 03C25
- (with Lascar, Daniel) An introduction to forcing. *J. Symbolic Logic* 44 (1979), no. 3, 330-350. (Guus Broesterhuizen) **80c:03030** 03C45
- See also **Groupe d'Étude: Théories Stables**, **80c:03003**
- Pokorný, Olga** Bemerkungen zu einer Anwendung singulärer Zerlegungen von Matrizen. (English summary) *Numerische Behandlung von Eigenwertaufgaben (Tagung, Tech. Univ. Clausthal, Clausthal, 1978)*, pp. 134-139, Internat. Schriftenreihe Numer. Math., 43, Birkhäuser, Basel, 1979. (Author's summary) **80m:65030** 65F15 (65R20)
- Pokorný, Ju. V.** Sturm properties of the spectrum of a class of boundary value problems. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 2 (Russian), pp. 174-178, Jaroslavl. Gos. Univ., Jaroslavl, 1977. (Stefan Balint) **80m:34012** 34B10
- Pokras, David** Solvability and nilpotency in generalized alternative rings. *Comm. Algebra* 7 (1979), no. 3, 225-239. (Ernest Stitzinger) **80c:17003** 17A30 (17D05)
- Pokrovskii, A. N.** (with Dem'janov, Ju. A.; Frolov, L. G.) The formation of a trace in the case of a shock wave descending on the edge of a plate. (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1978, no. 4, 59-66. (From the summary) **80f:76025** 76L05
- Pokrovskii, A. V.** (with Krasnosel'skii, M. A.) Natural solutions of stochastic differential equations. (Russian) *Dokl. Akad. Nauk SSSR* 240 (1978), no. 2, 264-267. (Constantin Tudor) **80a:60079** 60H10 (34F05)
- (with Ahmerov, R. R.; Kazakova, N. G.) Principle of the absence of bounded solutions and the absolute stability of equations of neutral type. (Russian) *Serdica* 4 (1978), no. 1, 61-69. (Erwin Kozakiewicz) **80k:34101** 34K20
- (with Krasnosel'skii, M. A.) Continuity points of monotone operators. (Russian) Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 2 (1979), 205-216. (Milan Kučera) **80h:47061** 47H07
- The limit norm of a linear operator and its applications. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 3, 548-551. (V. V. Peller) **80m:47004** 47A30
- Pokrovskii, L. A.** Nonequilibrium statistical operator method in the theory of one-mode lasers on two-level atoms. (Russian. English summary) *Teoret. Mat. Fiz.* 37 (1978), no. 1, 102-129. (Author's summary) **80b:82029** 82A30 (47B99)

- Pokrovskii, L. D.** (with Pavlov, K. B.; Tarasenko, S. N.) The stationary flow of an inviscid heat conducting gas. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1329–1335, 1360. (Authors' summary) **80d:76070** 76N15
- Pokrovskii, V. L.** (with Patainskii, A. Z.) ★ Fluctuation theory of phase transitions. Translated from the Russian and edited by P. J. Shepherd. International Series in Natural Philosophy, 98. Pergamon Press, Oxford-New York-Toronto, Ont., 1979. x+321 pp. ISBN 0-08-021664-1 (Editors) **80b:82022** 82A25
- Pokrzywa, Andrzej** (with Moszyński, Krzysztof) Some remarks on spectral approximation for compact operators. (Polish) *Mat. Stos.* (3) 12 (1978), 5–16. (M. V. Fokin) **80d:47030** 47B05 (47A50, 65J10)
- Pol, Elzbieta** On the dimension of the product of metrizable spaces. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 6, 525–534. (E. Hemmingen) **80f:54032** 54F45
- Strongly metrizable spaces of large dimension each separable subspace of which is zero-dimensional. *Colloq. Math.* 39 (1978), no. 1, 25–27, 189. (M. G. Charalambous) **80a:54063** 54F45
- Some examples in the dimension theory of Tychonoff spaces. *Fund. Math.* 102 (1979), no. 1, 29–43. (K. Nagami) **80c:54048** 54F45
- Pol, Roman** A non-paracompact space whose countable product is perfectly normal. *Comment. Math. Prace Mat.* 20 (1977/78), no. 2, 435–437. (James Chew) **80c:54030** 54D15
- (with Rao, K. P. S. Bhaskara) Topological zero-one laws. *Colloq. Math.* 39 (1978), no. 1, 13–23. (J. C. Oxtoby) **80a:54069** 54H05 (60F20)
- Note on category in Cartesian products of metrizable spaces. *Fund. Math.* 102 (1979), no. 1, 55–59. (William G. Fleissner) **80c:54029** 54E52
- A function space  $C(X)$  which is weakly Lindelöf but not weakly compactly generated. *Studia Math.* 64 (1979), no. 3, 279–285. (Y. Benyamini) **80j:46042** 46E15 (54C40)
- Polak, Elijah** (with Ray, D.; Pister, K. S.) Sensitivity analysis for hysteretic dynamic systems: theory and applications. *Comput. Methods Appl. Mech. Engrg.* 14 (1978), no. 2, 179–208. (Authors' summary) **80a:93058** 93B35 (73K05)
- (with Mukai, H.) A second-order method for unconstrained optimization. *J. Optim. Theory Appl.* 26 (1978), no. 4, 501–513. (C. A. Botsaris) **80b:90120** 90C30 (65K05)
- (with Mukai, H.) A second-order method for the general nonlinear programming problem. *J. Optim. Theory Appl.* 26 (1978), no. 4, 515–532. (John J. Dinkel) **80c:90136** 90C30
- (with Mukai, H.) On the use of approximations in algorithms for optimization problems with equality and inequality constraints. *SIAM J. Numer. Anal.* 15 (1978), no. 4, 674–693. (Peter Deuffhard) **80a:65131** 65K05 (49D99, 90C99)
- (with Mayne, D. Q.) On the finite solution of nonlinear inequalities. *IEEE Trans. Automat. Control* 24 (1979), no. 3, 443–445. (Authors' summary) **80c:65138** 65K10
- (with Sangiovanni-Vincentelli, Alberto) Theoretical and computational aspects of the optimal design centering, tolerancing, and tuning problem. *IEEE Trans. Circuits and Systems* 26 (1979), no. 9, 795–813. (Authors' summary) **80b:94045** 94C05
- (with Trahan, R.; Mayne, D. Q.) Combined phase I–phase II methods of feasible directions. *Math. Programming* 17 (1979), no. 1, 61–73. (Michael Minkoff) **80c:90131** 90C30 (90C05)
- (with Glad, Torkel) A multiplier method with automatic limitation of penalty growth. *Math. Programming* 17 (1979), no. 2, 140–155. (Pierre Lorian) **80j:90094** 90C30 (49D29, 65K05)
- (with Tishyadhigama, S.; Klessig, R.) A comparative study of several general convergence conditions for algorithms modeled by point-to-set maps. Point-to-set maps and mathematical programming. *Math. Programming Stud.* No. 10 (1979), 172–190. (John J. Dinkel) **80c:90140** 90C30
- (with Gonzaga, C.; Trahan, R.) An improved algorithm for optimization problems with functional inequality constraints. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 49–54. (Authors' summary) **80c:90075** 90C30
- (with Trahan, R.) A derivative-free algorithm for a class of infinitely constrained problems. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 54–61. (Authors' summary) **80c:90080** 90C30 (49D37)
- Polak, S. J.** (with Schrooten, J.; Barneveld Binkhuysen, C.) TEDDY2, a program package for parabolic composite region problems. *ACM Trans. Math. Software* 4 (1978), no. 3, 209–227. (Authors' summary) **80c:65009** 65–04
- Polansky, Paul** Invariant distributions for multipopulation models in random environments. *Theoret. Population Biol.* 16 (1979), no. 1, 25–34. (William A. Beyer) **80j:92011** 92A15 (60J70)
- Polat, Norbert** Aspects topologiques de la séparation dans les graphes infinis. I. *Math. Z.* 165 (1979), no. 1, 73–100. (Rudolf Halin) **80f:05040a** 05C10
- Aspects topologiques de la séparation dans les graphes infinis. II. *Math. Z.* 165 (1979), no. 2, 171–191. (Rudolf Halin) **80f:05040b** 05C10
- Polcino Miller, Francisco César** Group rings whose units form an FC-group. *Arch. Math. (Basel)* 30 (1978), no. 4, 380–384. (Ralph W. Wilkerson) **80f:20006a** 20C07 (16A27)
- Certain properties of the group of units of a group ring. *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977), Vol. II (Portuguese)*, pp. 793–797. *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Kenneth A. Brown) **80f:16006** 16A25 (16A27)
- (with Parmenter, M. M.) Isomorphic group rings of direct products. *Arch. Math. (Basel)* 31 (1978/79), no. 1, 11–14. (Ralph W. Wilkerson) **80f:16010** 16A26
- Corrigendum: "Group rings whose units form an FC-group" (*Arch. Math. (Basel)* 30 (1978), no. 4, 380–384). *Arch. Math. (Basel)* 31 (1978/79), no. 5, 528. (Ralph W. Wilkerson) **80f:20006b** 20C07 (16A27)
- Polemarchakis, Heraklis M.** More on economies with a finite set of Walrasian equilibria. *Econom. Lett.* 1 (1978), no. 1, 5–8. (Author's summary) **80c:90025** 90A14 (58C27)
- (with Green, Jerry R.; Lau, Lawrence J.) A theorem on the identifiability of the von Neumann-Morgenstern utility function from asset demands. *Econom. Lett.* 1 (1978), no. 3, 217–220. (Authors' summary) **80c:90021** 90A10
- (with Khan, M. Ali) Unequal treatment in the core. *Econometrica* 46 (1978), no. 6, 1475–1481. (Carl P. Simon) **80d:90010** 90A06 (90A16)
- Implicit contracts and employment theory. *Rev. Econom. Stud.* 46 (1979), no. 1, 97–108. (Hans Keiding) **80j:90037** 90A14
- Poletaev, G. S.** On the theory of abstract analogues of certain equations of convolution type. (Russian) *Mat. Fiz. No. 24* (1978), 104–106, 123. (F. Smithies) **80c:47025** 47B35 (45E05, 45E10, 47E05)
- Polemisi, F.** (with Van de Vel, H.) Characterizability of best approximations by means of a Kolmogorov criterion. *J. Approx. Theory* 22 (1978), no. 2, 177–188. (E. W. Cheney) **80j:41063** 41A65
- Polevnikov, V. K.** A difference scheme of the fourth order of accuracy for calculating the vortex function on the boundary in fluid dynamics problems. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 10, 872–875, 955. (Author's summary) **80c:65098** 65P05 (76C05)
- Poll, Alain** Une famille de codes généralisant les codes minimaux (cas semi-simple ou modulaire). Colloque Mathématiques Discrètes: Codes et Hypergraphes (Brussels, 1978). *Cahiers Centre Études Rech. Opér.* 20 (1978), no. 3–4, 427–435. (J.-M. Goethals) **80m:94053** 94B05 (13C05)
- Pollanskii, V. A.** See **Poljanskii, V. A.**
- Pollastro, M.** A simple algorithm to perform the bilinear transformation. *Internat. J. Control* 30 (1979), no. 4, 713–715. (K. Amborski) **80m:93030** 93C05 (93D25)
- Pollicha, A. E.** (with Sobolevskii, P. E.) Correct solvability of parabolic difference equations in Bochner spaces. (Russian) *Trudy Moskov. Mat. Obšč.* 36 (1978), 29–57, 294. (V. V. Kovrižkin) **80g:34063** 34G10 (35K99)
- Pollikarov, A. P.** The hypothetical-deductive model of scientific theories. (Russian) *C. R. Acad. Bulgare Sci.* 31 (1978), no. 9, 1097–1100. (I. Ruzsa) **80c:03014** 03A05 (00A69)
- Pollmeier, Albert D.** (with Lesniak-Foster, Linda M.; Vanderjagt, Donald W.) Mixed Ramsey numbers: edge chromatic numbers vs. graphs. *Theory and applications of graph (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976)*, pp. 330–341. *Lecture Notes in Math.*, 642, Springer, Berlin, 1978. (Stefan A. Burr) **80c:05044** 05C55
- Poll, Michael P.** (with David, Michel; Davis, Michael W. D.) Geostatistical techniques in distributed parameter system estimation problems. *Control of distributed parameter systems (Proc. Second IFAC Sympos., Coventry, 1977)*, pp. 367–379. *IFAC, Dusseldorf*, 1978. (Authors' introduction) **80k:93050** 93E10 (93E12)
- Polličák, E. G.** Computation of value for certain differential games. *Prikl. Mat. Meh.* 41 (1977), no. 4, 588–595. (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 4, 601–609 (1978). (Tamer Başar) **80c:90171** 90D25
- Reduction of linear differential games. (Russian) *Differencial'nye Uravnenija* 15 (1979), no. 3, 417–424, 571. (È. G. Al'breni) **80f:90119** 90D25
- Polličák, V. N.** (with Plišnik, B. I.) The periodic boundary value problem for a system of hyperbolic equations with constant coefficients. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 3, 326–333, 428. (O. Vejvodá) **80b:35100** 35L55 (35B10)
- A problem with nonlocal boundary conditions for hyperbolic systems of differential equations with constant coefficients. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 3* (1979), 171–176, 237. (Author's summary) **80f:35075** 35L55
- Poljščevič, Dan** (with Fleury, Françoise; Paşa, Gelpy) Homogénéisation de corps composés sous l'action de forces de grande fréquence spatiale. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 14, B241–B244. (Authors' summary) **80k:73014** 73C40
- Poljščuk, E. G.** See **Polličák, E. G.**
- Poljatkov, V. P.** On the theory of upper and lower solutions and the solvability of quasilinear integro-differential equations. (Russian) *Mat. Sb. (N.S.)* 107(149) (1978), no. 2, 218–226, 317. (V. Lakshmikantham) **80a:45022** 45K05 (35R99)
- Some mathematical questions of the equation of motion of automobile traffic. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst. No. 357* (1978), 75–80. (J. Kril) **80j:35088** 35Q99 (90B20)
- A method of solving boundary value problems for nonlinear transport equations. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 3, 675–688, 798. (M. Drăganu) **80j:80008** 80A99 (45K05, 65R20, 82A70)
- Polivanov, A. D.** (with Pavlov, V. P.) Analytic structure of amplitude 3→3. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics (Leipzig, 1977)*, pp. 164–176. *Teubner, Leipzig*, 1978. (Masatsugu Minami) **80c:81015** 81C10 (32A25)
- Polivanov, M. C.** Many-particle scattering amplitudes. *Mathematical problems in theoretical physics (Proc. Internat. Conf., Univ. Rome, Rome, 1977)*, pp. 375–385. *Lecture Notes in Phys.*, 80, Springer, Berlin, 1978. (From the introduction) **80c:81087** 81F10 (47A40)
- Polivanov, M. K.** (with Logunov, A. A.; Medvedev, B. V.; Muzafarov, L. M.; Pavlov, V. P.; Suhanov, A. D.) Analytical structure of the amplitude of 3→3 forward scattering. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 2, 179–193. (Authors' summary) **80f:81050** 81F15
- (with Džordžadze, G. P.; Pogrebkov, A. K.) Singular solutions of the equation  $\square \varphi + (m^2/2)\exp \varphi = 0$  and the dynamics of singularities. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 2, 221–234. (L. A. Takhtajan (Tahhtadžian)) **80j:81658** 81E99 (35B99)
- Pollizotto, Castrenze** A local bounding principle for dissipation energy in shakedown of elastic-perfectly plastic solids. *Internat. J. Solids and Structures* 16 (1980), no. 3, 253–263. (Authors' summary) **80m:73038** 73E99
- Poljabin, N. N.** (with Mel'nikova, O. F.) Construction of the initial approximation for the solution of the lifting surface integral equation. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 1, 104–110, 135. (Authors' summary) **80c:65250** 65R20 (73C99)
- Poljak, B. T.** (with Skokov, V. A.) Solution of least squares problems. (Russian) *Ékonom. i Mat. Metody* 14 (1978), no. 6, 1173–1180. (From the text) **80c:65139** 65K10 (65D10)
- Minimization of complex regression functions. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 4, 148–149. (Author's summary) **80b:90106** 90C15 (65D10)
- Methods for the solution of problems on the conditional extremum in the presence of random noise. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 1, 70–78, 268. (G. D. Mal'trovskaia) **80c:49009** 49A60
- Poljak, R. A.** On the search for a stationary point of a class of point-to-set mappings



- (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 6, 1252-1255. (Hans Keiding) 80c:90127 90C25
- Poljak, Svatopluk (with Turzik, Daniel) On amalgamation of graphs and essential sets of generators. *Comment. Math. Univ. Carolin.* 19 (1978), no. 2, 359-369. (Jaroslav Nešetřil) 80a:05171 05C99
- Poljakov, A. O. (with Aleksandrov, V. V.; Lačinov, V. M.) Synthesis and application of a multidimensional analogue of a Peano curve. (Russian) *Learning algorithms in control systems and in data processing systems* (Russian), pp. 20-29, 125, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (From the summary) 80g:68121 68G99
- Poljakov, E. A. (with Rozinas, M. G.) Correlations between different forms of relative computability of functions. (Russian) *Mat. Sb. (N.S.)* 107(149) (1978), no. 1, 134-145, 160. (Cristian Calude) 80e:68135 68C40 (03D30)
- Poljakov, I. V. Representation of numbers in the form of sums of a prime number and the square of an integer. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 2, 34-39, 100. (M. I. Israilov) 80k:10045 10J15
- Poljakov, L. Ja. Maximal subgroups of finite groups. (Russian) *Finite groups* (Proc. Gomel Sem., Gomel, 1975-1977) (Russian), pp. 63-69, 174, "Nauka i Tehnika", Minsk, 1978. (B. K. Durakov) 80c:20027 20D25
- Poljakov, P. A. (with Kuz'menkov, L. S.) Kinetic wave theory in relativistic plasma taking into account the dissipation by radiation. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* 19 (1978), no. 3, 95-100. (Vladimir Šips) 80a:82034 82A45 (35Q99)
- Poljakov, R. V. The approximate solution of systems of linear integral equations by means of splines. (Russian) *The theory of the approximation of functions* (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 280-282, "Nauka", Moscow, 1977. (M. I. Levin) 80c:65251 65R20 (41A15)
- Application of splines to the solution of systems of integral equations of Hammerstein type. *Fourier analysis and approximation theory* (Proc. Colloq., Budapest, 1976), Vol. II, pp. 633-638, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (From the text) 80e:65128 65R20
- Poljakova, L. N. The continuity of normal cones. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, no. 2, 112-113, 122. (E. G. Gol'shtein) 80j:90078 90C05
- Poljančič, E. A. On estimates of the solution of the Helmholtz equation in a plane waveguide. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 1, 71-74. (Ll. G. Chambers) 80b:76035 76Q05 (35J05)
- Poljančič, V. A. (with Gogosov, V. V.; Korovin, V. M.) Investigation of the structure of electrohydrodynamic shock waves using the complete equation of motion for the charged component instead of Ohm's law. *Prikl. Mat. Meh.* 41 (1977), no. 6, 1033-1052 (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 6, 1051-1070 (1979). (Giulio Mattei) 80d:76101 76W05 (35Q99, 58F99)
- Poljadov, A. N. (with Dorof'čev, A. G.; Kotok, E. V.; Novikov, I. D.; Sigov, Ju. S.; Šandarin, S. F.) A two-dimensional model for the formation of the large-scale structure of the universe. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 83* (1978), 23 pp. (N. V. Micevici) 80c:83057 83F05 (65P05)
- Polk, John F. (with Lynn, Paul P.) A least squares finite element approach to unsteady gas dynamics. *Internat. J. Numer. Methods Engrg.* 12 (1978), no. 1, 3-10. (Jacques Couot) 80i:65122 65N30 (76N15)
- Polking, John C. (with Wells, R. O., Jr.) Boundary values of Dolbeault cohomology classes and a generalized Bochner-Hartogs theorem. Special issue dedicated to the seventieth birthday of Erich Kähler. *Abh. Math. Sem. Univ. Hamburg* 47 (1978), 3-24. (B. M. Weinstein) 80h:32016 32A40
- Polkinghorne, J. C. Particle groups. *Bull. Inst. Math. Appl.* 15 (1979), no. 8-9, 194-196. 80h:81030 81C40
- Poll, J. D. (with Gibbs, P.; Hunt, J. L.) A note on some integrals useful in collision induced absorption. (French summary) *Canad. J. Phys.* 57 (1979), no. 7, 981-982. (Authors' summary) 80c:82025 82A40
- Pollak, Edward Some models of genetic selection. *Biometrics* 35 (1979), no. 1, 119-137. (Author's summary) 80b:92019 92A10
- Effective population numbers and mean times to extinction in monoecious populations with overlapping generations. *Math. Biosci.* 46 (1979), no. 1-2, 87-106. (Author's summary) 80c:92035 92A15
- Pollak, Eli (with Child, Mark S.; Pechukas, Philip) Classical transition state theory: a lower bound to the reaction probability. *J. Chem. Phys.* 72 (1980), no. 3, 1669-1678. (Authors' summary) 80k:00010 80A30
- Pollak, G. A class of hereditarily finitely based varieties of semigroups. *Algebraic theory of semigroups* (Proc. Sixth Algebraic Conf., Szeged, 1976), pp. 433-445, *Colloq. Math. Soc. János Bolyai*, 20, North-Holland, Amsterdam, 1979. (Ju. G. Košlev) 80b:08008 08B99 (20M07)
- On identities which define hereditarily finitely based varieties of semigroups. *Algebraic theory of semigroups* (Proc. Sixth Algebraic Conf., Szeged, 1976), pp. 447-452, *Colloq. Math. Soc. János Bolyai*, 20, North-Holland, Amsterdam, 1979. (Ju. G. Košlev) 80c:08008 08B99 (20M07)
- On the existence of covers in lattices of varieties. *Contributions to general algebra* (Proc. Klagenfurt Conf., Klagenfurt, 1978), pp. 235-247, *Heyn, Klagenfurt*, 1979. (James B. Nation) 80f:08005 08B15
- See also Algebraic theory of semigroups. 80d:20001
- Pollak, Robert A. (with Howe, Howard; Wales, Terence J.) Theory and time series estimation of the quadratic expenditure system. *Econometrica* 47 (1979), no. 5, 1231-1247. (Authors' introduction) 80g:90035 90A20
- (with Blair, Douglas H.) Collective rationality and dictatorship: the scope of the Arrow theorem. *J. Econom. Theory* 21 (1979), no. 1, 186-194. (Maurice Salles) 80i:90011 90A08
- Pollard, B. R. (with Gibson, W. M.) \*Принципы симметрии в физике элементарных частиц. (Russian) [Symmetry principles in elementary particle physics] Revised translation with six addenda. Translated from the English by L. A. Muzes and A. P. Perelomov. "Atomizdat", Moscow, 1979. 344 pp. (Editors) 80m:81002 81-02 (22E70, 81G20)
- Pollard, D. B. (with Laslett, G. M.; Tweedie, Richard L.) Techniques for establishing ergodic and recurrence properties of continuous-valued Markov chains. *Naval Res. Logist. Quart.* 25 (1978), no. 3, 455-472. (E. Arjas) 80c:60081 60J05 (60K25, 60K30, 90B05)
- Pollard, H. (with Boas, Ralph P.; Widder, D. V.) The asymptotic behavior of derivatives. *Amer. Math. Monthly* 85 (1978), no. 9, 749-750. (James Foran) 80c:26004 26A24
- Pollatschek, M. A. (with Flachs, J.) Further results on fuzzy-mathematical programming. *Inform. and Control* 38 (1978), no. 3, 241-257. (Klaus Tammer) 80a:90123 90C30 (90C15)
- (with Flachs, J.) Duality theorems for certain programs involving minimum or maximum operations. *Math. Programming* 16 (1979), no. 3, 348-370. (T. R. Jefferson) 80j:90093 90C30
- Pollington, A. D. On the density of sequence  $\{n_k\}$ . *Illinois J. Math.* 23 (1979), no. 4, 511-515. (K. E. Hirst) 80i:10066 10K05 (10L10)
- Pollock, M. D. The interaction between a rotating, spherical shell of matter and a central black hole. *Proc. Roy. Soc. London Ser. A* 362 (1978), no. 1711, 469-492. (R. C. Roeder) 80d:83078 83D05 (83C25)
- Pollock, Gisela See Ore, Oystein, 80m:05002
- Polniakowski, Zbigniew On some system of linear differential equations. *Comment. Math. Prace Mat.* 20 (1977/78), no. 2, 439-448. (Stefan Balint) 80a:34062 34D05
- Polonimo, Albert Nombres caractéristiques d'une variété riemannienne de dimension 4. *J. Differential Geom.* 13 (1978), no. 1, 145-162. (J. R. Vanstone) 80c:57032 57R20 (53C20)
- Pölkke, Pál (with Mihályffy, László; Réti, János) On the determination of weights in preference functions. (Hungarian. English and Russian summaries) *Szigma-Mat.-Közgazdasági Folyóirat* 11 (1978), no. 3-4, 211-218. (Authors' summary) 80c:90010 90A06
- Polarina, A. I. Approximation of differentiable functions by algebraic polynomials. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 3, 403-411, 431. (B. I. Kvasov) 80c:41006 41A10
- Polovinkina, V. I. (with Didur, L. I.) Asymptotically optimal sequences of Hermitian cubature formulas. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 3, 663-669, 719. (H. M. Möller) 80a:65049 65D30 (41A55)
- Convergence of cubature formulas with a boundary layer on concrete functions. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 51 (1978), 104-109, 228-229. (J. Girshtovich) 80f:65029 65D32
- The minimum of norms of functionals of errors in cubature formulas with arbitrary nodes. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 53 (1978), 3-7, 179. (I. M. Stancu-Minasian) 80h:65014 65D32
- Pol'skii, B. S. (with Martuzāns, B.) Numerical solution of one-dimensional steady-state problems of the theory of semiconductor devices. (Russian) *Lato. Mat. Elegodiek* No. 22 (1978), 133-143, 282. (From the introduction) 80c:78023 78A55
- Pol-Swircz, Anna Certain reflexive lattices of subspaces of a Hilbert space. *Demonstratio Math.* 11 (1978), no. 4, 901-905 (1979). (N. Popa) 80g:47049 47D99 (47A15)
- Poltavcev, A. N. (with Verečkov, G. M.; Grikan, Ju. S.; Ivanov, S. V.; Nesterenko, V. A.) Quantum gravitational effects in an anisotropic universe. *Ž. Eksp. Teor. Fiz.* 73 (1977), no. 6, 1985-2077 (Russian. English summary); translated as *Soviet Phys. JETP* 46 (1977), no. 6, 1041-1051. (Derek Raine) 80b:83028 83C45 (35Q99)
- Poltavskii, L. N. The finite controllability of infinite systems of pendulums. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 6, 1318-1321. (Szymon Dolecki) 80h:93017 93B05 (93C20)
- The relation between resonance properties and controllability in multidimensional infinite systems of pendulums. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 1, 24-27. (A. Halanay) 80i:93035 93C20
- Poltavtsev, A. N. See Poltavcev, A. N.
- Poltorov, V. M. (with Spivak, V. A.) Budget paradox in a model of economic equilibrium. (Russian) *Ekonom. i Mat. Metody* 15 (1979), no. 1, 115-127. (Editors) 80c:90022 90A14
- Effective equilibrium growth and continuous planning. (Russian) *Ekonom. i Mat. Metody* 15 (1979), no. 4, 760-773. 80c:90029 90A14
- Polytey, G. Š. Capacity for a sum of broadcast channels. *Problemy Peredachi Informacii* 15 (1979), no. 2, 40-44 (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 2, 111-114. (Author's summary) 80m:94043 94A40
- Polsbarinova-Kočina, P. Ja. See Kovalevskaja, S. V., 80i:01033
- Polsbarinova-Kočina, P. Ja. See Birthday: Kočina, P. Ja., 80i:91061
- Polyák, György (with Pathó, Péter) A note on a paper of Y. Matsouka. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 1, 119-121. (Péter Kiss) 80j:10007 10A20 (10A40)
- Polyakov, R. V. See Poljakov, R. V.
- Polydoros, Andreas D. (with Protonotarios, Emmanuel N.) Digital interpolation of stochastic signals. *IEEE Trans. Circuits and Systems* 26 (1979), no. 11, 916-922. (Authors' summary) 80j:94005 94A12 (68J05)
- Polyzou, Wayne N. (with Redish, Edward F.) Unified connected theory of few-body reaction mechanisms in *N*-body scattering theory. *Ann. Physics* 119 (1979), no. 1, 1-42. (Chindhu S. Warke) 80c:81008 81F10 (47A40)
- Pomareda, Roland J. Groups and geometry: collineations of translation planes. (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. I (Portuguese), pp. 145-154, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (G. Zappa) 80d:51005 51A40
- Pomeneu, V. Stochastic behavior of simple dynamical systems. *Stochastic processes in nonequilibrium systems* (Lectures, Fifth Stages Internat. School Statist. Mech., Stiger, 1978), pp. 235-277, *Lecture Notes in Phys.*, 84, Springer, Berlin, 1978. (Peter Walters) 80b:28027 28D05 (82A05)
- (with Derrida, B.; Gervois, A.) Iteration of endomorphisms on the real axis and representation of numbers. (French summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* 29 (1978), no. 3, 305-356. (Gérard Raouzy) 80g:10056 10K10 (28D20, 58F13)
- (with Derrida, B.; Gervois, A.) Universal metric properties of bifurcations of endomorphisms. *J. Phys. A* 12 (1979), no. 3, 269-296. (L. A. Bunimovich) 80c:58078 58F14 (49A99, 58F13)
- (with Derrida, B.; Toulouze, G.; Vannimenus, J.) Fully frustrated simple cubic lattices and phase transitions. (French summary) *J. Physics* 41 (1980), no. 3, 213-221. (Authors' summary) 80m:82020 82A25
- Pomel'nikov, Ju. V. (with Ivanov, O. V.; Suvorov, G. D.) Conformally invariant bicomplex extensions of a simply connected domain. (Russian) *Dokl. Akad. Nauk SSSR* 240 (1978), no. 6, 1281-1284. (E. Halfar) 80a:54040 54D35

- Pomerance, Carl** (with Erdős, Paul; Penney, D. E.) On a class of relatively prime sequences. *J. Number Theory* 10 (1978), no. 4, 451-474. (Matt Jutila) **80a:10059** 10H15 (10H25)
- The prime number graph. *Math. Comp.* 33 (1979), no. 145, 399-408. (S. L. Segal) **80d:10013** 10A25 (52A10)
- Pomerantz, M. J.** (with Gilpin, M. E.) Community covariance and coexistence. *J. Theoret. Biol.* 79 (1979), no. 1, 67-81. (Authors' summary) **80e:92036** 92A15
- Pomeroy, J. Ch.** Sufficient conditions for primal dual values equality in convex programming. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978), Section 1*, pp. 517-524, *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (W. W. Breckner) **80i:90100** 90C48 (90C25)
- Constraint qualifications for inexact linear programs. *Oper. Res.* 27 (1979), no. 4, 843-847. (M. Yamasaki) **80i:90078** 90C25
- Pommaret, Jean-François** Invariants différentiels des transformations de contact. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 4, A251-A254. (Author's summary) **80a:58039** 58H05
- Cohomologie de déformation des algèbres de Lie tronquées. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 14, A923-A926. (Author's summary) **80e:58049** 58H10
- Physics and pseudogroups. *Rep. Math. Phys.* 13 (1978), no. 3, 345-350. (Jean Pradines) **80h:58060** 58H05 (53C80, 58A15, 58G35, 58H15)
- Pommerening, Klaus** Observable radielle Untergruppen von halbeinfachen algebraischen Gruppen. *Math. Z.* 165 (1979), no. 3, 243-250. (T. Ono) **80f:20046** 20G05
- Pommerenke, Ch.** (with Beardon, A. F.) The Poincaré metric of plane domains. *J. London Math. Soc.* (2) 18 (1978), no. 3, 475-483. (A. M. Macbeath) **80a:30020** 30C75 (30F99, 51M10)
- Uniformly perfect sets and the Poincaré metric. *Arch. Math. (Basel)* 32 (1979), no. 2, 192-199. (T. A. Metzger) **80j:30073** 30F40 (30D60)
- Pomp, Andreas** Über die Konvergenz des Galerkinschen Verfahrens für Wiener-Hopf'sche Integralgleichungen in den Räumen  $L^p$ . *Math. Nachr.* 87 (1979), 71-92. (J. Sprekels) **80f:65146** 65R20
- Pomphrey, Nell** (with Meiss, James D.; Watson, Kenneth M.) Numerical analysis of weakly nonlinear wave turbulence. *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 5, 2109-2113. (Authors' summary) **80d:82067** 82A70 (76C99)
- Pomraning, G. C.** (with Wilson, H. L.; Scott, W. H.) Neutron transport in moving media. *SIAM J. Appl. Math.* 36 (1979), no. 2, 230-262. (A. Bellini-Morante) **80c:82052** 82A75 (45K05)
- Ponasse, Daniel** Algèbres floues et algèbres de Lukasiewicz. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 1, 103-111. (R. Cignoli) **80d:03063** 03G20 (06D30)
- (with Carrega, Jean-Claude) ★ *Algèbre et topologie booléennes*. Masson, Paris, 1979. viii + 303 pp. ISBN 2-225-62546-8 (F. Lapscher) **80j:06015** 06E15 (03G05, 06E20, 94C10)
- Poncet, Alain** (with Le Provost, Christian) Finite element method for spectral modelling of tides. *Internat. J. Numer. Methods Eng.* 12 (1978), no. 5, 853-871. (Jacques Couot) **80f:65121** 65N30 (86A05)
- Pondělčák, B.** On semigroups having regular globals. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 453-461, *Colloq. Math. Soc. János Bolyai*, 20, North-Holland, Amsterdam, 1979. (M. Yamada) **80i:20068** 20M10
- Ponizovskii, I. S.** On the radical of the Burnside algebra of a finite inverse semigroup. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 463-478, *Colloq. Math. Soc. János Bolyai*, 20, North-Holland, Amsterdam, 1979. (Hubert Grassmann) **80i:20053** 20M20 (20B05)
- Ponjuk, M. I.** (with Gaborak, Ja. N.; Kušničuk, I. F.) Equivalence of third order differential operators with a regular singular point. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 6, 1254-1259, 1436. (Piero Bassanini) **80a:47074** 47E05 (34A20, 34B25)
- Ponomarenko, A. K.** Cubature formulas for certain singular integrals. (Russian) *Metody Vyčisl. No. 11* (1978), 43-48, 187-188. (Walter Gautschi) **80a:65057** 65D32
- Construction of cubature formulas for some double singular integrals. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent) No. 51* (1978), 110-118, 229. (Author's summary) **80f:65030** 65D32
- Ponomarenko, G. G.** A class of nonindistinguishability of automata with finite memory. (Russian) *Discrete systems, formal languages and complexity of algorithms (Russian)*, pp. 56-65, *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (Jerzy W. Grzymala-Busse) **80a:68054** 68D50
- Ponomarenko, L. D.** (with Stojan, Ju. G.) A rational arrangement of geometric bodies in automated design problems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 1, 39-47, 219-220 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 1, 34-43. (Authors' summary) **80b:93021** 93A99
- Ponomarenko, L. L.** See Questions of modeling complex systems. **80j:90055**
- Ponomarenko, L. S.** Inequalities for distributions of normalized quadratic forms in random variables. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 3, 676-680. (V. L. Girko) **80h:60030** 60E15 (62H10)
- An inequality for distributions of quadratic forms in normal random variables. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 3, 680-684. (V. L. Girko) **80g:62033** 62H10
- Ponomarenko, S. P.** The solution of a class of triple integral equations associated with the integral Hankel transformation. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 6, 833-840, 863. (A. S. Silbergleit) **80c:45008** 45F10 (42B10, 73C35)
- A system of dual integral equations connected with the Mehler-Fok generalized integral transform. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 6* (1979), 420-424, 493. (A. S. Silbergleit) **80m:45007** 45F10 (44A15, 73C99)
- Solution of one kind for systems of dual integral equations. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 7* (1979), 516-519, 589. (A. S. Silbergleit) **80m:45008** 45F10
- Ponomarenko, V. G.** (with Timan, M. F.) Behavior near the boundary of the solutions of a boundary value problem and of their derivatives. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 282-286, "Nauka", Moscow, 1977. (V. Ždanovič (RŽMat 1977:10 B357)) **80i:35045** 35G15
- Ponomarev, A. I.** Regular pretorsions. (Russian) *Mat. Zametki* 25 (1979), no. 1, 27-35, 157. (L. Bican) **80d:16021** 16A63 (16A30)
- Ponomarev, A. P.** On a class of differential games of pursuit. *Prikl. Mat. Meh.* 41 (1977), no. 5, 949-951 (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 5, 976-978 (1979). (Emmanuel Nicholas Barron) **80a:90179** 90D25
- Ponomarev, D. M.** (with Krylov, V. V.; Vodop'janova, G. I.) Matrix representation of the differentiation operator and its application in measurement techniques. (Russian) *Automat. i Vyčisl. Tehn. (Riga)* 1978, no. 1, 58-62, 95. (K. P. Hadeier) **80g:65017** 65D25
- Ponomarev, O. A.** (with Ivanov, A. I.; Lomakin, G. S.) Investigation of systems with quadratic interaction by the method of functional derivatives. (Russian. English summary) *Teoret. Mat. Fiz.* 41 (1979), no. 2, 273-284. (Authors' summary) **80m:81128** 81H05 (82A15)
- Ponomarev, S. M.** The Tricomi problem for a system of mixed-type equations in the plane. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 6, 1256-1257. (Anthony G. O'Farrell) **80f:35085** 35M05
- Uniqueness of the solution of the Tricomi problem for an equation of mixed type in the plane. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 1, 183-184, 192. (Megumi Saigo) **80g:35089** 35M05
- Ponomarev, V. D.** The existence of the solution of the simplest boundary value problem for a second-order differential equation. (Russian) *Lato. Mat. Ežegodnik* No. 22 (1978), 69-74, 281. (M. Švec) **80g:34018** 34B15
- Ponomarev, V. N.** (with Obuhov, Ju. N.; Krečēt, V. G.) Torsion, sectional curvature and the structure of a space-time. (Russian) *Gravitacija i Teor. Otinosiel'nosti* No. 14-15 (1978), 121-127. (Kishore Marathe) **80d:83077** 83D05 (53B30)
- (with Barvinskii, A. O.) Global effects of the creation of scalar matter in quantum cosmology. (Russian. English summary) *Teoret. Mat. Fiz.* 37 (1978), no. 2, 224-236. (Ja. A. Smorodinskii) **80d:83039** 83C45 (58E99)
- (with Ceitin, A. A.) The correct use of the Palatini principle in gravitation theories. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* 19 (1978), no. 6, 57-59. (Kishore Marathe) **80a:83063** 83D05 (53B30, 83C35)
- Ponomarev, V. G.** Invariant equations of the second differential neighborhood of a ray of a complex of lines in the three-dimensional projective space  $P_3$ . (Ukrainian. English and Russian summaries) *Visnik Kiv. Univ. Ser. Mat. Meh.* No. 19 (1977), 13-16, 148. (M. A. Akivis) **80j:53017** 53A20 (53A25)
- Pons, J. M.** (with Gomis, J.) The centralizer subalgebras of Poincaré  $IO_{3,1}$ . (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 2, 166-174. (V. Syamala Devi) **80a:17007a** 17B20 (22E70, 81M05)
- (with Gomis, J.) Co-ordinate transformations and centralizer subalgebras of Poincaré  $IO_{3,1}$ . (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 2, 175-186. (V. Syamala Devi) **80a:17007b** 17B20 (22E70, 81M05)
- Pons, Odile** Test non paramétrique sur la loi d'un processus ponctuel. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 4, A189-A192. (Author's summary) **80c:62083** 62M07 (62G10)
- Ponssard, J.-P.** (with Srinivasan, T. N.) Selection of time independent technologies under an uncertain planning horizon. *Opersearch* 15 (1978), no. 2-3, 95-105. (B. W. Stuck) **80a:90041** 90A16
- Pont, Jean-Claude** Johann-Heinrich Rehbein: une voie philosophique vers la topologie. (English summary) *Historia Math.* 5 (1978), no. 4, 443-454. (H. Freudenthal) **80a:01016** 01A50
- Ponter, A. R. S.** (with Brown, P.) A finite element method for cyclically loaded creeping structure. *Energy methods in finite element analysis*, pp. 319-333, Wiley, Chichester, 1979. (Warren S. Edelstein) **80i:73046** 73K25 (65N30)
- Pontrjagin, L. S.** ★ *Continuous groups*. (Spanish) Translated from the third Russian edition by Carlos Vega. Editorial Mir, Moscow, 1978. 533 pp. (Editors) **80c:22001** 22-01
- A brief biographical sketch of L. S. Pontrjagin written by himself. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 6(204), 7-21. (Esther R. Phillips) **80f:01021** 01A70
- Optimization and differential games. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 6(204), 22-28. (O. Hájek) **80b:49001** 49-02 (90-02)
- See also Aleksandrov, P. S. **80j:01040**
- Ponzo, Peter J.** (with Wax, Nelson) Note on a model of a biochemical reaction. *J. Math. Anal. Appl.* 66 (1978), no. 2, 354-357. (Juan Lin) **80b:80012** 80A30 (34C99, 92A09)
- de sola Polt, Ithiel** See de Sola Polt, Ithiel
- Poole, G. D.** (with Barker, George Phillip) MP matrices. *Linear Algebra Appl.* 26 (1979), 165-174. (M. Lotkin) **80e:15004** 15A09
- Poole, W. G., Jr.** (with George, Alan; Voigt, R. G.) Analysis of dissection algorithms for vector computers. *Comput. Math. Appl.* 4 (1978), no. 4, 287-304. (Authors' summary) **80a:65084** 65F30
- Poor, H. Vincent** (with Thomas, John B.) Memoryless discrete-time detection of a constant signal in  $m$ -dependent noise. *IEEE Trans. Inform. Theory* 25 (1979), no. 1, 54-61. (Seihaku Higuchi) **80d:94002** 94A12
- (with Mami, M.; Thomas, John B.) On robust detection of discrete-time stochastic signals. *J. Franklin Inst.* 309 (1980), no. 1, 29-53. (Authors' summary) **80m:94017** 94A12
- van der Poorten, Alfred J.** See Van der Poorten, Alfred J.
- Popa, Cornel** An axiomatic system for a logical theory of liberty and constraint. (Romanian) *Problems of logic, Vol. VII (Romanian)*, pp. 215-228, *Ed. Acad. RS România, Bucharest*, 1977. (B. Brainerd) **80j:03031** 03B45
- Popa, D.** (with Ionescu-Pallas, Nicholas; Maurer, J.; Bärna, Oana) Schrödinger-Pauli wave equation without approximation. (French summary) *Rev. Roumaine Phys.* 23 (1978), no. 7-8, 727-742. (Jules Beckers) **80a:81015** 81C05 (35Q20)
- Popa, Nicolae** Complemented sublattices in  $L_p$ ,  $0 < p < 1$ , and an extension of Ando's theorem. *Arch. Math. (Basel)* 32 (1979), no. 3, 276-288. (H. E. Lacey) **80f:46021** 46B30
- Popa, Valeriu** (with Puiu, Gabriel; Stan, Costică) Erratum: "Sur le point fixe commun des plusieurs applications dans des espaces Hausdorff" (Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.) 21(69) (1977), no. 3-4, 405-409). *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 22(70) (1978), no. 2, 224. (Editors) **80a:54067** 54H25
- On certain properties of quasicontinuous and almost continuous multifunctions.



- (Romanian. French summary) *Stud. Cerc. Mat.* **30** (1978), no. 4, 441-446. (J. G. Ceder) 80b:54020 54C60
- Popadić, Milan S. (with Mitrović, Dragoslav S.) ★ Inequalities in number theory. University of Niš, Department of Mathematics, Niš, 1978. vii + 183 pp. (H. Halberstam) 80c:10002 10-02
- Pope, C. N. Axial-vector anomalies and the index theorem in charged Schwarzschild and Taub-NUT spaces. *Nuclear Phys. B* **141** (1978), no. 4, 432-444. (Author's summary) 80d:83079 83D05 (53C10)
- (with Hawking, S. W.) Symmetry breaking by instantons in supergravity. *Nuclear Phys. B* **146** (1978), no. 2, 381-392. (S. G. Mamaev) 80b:83027 83C45 (58G10, 83E99)
- (with Gibbons, G. W.) The positive action conjecture and asymptotically Euclidean metrics in quantum gravity. *Comm. Math. Phys.* **66** (1979), no. 3, 267-290. (Mauro Francaviglia) 80j:83016 83C45 (53C05)
- Popenda, J. (with Cracknell, A. P.; Davies, B. L.; Kunert, H.; Suffczyński, Maciej) Selection rules for the holosymmetric double space groups based on the body-centred cubic Bravais lattice. *Comm. Roy. Soc. Edinburgh Phys. Sci. No. 14* (1979), 177-192. (T. Janssen) 80c:82025 82A60 (20C35, 20H15)
- Popescu, Dorin Algebraically pure morphisms. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 6, 947-977. (Gerhard Pfister) 80j:13017 13J10 (14B12, 14D15)
- Popescu, I. P. (with Papuc, Dan I.) Considérations algébriques sur les tissus associés aux fibres principales différentiables. *Papers from the National Colloquium on Geometry and Topology (Univ. Timișoara, Timișoara, 1977)*, 185-198. *Univ. Timișoara, Timișoara, 1977.* (J. L. Koszul) 80e:55029 55R10 (53C05)
- Popescu, Liliana (with Popescu, Nicolae) ★ Theory of categories. Editura Academiei, Bucharest; Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn, 1979. x + 337 pp. ISBN 90-286-0168-6 (Paul Jambor) 80i:18001 18-01
- Popescu, Mihai On some classes of isoperimetric problems related to the entry into the planetary atmosphere of a space vehicle equipped with rocket propulsion. (Romanian. English summary) *Stud. Cerc. Mat.* **31** (1979), no. 5, 593-613. (Author's summary) 80m:70033 70P05 (49A10)
- On an optimal problem in thermodynamics of the re-entry of space vehicles into the atmosphere. (Romanian. English summary) *Stud. Cerc. Mat.* **31** (1979), no. 6, 705-737. (Author's summary) 80m:70029 70M05
- Popescu, Nicolae (with Popescu, Liliana) ★ Theory of categories. Editura Academiei, Bucharest; Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn, 1979. x + 337 pp. ISBN 90-286-0168-6 (Paul Jambor) 80i:18001 18-01
- Popescu, P. Dual Rodrigues-Hamilton (R-H) parameters for the spatial movement study of rigid material systems. (Romanian. French summary) *Bul. Științ. Inst. Politehn. Cluj-Napoca* **18** (1975), 9-10 (1977). (Editors) 80a:70010 70E15 (58F05)
- Popescu, Vasile An existence theorem for convex control problems of linear differential systems of retarded type. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 4, 633-645. (G. Zătașvili) 80j:49017 49A50
- Popivanov, N. I. Some boundary value problems for hyperbolic-parabolic equations in multidimensional domains. (Russian) *Dokl. Akad. Nauk SSSR* **243** (1978), no. 3, 584-587. (O. John) 80g:35090 35M05
- Popivanov, P. R. Some local and semi-global properties of linear pseudo-differential equations with double characteristics. *Contributions to the School on Global Analysis (Ludwigsgfelde, 1976)*, Part 2, pp. 47-62. *Akad. Wiss. DDR, Berlin, 1977.* (Editors) 80c:35106 35S05 (58G15)
- Local properties of pseudodifferential operators with multiple characteristics. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 193-199. *Moskoo. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978.* (A. S. Dynin) 80m:35082 35S05 (47G05, 58G05)
- The hypoellipticity of a certain class of pseudodifferential systems. (Russian) *C. R. Acad. Bulgare Sci.* **31** (1978), no. 7, 807-809. (L. Cattabriga) 80a:35021 35H05 (35J05)
- (with Popov, G. St.) Microlocal properties of the class of pseudodifferential equations of nonprincipal type. (Russian) *C. R. Acad. Bulgare Sci.* **31** (1978), no. 12, 1531-1533. (J. Chrastina) 80i:35187 35S05
- Local properties of pseudodifferential operators with double involutory characteristics. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 4(202), 223-224. (V. E. Korepin) 80g:35130 35S05
- Popivici, V. I. (with Rvačov, V. L.; Slesarenko, A. P.) Solution of a three-dimensional non-steady-state heat conduction problem under boundary conditions that change with time. (Russian) *Čisl. Metody Meh. Splošn. Sredy* **9** (1978), no. 6 *Mat. Modelirovanie*, 125-135. (B. Vujanović) 80m:80009 80A20
- Popkov, Ju. S. See Wilson, A. G. 80d:90030
- Poplawski, David A. On LL-regular grammars. *J. Comput. System Sci.* **18** (1979), no. 3, 218-227. (Author's summary) 80c:68194 68F05
- Popoola, J. O. (with Tweddle, I.) Density character, barrelledness and the closed graph theorem. *Colloq. Math.* **40** (1978/79), no. 2, 249-258. (N. Adasch) 80j:46004 46A07 (46A30)
- Popov, A. K. (with Dymnikova, I. G.) Low-frequency radiation from a particle falling into a Kerr black hole. *Astrophys. and Space Sci.* **68** (1980), no. 2, 487-494. (Authors' summary) 80m:83019 83C50
- Popov, A. M. Irreducible semisimple linear Lie groups with finite stationary subgroups of general position. (Russian) *Funkcional. Anal. i Priložen.* **12** (1978), no. 2, 91-92. (H. de Vries) 80b:20056 20G20 (22E10)
- Popov, Blagoj S. On a property of generalised Gegenbauer polynomials. (Macedonian summary) *Makedon. Akad. Nauk. Umet. Oddel. Prirod.-Mat. Nauk. Prilozi* **9** (1977), no. 1, 5-7. (From the text) 80c:33008 33A50
- Popov, E. P. ★ Теория линейных систем автоматического регулирования и управления. (Russian) [Theory of linear automatic regulation and control systems] "Nauka", Moscow, 1978. 256 pp. (Vadim Komkov) 80e:93002 93-02
- (with Kru'ko, P. D.) Canonical transformations of the equations of motion of a dynamical system. (Russian) *Dokl. Akad. Nauk SSSR* **246** (1979), no. 3, 555-557. (From the text) 80h:93035 93C15 (49C05)
- (with Petrov, B. N.; Kru'ko, P. D.) On the theory of construction of motion control algorithms. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 3, 575-577. (From the text) 80i:93044 93C99
- Popov, G. St. (with Popivanov, P. R.) Microlocal properties of the class of pseudodifferential equations of nonprincipal type. (Russian) *C. R. Acad. Bulgare Sci.* **31** (1978), no. 12, 1531-1533. (J. Chrastina) 80i:35187 35S05
- Popov, I. I. (with Romanenko, A. G.; Sumarokov, L. N.) Set-theoretic modeling of information systems. (Russian) *Voprosy Informatsii. Teorii i Praktiki No. 33-34* (1978), 16-63. (Vladimir Sleinkov) 80g:68027 68B15 (68C01)
- Popov, Ju. D. On the problem of the estimation of the spectral density of a homogeneous and isotropic random field on the plane. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev) No. 34* (1978), 79-87, 166. (Valery Fedorov) 80a:62153 62M15
- Popov, Ju. P. (with Gorev, V. V.; Koldoba, A. V.; Povešchenko, Ju. A.; Rudakov, L. I.) Numerical simulation of strong current relativistic electron beam diffusion through matter. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 102* (1978), 31 pp. (Authors' summary) 80a:78013 78A35 (00A89)
- (with Povešchenko, Ju. A.) Some problems of gas dynamics with sources. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **18** (1978), no. 4, 1048-1056, 1071. (Authors' summary) 80b:76028 76N15 (65P05)
- (with Ardeljan, N. V.) Peculiarities of application of numerical methods in the problem of magneto-rotational explosion of a supernova. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 107* (1979), 23 pp. (Authors' summary) 80m:85001 85A05
- (with Mažorova, O. S.) An algorithm for the numerical solution of two-dimensional Navier-Stokes equations. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 37* (1979), 31 pp. (From the text) 80c:65116 65P05 (76D05)
- (with Mažorova, O. S.) Completeness of conservative schemes for two-dimensional equations of gas dynamics. (Russian) *Differentsial'nye Uravnenija* **15** (1979), no. 7, 1318-1331, 1344. (Authors' summary) 80i:65134 65P05 (76N15)
- Popov, Ju. V. (with Popova, A. M.) Analytic solution of an integral equation of Fredholm type. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **18** (1978), no. 4, 1029-1034, 1070. (A. Ramm) 80a:45009 45E99
- Popov, M. M. Examples of exactly solvable scattering problems for a parabolic equation of diffraction theory. (Russian. English summary) *Mathematical questions in the theory of wave propagation*, 9. *Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **78** (1978), 184-202, 250. (J. S. Joel) 80g:78014 78A45 (35P25, 81F05)
- (with Plencik, I.) Whispering gallery waves in the vicinity of the point of unbending of a concave boundary. (Russian. English summary) *Mathematical questions in the theory of wave propagation*, 9. *Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **78** (1978), 203-210, 250. (From the text) 80g:78015 78A45 (35J15)
- Correctness of the problem of whispering gallery waves in the vicinity of points where the boundary becomes straight. (Russian. English summary) *Mathematical questions in the theory of wave propagation*, 10. *Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **89** (1979), 261-269, 296. (Author's summary) 80a:35025 35J10 (35P25, 76Q05)
- Popov, O. B. (with Il'inskii, A. S.) The direct method in diffraction problems on smooth unbounded surfaces in inhomogeneous media. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **19** (1979), no. 2, 426-443, 557. (M. M. Skripanov) 80g:78006 78A45 (78A05)
- Popov, V. A. Uniform approximation of functions with derivatives of bounded variation and its applications. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 639-647. *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (Lee L. Keener) 80h:41005 41A20
- Direct and converse theorems for oneshide approximation. *Linear spaces and approximation (Proc. Conf., Math. Res. Inst., Oberwolfach, 1977)*, pp. 449-458. *Internat. Schriftenreihe Numer. Math.*, 40, Birkhäuser, Basel, 1978. (Tord H. Ganelius) 80c:42002 42A10 (41A29)
- (with Skibenko, I. T.) Calculation of classes of partially specified automata with identified states. (Russian) *Avtomat. i Vychisl. Tehn. (Riga)* **1978**, no. 2, 11-12, 91. (A. N. Melikhov (Melihov)) 80h:68054 68D99
- (with Lysenko, E. V.; Skibenko, I. T.) Decomposition of logic circuits into standard parts. (Russian) *Avtomat. Sistemy Upravleniya i Priory Avtomat. No. 45* (1978), 95-101, 4-5. (Authors' summary) 80a:94060 94C10 (03G05)
- (with Litvinov, A. L.) Estimation of the variants of design and choice of parameters of an exchange channel of digital control computers. (Russian. English summary) *US i M—Upravljajuschie Sistemy i Maliny* **1978**, no. 5(37), 81-84, 149-150. (Authors' summary) 80a:94028 94A40 (68C15)
- (with Andreev, Andrei S.; Sendov, Blagovest) Some estimates for a numerical solution of a boundary problem for ordinary differential equations of a second order. *C. R. Acad. Bulgare Sci.* **32** (1979), no. 8, 1023-1026. (William B. Day) 80c:65066 65L10
- (with Kučerenko, V. V.) High-frequency oscillations of plates. (Russian) *Dokl. Akad. Nauk SSSR* **244** (1979), no. 4, 819-823. (From the text) 80d:73049 73D30 (73K10)
- Popov, V. I. (with Suvorov, G. D.; Aptekar, A. S.; Gusarova, N. I.; Prohoda, G. M.; Ševčuk, V. S.) The method of simplex-splines (as applied to the optimal layout of gas pipelines). (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 9* (1979), 708-709, 777. (Authors' summary) 80a:90022 90B99
- Popov, V. L. A classification of spinors of dimension fourteen. (Russian) *Trudy Moskov. Mat. Obšč.* **37** (1978), 173-217, 270. (A.-A. A. Jucys) 80b:20054 20G05 (15A72)
- Popov, V. M. Applications of the saturability technique in the problem of stability of nonlinear systems. *Nonlinear Anal.* **1** (1976/77), no. 5, 571-581. (Andrzej W. Olbrot) 80b:93126 93D20 (45D05)
- Monotonicity and mutability. *J. Differential Equations* **31** (1979), no. 3, 337-358. (A. Halanay) 80m:34036 34C11 (34D25, 45M05)
- Popov, V. N. (with Kuliš, P. P.) Infrared asymptotic behavior of the Green function of massive particles in a charge-symmetric model. (Russian) *Questions in quantum field theory and statistical physics. Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **77** (1978), 124-133, 231. (Authors' summary) 80e:81065 81E10
- A method of calculating the long-range behavior of the spin correlation in a two-dimensional Ising model. (Russian) *Questions in quantum field theory and*

- statistical physics. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 77 (1978), 188–213, 232. (Author's summary) **80e:82040** 82A67
- See also Questions in quantum field theory and statistical physics, **80e:81001**
- Popov, V. S. (with Elets'kii, V. L.) Summation of perturbation-theory series by the Padé and Padé-Borel methods. *Jadernaja Fiz.* 28 (1978), no. 4, 1109–1122 (Russian); translated as *Soviet J. Nuclear Phys.* 28 (1978), no. 4, 570–577 (1979). (T. Sasakawa) **80a:81026** 81C12 (41A21)
- (with Voskresenskii, D. N.; Elets'kii, V. L.; Mur, V. D.) WKB method at  $Z > 137$  and its applications to the theory of supercritical atoms. *Ž. Eksp. Teoret. Fiz.* 76 (1979), no. 2, 431–459 (Russian); translated as *Soviet Phys. JETP* 49 (1979), no. 2, 218–231. (J. V. Greenman) **80i:81072** 81G45
- Popov, V. V. (with Rancin, D. V.) A strengthening of the Fréchet-Uryson property. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 2, 75–80. (A. Császár) **80f:54017** 54D55
- Popova, A. M. (with Popov, Ju. V.) Analytic solution of an integral equation of Fredholm type. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 4, 1029–1034, 1070. (A. Ramm) **80a:45009** 45E99
- Popovici, Al. A. A Markovian stochastic model of the profit's general rate formation. (French and Russian summaries) *Econom. Comput. Econom. Cybernet. Stud. Res.* 12 (1979), no. 3, 85–106. **80c:90045** 90A99
- Popovici, Iulian Contributions à l'étude des espaces à connexion constante. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 8, 1211–1225. (Hassan Akbar-Zadeh) **80c:53067** 53C60
- Popoviciu, Elena Sur la convexité simultanée par rapport aux plusieurs ensembles interpolatoires. *Anal. Numér. Théor. Approx.* 7 (1978), no. 1, 101–106. (Lee L. Keener) **80i:41006** 41A05 (26A51)
- Sur les fonctionnelles simples par rapport à un ensemble interpolatoire. *Anal. Numér. Théor. Approx.* 7 (1978), no. 2, 189–192. (Editors) **80d:41005** 41A05
- Popovkin, V. I. Tikhonov's regularization method and the theory of antenna synthesis. (Russian) *Problems in mathematical physics and numerical mathematics* (Russian), pp. 264–271, 327, "Nauka", Moscow, 1977. (Author's summary) **80e:78022** 78A50 (47A50)
- Popp, K. (with Müller, Peter C.) On the stability of interactive multibody systems with an application to Maglev-vehicle-guideway control systems. *Dynamics of multibody systems* (Proc. IUTAM Symp., Munich, 1977), pp. 260–273, Springer, Berlin, 1978. (Authors' summary) **80d:70016** 70E99 (93C99)
- Popp, Simona Numerical evaluations of compressibility corrections in wake flows. *Anal. Numér. Théor. Approx.* 7 (1978), no. 2, 193–209. (From the introduction) **80d:76046** 76G05
- Poppe, Harry (with Jeschek, Franz) Remarks on compactness in spaces of measures. *Proceedings of the Conference Topology and Measure, I* (Zinnowitz, 1974), Part 2, pp. 285–291, Ernst-Moritz-Arndt Univ., Greifswald, 1978. (N. Dinuleanu) **80i:46025** 46E27 (28A33)
- Popynia, A. I. (with Anikin, A. A.; Šihov, S. B.) The stability of the solution of the spectral problem for a multi-group diffusion approximation of the transport equation. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 9, 1692–1695, 1725. (G. Lassner) **80b:82059** 82A70 (35B20)
- Popynia, L. S. ★Математическое моделирование и оптимизация теплоэнергетических установок. (Russian) [Mathematical modeling and optimization of thermal power installations] "Energiya", Moscow, 1978. 415 pp. (Vadim Komkov) **80d:93017** 93A99
- Porath, Günter (with Tabbert, Eckhard) Das Tschebyscheffsche Iterationsverfahren für lineare Volterra'sche Integralgleichungen zweiter Art. *Beiträge Numer. Math.* 7 (1979), 83–96. (Charles Salzer) **80b:65156** 65R20
- Pore, M. D. (with Hallum, C. R.) A discriminant approach to parameter estimation in the linear model with unknown variance-covariance matrix. *Indust. Math.* 29 (1979), no. 1, 1–8. (S. John) **80m:62066** 62J05 (62H12)
- Poroshuk-Porhanova, A. A. Ser Kalenčuk-Porhanova, A. A.
- Poroshuk, B. T. (with Tuhvetov, F. T.) The calculation of the profile of the rate and flow in the case of nonisometric flow of a rarefied gas in a cylindrical capillary by the Krylov-Bogolubov method. (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1978, no. 6, 143–150. (From the introduction) **80f:76031** 76N99
- Porper, F. O. (with Eidel'man, S. D.) Theorems on the asymptotic proximity and stability of the solutions of second-order multidimensional parabolic equations. (Russian) *Methods of functional analysis in problems of mathematical physics* (Russian), pp. 81–114, 181–182, Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1978. (P. A. Mišnevskii) **80i:35093** 35K20 (35B35)
- (with Eidel'man, S. D.) Asymptotic behavior of classical and generalized solutions of second-order one-dimensional parabolic equations. (Russian) *Trudy Moskov. Mat. Obšč.* 36 (1978), 85–130, 294. (V. V. Kovrižkin) **80g:35015** 35B40 (35K15)
- Portu, Giovanni  $\theta$ -mappings and quasiconformal mappings in normed spaces. *Rend. Sem. Mat. Univ. Padova* 57 (1977), 173–182 (1978). (T. Kubo) **80c:30008** 30C60
- A degenerate fourth-order elliptic operator in variational form. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 3, 648–659. (Z. C. Motzler) **80b:35069** 35J70
- On a compactness theorem with respect to  $G$ -convergence for degenerate second-order elliptic operators. (Italian. English summary) *Rend. Sem. Fac. Sci. Univ. Cagliari* 48 (1978), suppl., 67–80. (A. Haimovici) **80g:35063** 35J70
- Maximum principles for some classes of linear second-order systems with degenerate ellipticity. (Italian. English summary) *Rend. Sem. Fac. Sci. Univ. Cagliari* 48 (1978), no. 3–4, 363–373. (Z. C. Motzler) **80d:35051** 35J45
- Porte, Jean The  $\Omega$ -system and the  $L$ -system of modal logic. *Notre Dame J. Formal Logic* 20 (1979), no. 4, 915–920. (S. K. Thomason) **80b:03030** 03B45 (03B50)
- Portenko, M. I. (with Koroljuk, V. S.; Skorohod, A. V.; Turbin, A. F.) ★Справочник по теории вероятностей и математической статистике. (Russian) [A manual on probability theory and mathematical statistics] "Naukova Dumka", Kiev, 1978. 582 pp. (R. M. Dudley) **80b:60002** 60–01 (62–01)
- Diffusion processes with a generalized drift coefficient. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 1, 62–77. (Constantin Tudor) **80g:60082** 60J60
- Porter, A. Duane Some partitions of a symmetric matrix. *Math. Nachr.* 84 (1978), 179–183. (John H. Hodges) **80m:15010** 15A33 (15A24)
- (with Johnson, Larry S.; Varineau, Verne J.) Commutators over finite fields. *Publ. Math. Debrecen* 25 (1978), no. 3–4, 259–264. (John H. Hodges) **80d:15017** 15A24 (15A23)
- (with Mousouris, Nick) The Hermitian matrix equation  $U_1^* \cdots U_l^* A U_1 \cdots U_l = B$ . (French summary) *Rend. Mat.* (6) 11 (1978), no. 3, 387–392 (1979). (John H. Hodges) **80m:15008** 15A33 (15A24)
- (with Mousouris, Nick) Ranked solutions of  $AXC = B$  and  $AX = B$ . *Linear Algebra Appl.* 24 (1979), 217–224. (John H. Hodges) **80m:15011** 15A33 (15A24)
- Porter, B. (with D'Azzo, J. J.) Closed-loop eigenstructure assignment by state feedback in multivariable linear systems. *Internat. J. Control* 27 (1978), no. 3, 487–492. (Authors' summary) **80a:93065** 93B99 (93C55)
- (with Tsingas, A.) Singular perturbation methods in the design of linear multivariable tracking systems for plants with polynomial command inputs. *Internat. J. Control* 27 (1978), no. 4, 639–650. (B. Wittenmark) **80a:93066** 93B99 (93C05)
- (with Bradshaw, A.) Design of linear multivariable discrete-time output-feedback regulators. *Internat. J. Systems Sci.* 9 (1978), no. 8, 857–863. (Authors' summary) **80b:93087** 93C55
- (with Bradshaw, A.) Minimum settling-time control policies for cascaded production-inventory systems. *Internat. J. Systems Sci.* 9 (1978), no. 9, 981–994. (R. Jagannathan) **80a:90049** 90B05
- (with Bradshaw, A.) Design of linear multivariable discrete-time tracking systems incorporating error-actuated dynamic controllers. *Internat. J. Systems Sci.* 9 (1978), no. 10, 1079–1090. (Authors' summary) **80a:93098** 93C55
- (with Bradshaw, A.; Fletcher, Leslie R.) Synthesis of output-feedback control laws for linear multivariable continuous-time systems. *Internat. J. Systems Sci.* 9 (1978), no. 12, 1331–1340. (M. F. Kirichenko) **80b:93039** 93B15 (93C15)
- (with Bradshaw, A.) Design of linear multivariable continuous-time high-gain output-feedback regulators. *Internat. J. Systems Sci.* 10 (1979), no. 2, 113–121. (J. C. Allwright) **80c:93054** 93C15 (93C35)
- (with Bradshaw, A.) Design of linear multivariable continuous-time tracking systems incorporating high-gain decentralized error-actuated controllers. *Internat. J. Systems Sci.* 10 (1979), no. 9, 961–970. (Authors' summary) **80f:93033** 93B99
- Computation of the zeros of linear multivariable systems. *Internat. J. Systems Sci.* 10 (1979), no. 12, 1427–1432. (Authors' summary) **80j:93068** 93C35
- Necessary conditions for absolute stability of nonlinear regulators. *Electron. Lett.* 16 (1980), no. 5, 181–182. (Authors' summary) **80m:93071** 93D99
- Comments on: "A pole assignment algorithm for multivariable control by G. Lee, D. Jordan and M. Sohrwardy. With a reply by Lee, Jordan and Sohrwardy. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 139–140. (Editors) **80g:93049** 93C35 (93C99)
- (with Gruić, Ljubomir T.) Continuous-time tracking systems incorporating Lur'e plants with single non-linearities. *Internat. J. Systems Sci.* 11 (1980), no. 2, 177–189. (Authors' summary) **80m:93057** 93C60
- Porter, J. R. See Porter, John R.
- Porter, Jack R. (with Woods, R. Grant) Minimal extremally disconnected Hausdorff spaces. *General Topology Appl.* 8 (1978), no. 1, 9–26. (Stephen Willard) **80c:54043** 54G05
- Porter, John R. (with Newman, Ezra T.; Tod, K. P.) Twistor surfaces and right-flat spaces. *Gen. Relativity Gravitation* 9 (1978), no. 12, 1129–1142. (R. Behari) **80a:83021** 83C20 (32L05, 53C55)
- Porter, Richard (with Cenkl, Bohumil) Complément de Lazard des groupes par des formes différentielles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 8, A445–A447. (Authors' summary) **80b:58004** 58A10 (14L05, 55P62)
- Porter, Timothy (with Cordier, Jean-Marc) Introduction à la théorie de la forme. I. *Esquisses mathématiques*, No. 30, Exp. No. 1, 140 pp., Univ. Amiens, Amiens, 1978. (Harold Hastings) **80j:55012** 55P55 (54F43, 55N05)
- Coherent prohomotopy theory. *Cahiers Topologie Géom. Différentielle* 19 (1978), no. 1, 3–46. (Harold Hastings) **80m:55015** 55P55
- Stability of algebraic inverse systems. I. Stability, weak stability and the weakly-stable socle. *Fund. Math.* 100 (1978), no. 1, 17–33. (Daniel Tanré) **80c:13007** 13C12 (13C13)
- Porter, William A. Partial inverses for parameter sensitivity reduction. *Internat. J. Control* 29 (1979), no. 6, 949–961. (R. Sacks) **80j:93045** 93B99
- Porteus, Evan L. (with Kreps, David M.) Temporal resolution of uncertainty and dynamic choice theory. *Econometrica* 46 (1978), no. 1, 185–200. (Yves Balasko) **80b:90002** 90A05 (90A06)
- (with Kreps, David M.) Dynamic choice theory and dynamic programming. *Econometrica* 47 (1979), no. 1, 91–100. (P. Kischka) **80b:90138** 90C40 (90A05)
- Portinari, João C. An inverse scattering transform for potentials of compact support. *J. Math. Phys.* 19 (1978), no. 10, 2100–2102. (Christiane Coudray) **80b:81095** 81F05 (34B25)
- Portnov, V. R. Solvability of nonlinear operator equations in Banach spaces. Applications to the solution of certain problems of the theory of differential equations. (Russian) *Mathematical analysis and related mathematical questions* (Russian), pp. 192–223, 353, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (A. A. Fonarev) **80m:47061** 47H15 (47H05)
- Portnov, Stephen L. Further remarks on robust estimation in dependent situations. *Am. Statist.* 7 (1979), no. 1, 224–231. (Farhad Mehran) **80c:62049** 62F35
- Porubský, Štefan On covering systems on rings. (Russian summary) *Math. Slovaca* 28 (1978), no. 2, 147–152. (I. Gy. Maurer) **80b:16031** 16A80
- On theorems of Niven and Dressler. (Russian summary) *Math. Slovaca* 28 (1978), no. 3, 243–246. (D. Suryanarayana) **80b:10065** 10L10 (10H25)
- Sums of prime powers. *Monatsh. Math.* 86 (1978/79), no. 4, 301–303. (W. Schwarz) **80i:10065** 10J15 (10B35)
- On the density of certain sets in arithmetical semigroups. *Czechoslovak Math. J.* 29 (104) (1979), no. 1, 148–152. (W. Narkiewicz) **80c:10047** 10H40
- Posada, Germán A proof of the Schröder-Bernstein theorem. (Spanish) *Bol. Mat.* 11 (1977), no. 4–6, 179–183. (Editors) **80g:04003** 04–01
- Pöschel, R. Concrete representation of algebraic structures and a general Galois theory.



- Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978), pp. 249-272, Heyn, Klagenfurt, 1979. (Agnes Szendrei) **80h:00008** 08A40 (06A15)
- Pondorf, H. (with Baszenski, G.; Delvos, F.-J.) ★ Zur  $C^m$ -konformen zweidimensionalen Melkes-Interpolation. Arbeitsberichte des Rechenzentrums, 7809, Ruhr-Universität, Bochum, 1978. 22 pp. (From the introduction) **80g:65010** 65D05  
(with Delvos, F.-J.; Schempp, Walter) Serendipity-type bivariate interpolation. *Multivariate approximation (Sympos., Univ. Durham, Durham, 1977)*, pp. 47-56, Academic Press, London, 1978. (David R. Hill) **80h:65009** 65D05  
(with Delvos, F.-J.) A representation formula for reduced Hermite interpolation. *Numerische Methoden der Approximationstheorie, Band 4 (Meeting, Math. Forschungsinst., Oberwolfach, 1977)*, pp. 124-137, Internat. Schriftenreihe Numer. Math., 42, Birkhäuser, Basel, 1978. (From the introduction) **80g:41002** 41A05
- Polekhonov, Ju. Ju. (with Vabitschev, P. N.; Degtjarev, L. M.; Pistunovich, V. I.; Šafranov, V. D.) Evolution of the equilibrium of a toroidal plasma string in the casing of a complex form. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 119* (1978), 33 pp. (V. P. Milant'ev) **80i:82036** 82A45  
(with Babiševič, P. N.; Degtjarev, L. M.) Numerical solution of a direct and inverse problem of MHD-equilibrium with a surface current. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 9* (1979), 21 pp. (Authors' summary) **80h:76058** 76W05 (65P05)
- Polerstnik, M. S. Solving of logic equations by method of separation of variables. *Automat. i Telemekh.* 1979, no. 2, 132-140 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 2, part 2, 260-267. (Author's summary) **80h:94056** 94C10
- Poncel'skij, E. D. (with Abramović, Ju. A.; Janovskij, L. P.) On some parameters associated with normed lattices and on series characterisation of  $M$ -spaces. *Studia Math.* 63 (1978), no. 1, 1-8. (G. J. O. Jameson) **80e:46014** 46B30
- Ponshuzny, Jeffrey (with Rubel, Lee A.) The motions of an ordinary differential equation. *J. Differential Equations* 34 (1979), no. 2, 291-302. (F. Neuman) **80m:58036** 58F35 (34C20)
- Pomer, David B. (with Jockusch, Carl G., Jr.) Double jumps of minimal degrees. *J. Symbolic Logic* 43 (1978), no. 4, 715-724. (Barry Cooper) **80d:03042** 03D30
- Pomer, Marc E. (with Guignard, Monique) The collapsing 0-1 knapsack problem. *Math. Programming* 15 (1978), no. 2, 155-161. (Eitan Zemel) **80a:90100** 90C10  
The decomposition of nonlinear problems. *Math. Programming* 15 (1978), no. 3, 360-362. (Barry Korte) **80h:90121a** 90C30  
Errata: "The decomposition of nonlinear problems" (*Math. Programming* 15 (1978), no. 3, 360-362). *Math. Programming* 17 (1979), no. 3, 400. (Editors) **80h:90121b** 90C30
- Pomer, Roland See Hughes, G. E.; et al., **80i:03001** and *Cresswell, Max J.*, **80g:03022**
- Pospelov, D. A. (with Zaharov, V. N.; Hazzakij, V. E.) ★ Steuerungssysteme. Aufgabenstellung, Projektierung, Realisierung. Translated from the Russian by Günter Müller. Edited by Herbert Ehrlich. Elektronisches Rechnen und Regeln, Sonderband, 26, Akademie-Verlag, Berlin, 1979. x+442 pp. (Editors) **80d:93019** 93A99 (90A05)  
Artificial intelligence systems: results and short-term outlook. (Russian. English summary) With a loose English translation. *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* 9 (1980), no. 1, 3-18. (From the introduction) **80m:68076** 68Gxx (68-01)
- Pospelov, V. V. The error of approximation of a function of two variables by sums of the products of functions of one variable. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1307-1308, 1359. (Hans-Jürgen Albrand) **80h:65035** 65D15
- Pospelov, D. A. See Pospelov, V. V.
- Possibill, P. Theoretical outline of a splitting method for the solution of total equations. (Russian) *The use of finite element method and finite difference method in geophysics (Proc. Summer School, Liblice, 1977)*, pp. 333-339, Česk. Akad. Věd, Prague, 1978. (Author's summary) **80g:86006** 86A10 (65P05)
- Possien, Uri M. (with Pestiau, Pierre) A model of wealth distribution. *Econometrica* 47 (1979), no. 3, 761-772. (Authors' summary) **80h:90028** 90A15
- Post, E. J. The logic of time reversal. *Found. Phys.* 9 (1979), no. 1-2, 129-161. (Etang Chen) **80e:81013** 81B05 (03A05)  
Time asymmetries in classical and in nonclassical physics. *Found. Phys.* 9 (1979), no. 11-12, 831-863. (Author's summary) **80h:81066** 81D20 (81M05)
- Post, Karel A. (with Schalkwijk, J. Pieter M.; Vinck, A. J.) Syndrome decoding of binary rate  $k/n$  convolutional codes. *IEEE Trans. Inform. Theory* 24 (1978), no. 5, 553-562. (Sat Narain Gupta) **80e:94017** 94B10
- Post, Wilfred M., III (with Travis, C. C.) Dynamics and comparative statics of mutualistic communities. *J. Theoret. Biol.* 78 (1979), no. 4, 553-571. (Authors' summary) **80d:92035** 92A15  
(with Travis, C. C.) Quantitative stability in models of ecological communities. *J. Theoret. Biol.* 79 (1979), no. 4, 547-553. (From the text) **80g:92038** 92A17
- Poustaie, J.-G. (with Vasseur, C.) Convexité des fonctions de densité: application à la détection des modes en reconnaissance des formes. (English summary) *RAIRO Automat.* 13 (1979), no. 2, 171-188. (Authors' summary) **80e:68228** 68G10
- Potawa, S. On zero points of the linear combinations of the eigenfunctions in a singular Sturm-Liouville problem. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* No. 21 (1979), 11-16. (R. R. D. Kemp) **80h:34027** 34B25 (34C10)
- Pouletthwaite, Ian (with MacFarlane, Alistair G. J.) ★ A complex variable approach to the analysis of linear multivariable feedback systems. Lecture Notes in Control and Information Sciences, 12. Springer-Verlag, Berlin-New York, 1979. iv+177 pp. ISBN 0-387-09340-0 (Ljubomir Lilov) **80j:93073** 93C45 (93C30)  
Association between branch points and stationary points on the gain and frequency surfaces. *Internat. J. Control* 29 (1979), no. 2, 255-260. (Author's summary) **80h:93130** 93D99  
A note on parametric stability. *Internat. J. Control* 29 (1979), no. 2, 261-266. (Kunihiko Ichikawa) **80d:93063** 93D99  
Algebraic-function theory in the analysis of multivariable feedback systems. *Proc. Inst. Electr. Engrs.* 126 (1979), no. 6, 555-562. (Clyde F. Martin) **80j:93069** 93C35
- Poutelvalte, Andrew (with Kalai, Ehud; Roberts, John) Barriers to trade and disadvantageous middlemen: nonmonotonicity of the core. *J. Econom. Theory* 19 (1978), no. 1, 200-209. (J. Rosenmüller) **80e:90185** 90D45 (90B10, 90D12)
- Manipulation via endowments. *Rev. Econom. Stud.* 46 (1979), no. 2, 255-262. (Edwin Burmeister) **80h:90045** 90A16
- Postnikov, A. G. (with Moskvina, D. A.) A local limit theorem for the distribution of fractional parts of an exponential function. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 3, 540-547. (J. Galambos) **80h:10074** 10K10
- Postolici, Vasile On set functions of bounded  $p$ -variation. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 24 (1978), no. 2, 251-258. (B. Bongiorno) **80m:28002** 28A10 (28B25)
- Poston, Tim (with Stewart, Ian) Nonlinear modeling of multistable perception. Applications of catastrophe theory in the behavioral and life sciences. *Behavioral Sci.* 23 (1978), no. 5, 318-334. (R. D. Luce) **80h:92047** 92A20 (58C28)  
On deducing the presence of catastrophes. (French summary) *Math. Sci. Humaines* No. 64 (1978), 71-99, 101 (1979). (I. Stewart) **80j:50016** 58C28
- Potapenko, I. F. (with Čujanov, V. A.) Completeness of conservative difference schemes for a system of Landau equations. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 2, 458-463, 557. (Vladimir L. Save'ev) **80h:82052** 82A45
- Potapov, A. P. Some problems connected with output control. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 3, 57-63, 122. (Author's summary) **80h:93029** 93C15
- Potapov, M. M. Difference approximation and the regularization of optimal control problems of Goursat-Darboux systems. (Russian) *Vestnik Moskov. Univ. Ser. XV Vychisl. Mat. Kibernet.* 1978, no. 2, 17-26. (A. Ženišek) **80i:65079** 65K10 (49A05)  
Difference approximation of minimax problems for Goursat-Darboux systems in the presence of phase constraints. (Russian) *Vestnik Moskov. Univ. Ser. XV Vychisl. Mat. Kibernet.* 1978, no. 4, 28-36. (Author's summary) **80h:65140** 65K10
- Potapov, S. V. (with Šimel'feng, O. V.) Factorization of games. (Russian) *Mathematical models of behavior*, No. 3 (Russian), pp. 53-67, 87, Saratov. Gos. Univ., Saratov, 1978. (M. Maňas) **80i:90110** 90D10
- Potehin, V. A. (with Tatarinov, V. N.) ★ Теория когерентности электромагнитного поля. (Russian) [Coherence theory of an electromagnetic field] Статистическая теория связи [Statistical Theory of Communications], 10. "Svyaz", Moscow, 1978. 207 pp. (Andrzej Zardecki) **80h:78001** 78-01 (35Q99)
- Potempa, H. Modifizierte Restgliedabschätzungen für Quadraturformeln. (English summary) *Numer. Math.* 30 (1978), no. 1, 39-50. (D. C. Handscomb) **80d:41014** 41A55 (65D32)
- Poteraş, Victor Florin Sensitivity synthesis of optimal strategies for distributed parameter differential games. II. Sensitivity games. (Romanian summary) *Bul. Inst. Politehn. Iaşi Sect. I* 24(28) (1978), no. 1-2, 69-76. (Author's summary) **80h:90166** 90D25
- Potier, Dominique (with Pujolle, Guy) Réseaux de files d'attente à capacité limitée avec des applications aux systèmes informatiques. (English summary) *RAIRO Inform.* 13 (1979), no. 2, 175-197. (Authors' summary) **80e:68088** 68C15
- le Potier, J. See Le Potier, J.
- Potier-Ferry, Michel Bifurcation et stabilité pour des systèmes dérivant d'un potentiel. (English summary) *J. Mécanique* 17 (1978), no. 4, 579-608. (A. Vanderbauwhede) **80e:58015** 58E07 (47H15, 73H05)  
Perturbed bifurcation theory. *J. Differential Equations* 33 (1979), no. 1, 112-146. (A. Vanderbauwhede) **80i:58020** 58E07 (73H05)
- Potocký, Rastislav On random variables having values in a vector lattice. (Russian summary) *Math. Slovaca* 27 (1977), no. 3, 267-276. (Author's summary) **80f:28011** 28B15 (60B11)  
On the extension of measures. (Russian summary) *Math. Slovaca* 27 (1977), no. 4, 359-363. (Author's summary) **80f:28012** 28B15  
The strong law of large numbers for  $\alpha$ -convergent random variables. (Russian summary) *Math. Slovaca* 28 (1978), no. 1, 101-111. (Jerzy Szulga) **80e:60017** 60B12 (46B99)
- Potra, Teodor (with Cotju, Aurel; Moruşca, Ioan) Mathematical modeling by complex spline functions of filtration phenomena in porous media. (Romanian) *Stud. Cerc. Mec. Apl.* 37 (1978), no. 1, 23-32. (Authors' summary) **80e:76049** 76S05 (65D07)
- Potrzebowski, Henryk Branch and bound as a decomposition method of determining schedules for parallel machines. (Polish. English and Russian summaries) *Arch. Automat. Telemekh.* 24 (1979), no. 2, 301-313. (Author's summary) **80g:90065** 90B35
- Pötschke, D. A statistical interpretation of the B-rate of information theory. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 409-418, Academia, Prague, 1978. (From the introduction) **80d:94011** 94A17
- Potter, John M. (with Anderson, Brian D. O.; Morae, A. Stephen) Single-channel control of a two-channel system. *IEEE Trans. Automat. Control* 24 (1979), no. 3, 491-492. (Authors' summary) **80e:93053** 93B99
- Potter, R. G. (with Kobrin, F.; Langsten, R.) Three contraceptive acceptance strategies. *Math. Biosci.* 43 (1979), no. 1-2, 1-22. (Authors' summary) **80e:92040** 92A15
- Potter, R. V. (with Jacobs, O. L. R.) Optimal control of a stochastic bilinear system. Recent theoretical developments in control (Proc. Conf., Univ. Leicester, Leicester, 1976), pp. 403-419, Academic Press, London, 1978. (Pierre-Louis Lions) **80i:93093** 93E20 (49B60, 49C20)
- Potthoff, K. Orderings of types of countable arithmetic. *Z. Math. Logik Grundlag. Math.* 24 (1978), no. 2, 97-108. (Andreas Blass) **80i:03035** 03C65
- Pottinger, Garrel A new classical relevance logic. *J. Philos. Logic* 8 (1979), no. 1, 135-147. (Charles F. Kielkopf) **80h:03031** 03B45
- Pottinger, Peter On the  $C^k$ -approximation by Baskakov-operators. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 649-657, Colloq. Math. Soc. János Bolyai, 19, North-Holland, Amsterdam, 1978. (T. Hermann) **80h:41017** 41A35  
On the approximation of functions and their derivatives by Hermite interpolation. *J. Approx. Theory* 23 (1978), no. 3, 267-273. (Christian Coatméc) **80h:41003** 41-XX
- Pottosin, I. V. Foundation of algorithms of optimization of programs. *Programirovanie* 1979, no. 2, 3-13 (Russian); translated as *Programming and Comput. Software* 5 (1979), no. 2, 47-85. (Author's summary) **80m:68033** 68C05 (68B10)
- Pottosin, Ju. V. Decomposition of asynchronous automata. (Russian) *Automat. i Vychisl.*

- Tehn. (Riga)* 1978, no. 4, 1-7, 91. (Author's summary) **80b:60076** 68D35 (68D25)
- Potts, Timothy C. Fregean grammar: a formal outline. *Studia Logica* 37 (1978), no. 1, 7-26. (Editors) **80a:03012** 03B15
- Pouget, J. (with Chandon, J. L.; Lemaire, J.) Dénombrement des quasi-ordres sur un ensemble fini. (English summary) *Math. Sci. Humaines* No. 62 (1978), 61-80, 83. (P. Suppes) **80g:28039** 92A25 (05A15)
- Poupard, Christiane Une correspondance entre deux familles de transformations définies sur l'ensemble des extensions linéaires d'un ordre partiel. (English summary) *RAIRO Rech. Opér.* 13 (1979), no. 2, 129-133. (Author's summary) **80h:90065** 90B10 (06A10)
- Pourchet, Yves Solution du problème arithmétique du quotient de Hadamard de deux fractions rationnelles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 23, A1055-A1057. (From the text) **80i:12002** 12A10
- Pour-El, M. B. (with Richards, Ian) Differentiability properties of computable functions—a summary. *Acta Cybernet.* 4 (1978/79), no. 1, 123-125. (John P. Helm) **80d:03059** 03F60 (26A24, 68C30)
- Pourzeza, Ibrahim (with Hubbard, John) The space of closed subgroups of  $\mathbb{R}^2$ . *Topology* 18 (1979), no. 2, 143-146. (Lee Rudolph) **80h:14023** 14K07 (57M05, 57M99)
- Pousse, Alain (with Dauxois, Jacques; Fine-Fontan, Jeanne) Stabilité de la méthode de segmentation. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 4, A299-A301. (Authors' summary) **80b:62070** 62H25 (62-07)
- Pouzet, Maurice Quelques remarques sur les résultats de Tutte concernant le problème de Ulam. *Publ. Dép. Math. (Lyon)* 14 (1977), no. 2, 1-8. (J. A. Bondy) **80c:05084** 05C60 (05C50, 15A15)
- Sur certains tournois reconstruisibles. Application à leurs groupes d'automorphismes. *Discrete Math.* 24 (1978), no. 2, 225-229. (Jean-Claude Bermond) **80b:05033** 05C20 (05C25)
- Condition de chaîne en théorie des relations. (English summary) *Israel J. Math.* 30 (1978), no. 1-2, 65-84. (E. Harzheim) **80c:04004** 04A05
- Correction to: "Condition de chaîne en théorie des relations" (Israel J. Math. 30 (1978), no. 1-2, 65-84). *Israel J. Math.* 31 (1978), no. 3-4, 395. (E. Harzheim) **80c:04004** 04A05
- (with Assous, R.) Une caractérisation des mots périodiques. *Discrete Math.* 25 (1979), no. 1, 1-5. (F. Levin) **80c:05012** 05A99
- Relations non reconstruisibles par leurs restrictions. *J. Combin. Theory Ser. B* 26 (1979), no. 1, 22-34. (Joseph A. Thas) **80d:08006** 08A30 (05C60)
- Povčenka, Ju. A. (with Gorev, V. V.; Koldoba, A. V.; Popov, Ju. P.; Rudakov, L. I.) Numerical simulation of strong current relativistic electron beam diffusion through matter. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 102 (1978), 31 pp. (Authors' summary) **80c:78013** 78A35 (00A89)
- (with Popov, Ju. P.) Some problems of gas dynamics with sources. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 4, 1048-1056, 1071. (Authors' summary) **80b:76028** 76N15 (65P05)
- Povona, M. On a second order degenerate hyperbolic equation. (Italian summary) *Boll. Un. Mat. Ital. A (5)* 16 (1979), no. 2, 349-355. (V. M. Babič) **80i:35115** 35L20 (34G10)
- Some remarks on Maxwell's equations. *J. Math. Anal. Appl.* 69 (1979), no. 1, 35-50. (Rolf Leis) **80b:35119** 35Q20
- Povoraznikov, N. N. A general method for the solution of transcendental equations. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 4, 830-845, 1066. (Gerhard Telschow) **80a:65099** 65H05
- Povšič, Jože ★ Bibliografija—Franca Hočevarja. (Slovenian) [Franca Hočevar—bibliography] With an English summary. *Razred za Matematične, Fizikalne in Tehnične Vede, Dela* [Class of Mathematics, Physics and Technological, Works], 12. Slovenska Akademija Znanosti in Umetnosti, Ljubljana, 1978. 35 pp. (1 plate). (J. S. Joel) **80a:01039** 01A70
- Povzner, A. Ja. (with Bogaevskii, V. N.) On one-dimensional shock waves. (French and German summaries) *Internat. J. Non-Linear Mech.* 13 (1978), no. 5-6, 337-349. (Authors' summary) **80g:76030** 76L05 (35Q20)
- Powell, Barry Proof of a special case of Fermat's last theorem. *Amer. Math. Monthly* 85 (1978), no. 9, 750-751. (J. M. Gandhi) **80c:10033** 10B15
- Powell, Jerome (with Birman, Joan S.) Special representations for 3-manifolds. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 23-51, Academic Press, New York, 1979. (Hugh M. Hilden) **80g:57010** 57N10
- Homeomorphisms of  $S^3$  leaving a Heegaard surface invariant. *Trans. Amer. Math. Soc.* 257 (1980), no. 1, 193-216. (John Hempel) **80m:57005** 57N10
- Powell, John D. (with Batteh, J. H.) Computer simulation of shock propagation in the one-dimensional lattice. *Transactions of the Twenty-Third Conference of Army Mathematicians (Langley Res. Center, Hampton, Va., 1977)*, pp. 121-130, ARO Rep. 78, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1978. (Authors' summary) **80d:76031** 76D99
- Powell, Lynda Watts A Bayesian approach to a sequential three-decision problem: voting and the uses of information in electoral choice. *J. Math. Sociol.* 6 (1978/79), no. 2, 177-198. (Rubin Saponik) **80c:90016** 90A08 (90A05)
- Powell, M. J. D. The convergence of variable metric methods for nonlinearly constrained optimization calculations. *Nonlinear programming, 3 (Proc. Sympos., Special Interest Group Math. Programming, Univ. Wisconsin, Madison, Wis., 1977)*, pp. 27-63, Academic Press, New York, 1978. (Pierre Lorian) **80c:90138** 90C30 (65K05)
- Variable metric methods for constrained optimization. *Computing methods in applied sciences and engineering (Proc. Third Internat. Sympos., Versailles, 1977)*, 1, pp. 62-72, Lecture Notes in Math., 704, Springer, Berlin, 1979. (From the text) **80c:90100** 90C30
- (with Toint, Ph. L.) On the estimation of sparse Hessian matrices. *SIAM J. Numer. Anal.* 16 (1979), no. 6, 1060-1074. (A. Barraud) **80m:65013** 65D25 (65K10)
- Power, Henry M. Stability problems in using state variable feedback to produce a servomechanism of specified type number. *Internat. J. Control* 27 (1978), no. 1, 31-48. (From the summary) **80a:93141** 93D15
- Formal models for biological oscillators, derived by using Liapunov stability theory in a synthetic mode. *Proc. Roy. Irish Acad. Sect. A* 78 (1978), no. 23, 235-245. (Author's summary) **80d:92005** 92A05 (92A15)
- Power, Leigh R. Internal sorting using a minimal tree merge strategy. *ACM Trans. Math. Software* 6 (1980), no. 1, 68-79. (Author's summary) **80m:68056** 68E05
- Power, Stephen Hankel operators with PQC symbols and singular integral operators. *Integral Equations Operator Theory* 1 (1978), no. 3, 448-452. (N. L. Vasilevskii) **80a:47040** 47B35 (47G05)
- $C^*$ -algebras generated by Hankel operators and Toeplitz operators. *J. Funct. Anal.* 31 (1979), no. 1, 52-68. (A. Devinatz) **80d:47043** 47B35
- Powers, David L. (with Lovass-Nagy, Victor; Miller, Richard J.) An introduction to the application of the simplest matrix-generalized inverse in systems science. Special issue on the mathematical foundations of system theory. *IEEE Trans. Circuits and Systems* 25 (1978), no. 9, 766-771. (Thomas L. Boullion) **80b:93056** 93B99 (15A09)
- ★ Boundary value problems. Second edition. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London*, 1979. xii + 351 pp. ISBN 0-12-563760-8 (Editors) **80d:35001** 35-01 (34-01)
- (with Lovass-Nagy, Victor; Miller, Richard J.) Reply to "Comments on: 'On system realization by matrix generalized inverses'" (Internat. J. Control 27 (1978), no. 4, 651-652) by E. Eitelberg and H. Hanselmann. *Internat. J. Control* 29 (1979), no. 1, 175-176. (Editors) **80d:93016** 93A99
- Powers, M. Walton (with Boland, W. Robert) The solution of a problem in the theory of epidemics. *J. Math. Anal. Appl.* 67 (1979), no. 2, 565-585. (Andris Abakusis) **80c:92023** 92A15
- Powers, R. T. Resistance inequalities for the isotropic Heisenberg model.  $C^*$ -algebras and applications to physics (Proc. Second Japan-USA Sem., Los Angeles, Calif., 1977), pp. 160-167, Lecture Notes in Math., 650, Springer, Berlin, 1978. (Woodford W. Zachary) **80k:82035** 82A25 (82A55)
- Poznjak, A. S. (with Kel'mans, G. K.; Černicer, A. V.) "Local" optimization algorithms in asymptotic control of nonlinear dynamic plants. *Automat. i Telemekh.* 1977, no. 11, 73-88. (Russian. English summary); translated as *Automat. Remote Control* 38 (1977), no. 11, part 1, 1639-1653 (1978). (Authors' summary) **80c:93080** 93C10
- (with Nazin, A. V.) Matrix games of  $N$  persons with uncertainty conditions. (Russian) *Ekonom. i Mat. Metody* 14 (1978), no. 5, 958-968. (V. D. Dimitrov) **80c:90163** 90D12
- Poznjak, E. G. Geometric interpretation of regular solutions of the equation  $z_{xy} = \sin z$ . (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 7, 1332-1336, 1344. (H. Kılıp) **80j:35066** 53A05 (35Q20, 58F07)
- Poznjak, L. T. The use of the method of fictitious domains for estimation from below of the eigenvalues of differential operators. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 921-936, 1082. (From the summary) **80b:65086** 65N25 (35P15)
- Poznyak, A. S. See Poznjak, A. S.
- Jiménez Pozo, Miguel A. See Jiménez Pozo, Miguel A.
- Pozzoli, Roberto (with Rytov, Dmitri D.) Modulational instability produced by Langmuir turbulence in a magnetic field. *Phys. Fluids* 22 (1979), no. 9, 1782-1789. (E. G. Broadbent) **80f:76021** 76F99 (35B35)
- Prabhakar, Alladi (with Anjaiah, B.) Solution of a class of differential equations with variable coefficients by reversion method. *Proceedings of the Conference on Mathematical Analysis and its Applications (Inst. Engrs., Mysore, 1977)*, pp. M92-M99, *Mathematics Rep.*, 91, Inst. Math. Sci., Madras, 1978. (B. S. Popov) **80b:34005** 34A25 (33A65)
- Prabhakar, T. R. (with Chakrabarty, M.) A class of basic integral equations with basic hypergeometric function  ${}_1\phi_1$  in the kernels. *Indian J. Pure Appl. Math.* 7 (1976), no. 11, 1253-1260. (S. P. Goyal) **80m:45011** 45H05 (33A70)
- (with Rekha, Suman) On the set of polynomials  $G_n^2(x)$ . *Indian J. Pure Appl. Math.* 7 (1976), no. 12, 1367-1370. (Authors' summary) **80m:33021** 33A65
- (with Rekha, Suman) Some results on the polynomials  $L_n^{\alpha, \beta}(x)$ . *Rocky Mountain J. Math.* 8 (1978), no. 4, 751-754. (W. A. Al-Salam) **80f:33019** 33A70
- (with Jain, Sudha) A set of polynomials relevant to problems in quantum mechanics. *Serdica* 5 (1979), no. 2, 119-122. (H. M. Srivastava) **80m:33008** 33A30 (33A45)
- (with Jain, Sudha) Some bilateral generating functions for a general class of polynomials relevant to quantum mechanics. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 22 (1979), no. 1, 49-56. (C. L. Koul) **80i:33005** 33A30 (33A65)
- Prabhakar Rao, A. Liaison among curves in  $P^3$ . *Invent. Math.* 50 (1978/79), no. 3, 205-217. (G. Horrocks) **80e:14023** 14M07
- Prabhu, K. A. (with Bose, N. K.) Two-dimensional discrete Hilbert transform and computational complexity aspects in its implementation. *IEEE Trans. Acoust. Speech Signal Process.* 27 (1979), no. 4, 356-360. (Bradley W. Dickinson) **80b:94003** 94A05 (68C25)
- (with Bose, N. K.) Number of irreducible  $q$ -ary polynomials in several variables with prescribed degrees. *IEEE Trans. Circuits and Systems* 26 (1979), no. 11, 973-975. (Edward W. Kamen) **80m:12019** 12C05 (13F20)
- Prabhu-Ajgaonkar, S. G. (with Pedgaonkar, A. M.; Chaudhari, B. T.) Selection of a unique estimator for Ikeda-Sen's sampling procedure. *J. Indian Statist. Assoc.* 16 (1978), 97-111. (David Bellhouse) **80b:62017** 62D05
- (with Pedgaonkar, A. M.) Comparison of sampling strategies. *Metrika* 25 (1978), no. 3, 149-153. (David Bellhouse) **80b:62018** 62D05
- Pracht, Egon (with Heidenreich, Karl) ★ Elementare Zahlentheorie. Uni-Taschenbücher, 781. Ferdinand Schöningh, Paderborn, 1978. 192 pp. ISBN 3-506-99201-5 (H. G. Meier) **80c:10002** 10-01
- Prada Blanco, J. A note about Schwartz sequence spaces. *Math. Japon.* 24 (1979/80), no. 2, 187-189. (Christian Fenske) **80k:46018** 46A45 (46A15)
- Prade, Henri (with Dubois, Didier) Fuzzy real algebra: some results. *Fuzzy Sets and Systems* 2 (1979), no. 4, 327-348. (Anca Pascu) **80b:03075** 03E72 (94D05)
- (with Dubois, Didier) Operations in a fuzzy-valued logic. *Inform. and Control* 48 (1979), no. 2, 224-240. (S. K. Pal) **80m:94120** 94D05 (03B52, 03E72)
- Pradhan, Aniruddh On the generalized Peres space-time. *J. Math. Phys. Sci.* 12 (1978), no. 6, 547-557. (A. F. da F. Teixeira) **80b:83014** 83C20 (53B30)
- Pradhan, D. K. (with Chang, L. C.) A graph-structural approach for the generalization of data management systems. *Inform. Sci.* 12 (1977), no. 1, 1-18. (Authors' summary) **80c:68044** 68B15 (68H05)



- Pradhan, Dhiraj K.** (with Kodandapani, K. L.) Undetectability of bridging faults and validity of stuck-at fault test sets. *IEEE Trans. Comput.* **29** (1980), no. 1, 55–59. (From the summary) **80k:94044** 94C10
- Pradhan, K. M.** Integrals representing the products of Kampé de Fériet's function and  $A^*$ -function. (Hindi. English summary) *Vijnana Parishad Amusandhan Patrika* **21** (1978), no. 3, 205–211. (Brij Mohan) **80e:33004** 33A30
- A generalized hypergeometric polynomial. (Hindi. English summary) *Vijnana Parishad Amusandhan Patrika* **22** (1979), no. 1, 89–98. (K. M. Saksena) **80j:33021** 33A65
- (with Maheshwari, N. K.) Certain relations involving a generalized hypergeometric function and the Legendre function with applications. (Hindi. English summary) *Vijnana Parishad Amusandhan Patrika* **22** (1979), no. 3, 217–222. (Rekha Srivastava) **80m:33009** 33A30 (33A35)
- Pradines, Jean** Feuillages dont les groupes d'holonomie sont de Coxeter. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 5, A255–A258. (Author's summary) **80b:57025** 57R30
- Un feuilletage sans holonomie transversale, dont le quotient n'est pas une  $Q$ -variété. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 4, A245–A248. (Author's summary) **80e:57029** 57R30
- (with Kamga, Jean Woufo) La catégorie des  $QF$ -variétés. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 15, 717–719. (Authors' summary) **80d:57018** 57R40
- Prado, L. O. C.** (with Mascarenhas, N. D. A.) A Bayesian approach to edge detection in images. *IEEE Trans. Automat. Control* **25** (1980), no. 1, 36–43. (Authors' summary) **80m:68080** 68G10 (94A05)
- Prager, Cheryl E.** On doubly transitive permutation groups. *Bull. Austral. Math. Soc.* **18** (1978), no. 3, 465–473. (David R. Mason) **80a:20007** 20B10
- (with Herzog, Marcel) Corrigendum: "On the fixed points of Sylow subgroups of transitive permutation groups" [*J. Austral. Math. Soc. Ser. A* **21** (1976), no. 4, 428–437; MR **53** #13364]. *J. Austral. Math. Soc. Ser. A* **26** (1978), no. 3, 383–384. (Wolfgang Knapp) **80h:20003** 20B05
- Doubly transitive automorphism groups of block designs. *J. Combin. Theory Ser. A* **25** (1978), no. 3, 258–266. (Michael J. Ganley) **80h:20009** 20B20 (05B05)
- (with Herzog, Marcel) On characters in the principal 2-block. II. *J. Austral. Math. Soc. Ser. A* **28** (1979), no. 1, 100–106. (Stephen D. Smith) **80g:20014** 20C20
- Prastegard, E.** (with Moss, R.; Heilmann, O. J.) Correlation functions for a topological cell model in two dimensions. *Statistical physics—"STATPHYS 13" (Proc. Thirteenth IUPAP Conf. Statist. Phys., Technion—Israel Inst. Tech., Haifa, 1977), Part 2*, pp. 645–648. *Ann. Israel Phys. Soc.*, **2**, Hilger, Bristol, 1978. (Ernest R. Davidson) **80g:82035** 82A50 (60K35)
- Pratz, Peter D.** The detection of omitted variables by Durbin-Watson statistics in multiple regression models. *Austral. J. Statist.* **21** (1979), no. 2, 129–138. (Andrew Harvey) **80k:62113** 62P20 (62J05)
- Prager, M.** (with Tauber, J.) Numerical solution of stiff problems. *The use of finite element method and finite difference method in geophysics (Proc. Summer School, Liblice, 1977)*, pp. 279–293. *Cesk. Akad. Věd, Prague, 1978*. (Authors' summary) **80g:65006** 65L05
- Prager, Stephen** (with Frisch, H. L.) Diffusion-controlled reactions on a two-dimensional lattice. *J. Chem. Phys.* **72** (1980), no. 5, 2941–2947. (Authors' summary) **80m:80008** 80A20
- Prager, W.** (with Rozvany, G. I. N.) A new class of structural optimization problems: optimal archgrids. *Comput. Methods Appl. Mech. Engrg.* **19** (1979), no. 1, 127–150. (Authors' summary) **80f:73065** 73K99 (65K10)
- Prasanna** Statistical study of prey-predator system in random environment. *J. Indian Statist. Assoc.* **15** (1977), 161–170. (From the introduction) **80d:92031** 92A15
- Stability of two interacting species subject to stochastic parameter variation. *Comm. Statist. A—Theory Methods* **8** (1979), no. 1, 57–69. (Frank J. S. Wang) **80h:92034** 92A15
- Prassas Rao, B. L. S.** Density estimation for Markov processes using delta-sequences. *Ann. Inst. Statist. Math.* **30** (1978), no. 2, 321–328. (Gilbert Walter) **80e:62105** 62M05 (62G05)
- The rate of convergence of Bernstein-Von Mises approximation for Markov processes. *Serdica* **4** (1978), no. 1, 36–42. (G. Roussas) **80k:62097** 62M02 (62M05)
- Prakash, Anand** (with Srivastava, Pramila) Somewhat continuity and some other generalizations of continuity. *Math. Slovaca* **27** (1977), no. 3, 243–248. (Hughes B. Hoyle, III) **80k:54019** 54C08
- (with Srivastava, P.) Relations between convergence, almost convergence and  $r$ -convergence. *Riv. Mat. Univ. Parma* (4) **4** (1978), 37–39 (1979). (O. Wyler) **80e:54003** 54A20
- Prakash, C. V. S.** (with Jain, Padam C.) Stability of hydromagnetic flows in a temperature field. *Indian J. Pure Appl. Math.* **7** (1976), no. 12, 1411–1425. (Authors' summary) **80m:76044** 76E25
- Prakash, J. S.** Molien series and cycle index of the symmetric group. *Proceedings of the Conference on Structure of Matter—Mathematics and Phenomenology (Inst. Engrs., Mysore, 1978)*, pp. 305–311. *Matscienc Rep.*, **93**, Inst. Math. Sci., Madras, 1978. (David B. Surowski) **80d:20006** 20B30
- Prakash, Nirmla** (with Lata, Sneha) Generalised exterior derivations in framed manifolds. *Indian J. Pure Appl. Math.* **8** (1977), no. 10, 1193–1204. (H. Rund) **80e:58004** 58A10 (53C55)
- (with Bahadur, Neera) Foliations of manifolds admitting quartic structures. *Tensor (N.S.)* **32** (1978), no. 1, 1–4. (Franco Triccerri) **80a:53045** 53C15
- Prakash, S.** (with Roy, S. R.; Rajbali) A cylindrically symmetric universe in general relativity. *Proc. Indian Acad. Sci. Sect. A* **87** (1978), no. 9, 181–188. (Carl Brans) **80j:83007** 83C15 (53B50)
- (with Roy, S. R.) An anisotropic incoherent fluid cosmological model in general relativity. *Indian J. Pure Appl. Math.* **10** (1979), no. 1, 1–5. (Authors' summary) **80c:83059** 83F05 (53B50)
- Prakash, Satya** On the machine-assignment problem. *Proc. Nat. Acad. Sci. India Sect. A* **48** (1978), no. 2, 103–110. (Author's summary) **80f:90070** 90B35
- Prakash, Ved** On matrix summability of Fourier series. (Hindi. English summary) *Vijnana Parishad Amusandhan Patrika* **22** (1979), no. 2, 99–106. (Author's summary) **80g:42009** 42A24
- Prakel, Judith M.** Some preliminary suggestions for the mirroring of non-metaphysical modalities in Leśniewski's ontology. On Leśniewski's systems (Proc. XXII Conf. Hist. Logic, Kraków, 1976). *Studia Logica* **36** (1977/78), no. 4, 363–376. (R. M. Yoshida) **80a:03033** 03B60
- Pramank, A. K.** Transient waves generated by a moving oscillatory pressure on a sloping beach. *Appl. Sci. Res.* **35** (1979), no. 5–6, 347–356. (Author's summary) **80m:76020** 76B15
- Pranerišius, Henrikas** (with Iazeolla, Giuseppe G.; Martinelli, Enrico) A method for the analytical representation of discrete event simulation models. (Russian and Latvian summaries) *Statist. Problemy Upravlenija—Trudy Sem. Procestry Optimal. Upravlenija V Sekcija No. 33* (1979), 75–90, 114. (Authors' summary) **80i:93007** 93A10 (68J10)
- Prank, R.** Congruence relations in the lattice of recursively enumerable sets. (Russian. Estonian and English summaries) *Tartu Riikl. Ül. Toimetised No. 464 Trudy Mat. i Meh.* **22** (1978), 28–36. (A. N. Degtev) **80g:03041** 03D25
- Prasad, B. N.** A generalisation of Kawaguchi space. *Acta Cienc. Indica* **5** (1979), no. 3, 104–107. (S. Kawaguchi) **80m:53027** 53B40
- Conformal transformations associated with sets of  $n$  fundamental forms of Riemannian hypersurface. *Indian J. Pure Appl. Math.* **10** (1979), no. 7, 835–841. (S. C. Rastogi) **80e:53022** 53B25
- A transformation associated with the set of  $n$  fundamental forms of Minkowskian hypersurface. *J. Math. Phys. Sci.* **13** (1979), no. 3, 251–256. (J. K. Beem) **80g:53021** 53B40
- (with Singh, U. P.; John, V. N.) Finsler spaces preserving Killing vector fields. *J. Math. Phys. Sci.* **13** (1979), no. 3, 265–271. (Yoshihiro Ichijō) **80h:53027** 53B40
- Prasad, Baleshwar** (with Rai, R. P.) On radiative boundary shock waves. *Defence Sci. J.* **28** (1978), no. 2, 67–72. (Authors' summary) **80c:76032** 76L05 (35L99)
- On radiative magnetogasdynamical boundary shock wave. *Acta Cienc. Indica* **5** (1979), no. 3, 118–122. (Giulio Mattei) **80j:76052** 76W05 (76L05)
- Prasad, Chandra Mami** (with Srivastava, Ravindra Kumar) On concircular Bianchi and Veblen identities. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **63** (1977), no. 1–2, 27–32 (1978). (B. B. Sinha) **80f:53018** 53B20
- (with Srivastava, Ravindra Kumar) Decomposition of neo-recurrent curvature tensor field of the second order. *Indian J. Pure Appl. Math.* **10** (1979), no. 8, 920–927. (R. Behari) **80k:53048** 53B40
- (with Srivastava, Ravindra Kumar) Decomposition of neo-recurrent curvature tensor field of the first order. *Indian J. Pure Appl. Math.* **10** (1979), no. 9, 1175–1182. (R. Behari) **80k:53047** 53B40
- Prasad, Gunraj** (with Sinha, B. B.) On the geometry of relativistic electromagnetic fluid flows. I. *Indian J. Pure Appl. Math.* **9** (1978), no. 5, 447–456. (P. C. Vaidya) **80g:83028** 83C50 (53B50)
- (with Mittal, M. L.) On strong matrix summability. *Indian J. Pure Appl. Math.* **9** (1978), no. 10, 1076–1082. (H.-H. Körle) **80a:40007** 40F05 (40C05)
- On the geometry of the relativistic electromagnetic fluid flows. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **30** (1979), no. 1, 17–26. (W. B. Bonnor) **80g:83023** 83C99 (53B50)
- On the geometry of relativistic electromagnetic fluid flows. II. *Indian J. Pure Appl. Math.* **10** (1979), no. 4, 470–478. (P. C. Vaidya) **80g:83026** 83C50 (53B50)
- (with Sinha, B. B.) Spacelike motions admitted by the magnetofluid space-times. (Italian) *Nuovo Cimento B* (11) **52** (1979), no. 1, 105–112. (A. F. da F. Teixeira) **80k:83019** 83C40
- (with Sinha, B. B.) Spacelike FCRC symmetry mappings admitted by imperfect magnetofluid space-times. (Italian summary) *Nuovo Cimento B* (11) **54** (1979), no. 2, 401–412. (Authors' summary) **80m:76090** 76Y05
- Prasad, Jagadish** (with Kapoor, O. P.) Orthogonality and characterizations of inner product spaces. *Bull. Austral. Math. Soc.* **19** (1978), no. 3, 403–416. (K. Sundaresan) **80h:46028** 46C05
- Prasad, Jagdish** On the uniform convergence of interpolatory polynomials. *J. Austral. Math. Soc. Ser. A* **27** (1979), no. 1, 7–16. (Editors) **80d:41006** 41A05 (41A25)
- A note on nonexistence of interpolatory polynomials for  $(0, 2)$ -interpolation. *Publ. Math. Debrecen* **26** (1979), no. 1–2, 37–40. (A. K. Varma) **80g:41006** 41A05
- (with Varma, A. K.) Lacunary interpolation by quintic splines. *SIAM J. Numer. Anal.* **16** (1979), no. 6, 1075–1079. (A. Sharma) **80k:41001** 41A05 (41A15)
- Krishna Prasad, K.** See Krishna Prasad, K.
- Prasad, Kanahalya** (with Sinha, S. R.) On the absolute Riesz summability of a factored Fourier series. *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* **26** (1978), no. 3, 223–229. (S. Izumi) **80m:42016** 42A28
- Prasad, P.** (with Ravindran, Renuka) A mathematical analysis of nonlinear waves in a fluid filled visco-elastic tube. (German summary) *Acta Mech.* **31** (1978/79), no. 3–4, 253–280. (Alan Jeffrey) **80d:76106** 76Z05 (35Q20)
- Prasad, R.** (with Maheshwari, S. N.) Semi-open sets and semicontinuous functions in bitopological spaces. *Math. Notae* **26** (1977/78), 29–37. (Ivan L. Reilly) **80e:54040** 54E55
- (with Maheshwari, S. N.) On pairwise  $s$ -regular spaces. *Riv. Mat. Univ. Parma* (4) **4** (1978), 45–48 (1979). (Ivan L. Reilly) **80g:54037** 54E55
- Prasad, R. S.** (with Bihary, G.) Minimax polynomial approximation to Struve's functions of order 0 and 1. *Proc. Nat. Acad. Sci. India Sect. A* **47** (1977), no. 3, 177–181. (A. K. Varma) **80j:41009** 41A10
- Prasad, Rajendra** On the uniform Nörlund summability of Legendre series. *Indian J. Pure Appl. Math.* **10** (1979), no. 10, 1298–1302. (Shri Nivas Bhatt) **80m:42011** 42A24 (40C05)
- (with Saxena, Ashok K.) On the Nörlund summability of Fourier-Jacobi series. *Indian J. Pure Appl. Math.* **10** (1979), no. 10, 1303–1311. (G. U. Brauer) **80k:42014** 42A24 (42A20, 42C10)
- Prasad, Shyamam Charan** (with Jha, Dharendra Kumar) Chebyshev-type delay functions & solutions by the method of matching coefficients. *Indian J. Pure Appl. Phys.* **15** (1977), no. 5, 355–358. (Authors' summary) **80i:94018** 94C05 (93D99)
- Prasad, Vidhu S.** (with Oxtoby, John C.) Homeomorphic measures in the Hilbert cube. *Pacific J. Math.* **77** (1978), no. 2, 483–497. (A. H. Stone) **80h:28006** 28A35 (28C15)
- Ergodic measure preserving homeomorphisms of  $R^n$ . *Indiana Univ. Math. J.* **28** (1979), no. 6, 859–867. (Peter Walters) **80m:28014a** 28D05

- Prasad, Y. N. (with Singh, S. N.) Some higher operational techniques in the theory of special functions. *Indian J. Pure Appl. Math.* 8 (1977), no. 11, 1298-1307. (A. M. Mathai) 80b:33010 33A35 (44A20)
- (with Yadav, J. M. S.) Some infinite integrals involving generalized functions of  $r$  variables. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 21 (1978), no. 3, 213-220. (R. S. Dahiya) 80b:33013 33A35
- (with Maurya, R. P.) On a generalized multiple L-H transform. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 21 (1978), no. 4, 373-381. (S. D. Bajpai) 80b:44012 44A20 (33A30)
- (with Maurya, R. P.) Basic properties of the generalized multiple L-H transform. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 22 (1979), no. 1, 73-83. (H. M. Srivastava) 80b:44008 44A30 (33A35)
- Prasanna, Shanti (with Parmar, A. K.; Buch, Smriti B.) On a paper of Phadke, Khasbardar and Thakare. *Indian J. Pure Appl. Math.* 10 (1979), no. 4, 467-469. (Teishirō Saitō) 80b:47035 47B20
- Prásková-Visková, Zuzana A local limit theorem for Dwass statistic. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 537-545, Academia, Prague, 1978. (A. N. Philippou) 80b:62028 62E20 (62G10)
- Prastacos, Gregory P. LIFO distribution systems. *J. Oper. Res. Soc.* 30 (1979), no. 6, 539-546. (Author's summary) 80c:90056 90B05
- Prat, Jean-Jacques Représentation de certaines fonctions harmoniques bornées sur une surface à courbure négative. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 3, A219-A222. (Author's summary) 80b:60096 60J45 (58E20, 60J65)
- Prattelli, Maurizio Une version probabiliste d'un théorème d'interpolation de G. Stampacchia. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 1-19, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (D. L. Burkholder) 80b:60073 60G46
- See also Lepingle, Dominique, 80c:60060
- Prattibhi, D. (with Samal, G.) Strong result for real zeros of random polynomials. II. *J. Indian Math. Soc. (N.S.)* 41 (1977), no. 3-4, 395-403 (1978). (A. C. Offord) 80b:60082 60G99 (26C10)
- da Prato, Giuseppe See Da Prato, Giuseppe
- Praet, John W. Finding how many roots a polynomial has in  $(0, 1)$  or  $(0, \infty)$ . *Amer. Math. Monthly* 86 (1979), no. 8, 630-637. (H. L. Seal) 80b:62088 62P05 (12D10, 90A99)
- Praet, Michael J. (with Faux, Ivor D.) ★Computational geometry for design and manufacture. Mathematics and its Applications. Ellis Horwood Ltd., Chichester; distributed by Halsted Press [John Wiley & Sons], New York-Chichester-Brisbane, 1979. 329 pp. ISBN 0-470-26473-X (Wolfgang Boehm) 80b:68134 68K05 (51-01, 65D10, 65G10)
- Prätzel-Wolters, D. (with Münzner, H. F.) Minimal bases of polynomial modules, structural indices and Brunovsky-transformations. *Internat. J. Control* 30 (1979), no. 2, 291-318. (Arthur J. Krener) 80b:93022 93B25
- Pravdina, M. H. (with Lihachev, O. A.) Model self-oscillations in a two-dimensional jet. (Russian) *Izv. Akad. Nauk SSSR Meh. Zhidk. Gaza* 1979, no. 3, 26-32. (From the text) 80b:76034 76D25
- Praveczki, E. Padé approximation method as renormalization group method. *Phys. Status Solidi (B)* 96 (1979), no. 1, 437-440. (Author's summary) 80b:82036 82A25
- Prasnowski, Krzysztof Conciseness and hierarchy of theories. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astron. Phys.* 26 (1978), no. 7, 577-583. (Luiz Paulo de Alcantara) 80b:03021 03B30 (03F25)
- Prepacanu, Teodor Characterizations of Hilbertian norms. (Italian summary) *Boll. Un. Mat. Ital. B (5)* 15 (1978), no. 1, 161-169. (V. Zizler) 80b:46036 46C05
- Preda, Vasile On the intrinsic convergence. *An. Univ. București Mat.* 28 (1979), 85-89. (Author's summary) 80b:28014 28A20 (60B10)
- Predelceanu, Miros (with Dahan, Marc) Solutions fondamentales dans la théorie de l'élasticité aérotrope pour un milieu semi-infini. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 2, A147-A150. (Authors' summary) 80b:73013 73C30
- Predoi, Maria Sur l'approximation des fonctions par des opérateurs linéaires et positifs. *An. Univ. Craiova Mat. Fiz.-Chim. No. 5* (1977), 81-84. (V. Veselinov) 80b:41008 41A36 (41A63, 41A65)
- Sur la convergence quasi-uniforme. *Period. Math. Hungar.* 10 (1979), no. 1, 31-40. (D. C. Kent) 80b:54020 54C35
- Preece, D. A. (with Bailey, R. A.; Zemroch, P. J.) Totally symmetric Latin squares and cubes. *Utilitas Math.* 14 (1978), 161-170. (David A. Drake) 80a:05032 05B15
- Supplementary bibliography of designs for experiments in three dimensions. *Austral. J. Statist.* 21 (1979), no. 2, 170-172. (Editors) 80b:62090 62Kxx (00A15)
- Preiser, Udo Produkte von endlichen einfachen Gruppen. *J. Algebra* 56 (1979), no. 1, 50-70. (Bert Beisiegel) 80b:20031 20D40
- Produkte endlicher einfacher Gruppen. *Math. Z.* 167 (1979), no. 1, 91-98. (W. J. Wong) 80b:20021 20D40
- Preis, David Gaussian measures and covering theorems. *Comment. Math. Univ. Carolin.* 20 (1979), no. 1, 95-99. (J. D. Knowles) 80b:28020 28C20
- Maximoff's theorem. *Real Anal. Exchange* 5 (1979/80), no. 1, 92-104. (Rotraut Goubau Cahill) 80b:26007 26A24
- (with Kotěcký, R.) The use of projective limits in classical statistical mechanics and Euclidean quantum field theory. *Czechoslovak J. Phys. B* 30 (1980), no. 1, 23-32. (Authors' summary) 80b:82011 82A15
- Preis, K. Checking the topological consistency of a finite element mesh. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 12, 1805-1812. (Author's summary) 80b:65123 65N30 (65D99)
- Prékopa, A. (with Kelle, P.) Reliability type inventory models based on stochastic programming. Mathematical programming in use. *Math. Programming Stud.* No. 9 (1978), 43-58. (B. Raja Rao) 80c:90057 90B05
- (with Szántai, T.) Flood control reservoir system design using stochastic programming. Mathematical programming in use. *Math. Programming Stud.* No. 9 (1978), 138-151. (Authors' summary) 80c:90151 90C50 (90C15)
- (with Szántai, T.) On optimal regulation of a storage level with application to the water level regulation of a lake. *European J. Oper. Res.* 3 (1979), no. 3, 175-189. (Authors' summary) 80b:90149 90C50 (90B15)
- Prele, Rainer (with Göbel, Rüdiger) Solution of two problems on cotorsion abelian groups. *Arch. Math. (Basel)* 31 (1978/79), no. 5, 423-431. (L. Procházka) 80b:20063 20K99
- Prelov, V. V. (with Dobrušin, R. L.) Asymptotic approach to the investigation of message switching networks of linear structure with a large number of centers. *Problemy Peredachi Informatsii* 15 (1979), no. 1, 61-73. (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 1, 46-55. (Authors' summary) 80b:94037 94C10
- Prenowitz, Walter (with Jantosciak, James) ★Join geometries. A theory of convex sets and linear geometry. Undergraduate Texts in Mathematics. Springer-Verlag, New York-Heidelberg, 1979. xii + 534 pp. ISBN 0-387-90340-2 (Gerald Beer) 80c:53001 52-01 (51-01)
- Prenter, P. M. (with Locker, John) Optimal  $L^2$  and  $L^\infty$  error estimates for continuous and discrete least squares methods for boundary value problems. *SIAM J. Numer. Anal.* 13 (1978), no. 6, 1151-1160. (John B. Kioustelidis) 80b:65097 65L10
- (with Locker, John) On least squares methods for linear two-point boundary value problems. *Functional analysis methods in numerical analysis (Proc. Special Session, Annual Meeting, Amer. Math. Soc., St. Louis, Mo., 1977)*, pp. 149-168, *Lecture Notes in Math.*, 701, Springer, Berlin, 1979. (W. H. Wong) 80b:65029 65L10
- Prentice, M. J. Correction to: "On invariant tests of uniformity for directions and orientations" [Ann. Statist. 6 (1978), no. 1, 169-176; MR 56 #16921]. *Ann. Statist.* 7 (1979), no. 4, 926. (Editors) 80b:62078 62H15
- On the problem of  $m$  incomplete rankings. *Biometrika* 66 (1979), no. 1, 167-170. (P. K. Sen) 80b:62063 62G10 (62G20)
- Prentice, Ross L. Linear rank tests with right censored data. *Biometrika* 65 (1978), no. 1, 167-179. (Jana Jurečková) 80b:62060 62G10 (62J05)
- (with Kalbfleisch, John D.) Hazard rate models with covariates. *Biometrics* 35 (1979), no. 1, 25-39. (Bruce W. Turnbull) 80b:62094 62N05
- Preparata, Franco P. (with Adleman, Leonard; Booth, Kellogg S.; Ruzzo, Walter L.) Improved time and space bounds for Boolean rank tests (multiplication). *Acta Inform.* 11 (1978/79), no. 1, 61-70. (N. A. Karпова) 80b:68038 68C25 (94C10)
- (with Muller, D. E.) Finding the intersection of two convex polyhedra. *Theoret. Comput. Sci.* 7 (1978), no. 2, 217-236. (D. T. Lee) 80b:68043 68C05 (52-04)
- An optimal real-time algorithm for planar convex hulls. *Comm. ACM* 22 (1979), no. 7, 402-405. (Author's summary) 80b:68075 68C05 (68C25)
- (with Lee, D. T.) An optimal algorithm for finding the kernel of a polygon. *J. Assoc. Comput. Mach.* 26 (1979), no. 3, 415-421. (Authors' summary) 80b:68113 68C25 (51-04, 68E99)
- (with Muller, D. E.) Finding the intersection of  $n$  half-spaces in time  $O(n \log n)$ . *Theoret. Comput. Sci.* 8 (1979), no. 1, 45-55. (From the summary) 80b:68120 68C25 (90C99)
- Preparata, G. (with Szegő, K.) Baryon structure in quark geometrodynamics. (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 3, 303-323. (Authors' summary) 80a:81101 81G10 (22E70)
- Prepeljč, Valerij Réalisations canoniques des applications linéaires entrée-sortie à plusieurs indices. *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énergét.* 23 (1978), no. 1, 439-446. (Author's summary) 80a:93042 93B05 (14D20)
- Stability of a class of dynamical hyperbolic systems. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 2, 201-206. (John M. Ball) 80b:35017 35B35 (35L55)
- A dynamical system described by partial differential equations. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énergét.* 24 (1979), no. 1, 117-126, vii, viii. (Michel Cotsafitis) 80b:93033 93B07
- Weighting patterns and transfer matrices for partial differential dynamical systems. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énergét.* 24 (1979), no. 2, 281-287, vii, viii. (Michel Cotsafitis) 80b:93061 93C20
- Prešić, Marica D. On Ostrowski's fundamental existence theorem. *Publ. Inst. Math. (Beograd) (N.S.)* 24(38) (1978), 125-132. (Editors) 80b:65057 65H05
- Presker, V. T. (with Zaharov, V. V.) The influence of the nonlinearity of a function on the effectiveness of the estimate of its gradient. (Russian) Adaptation problems in technical systems. *Problemy Shchazn. Poiska* No. 7 (1978), 149-158, 319. (Authors' summary) 80b:65072 65K10
- Presman, E. L. (with Sonin, I. M.) The "two-armed bandit" problem in continuous time. (Russian) *Probability processes and control (Russian)*, pp. 154-204, "Nauka", Moscow, 1978. (R. Theodorescu) 80b:62058 62L05 (62L15, 90C40, 90D40)
- Preinajder, P. (with Prilä, P.) Static spherically symmetric solutions of the classical Yang-Mills equations. *Nuclear Phys. B* 142 (1978), no. 3, 229-235. (P. K. Smit) 80a:81080 81E10 (58D30)
- Press, S. James (with Zellner, Arnold) Posterior distribution for the multiple correlation coefficient with fixed regressors. *J. Econometrics* 8 (1978), no. 3, 307-321. (From the introduction) 80b:62042 62H20 (62F15)
- Prest, Mike Some model-theoretic aspects of torsion theories. *J. Pure Appl. Algebra* 12 (1978), no. 3, 295-310. (Hugo Volger) 80a:18009 18E40 (03C60)
- Torsion and universal Horn classes of modules. *J. London Math. Soc.* (2) 19 (1979), no. 3, 411-416. (J. D. Fabelberth) 80b:16037 16A63 (03C60, 18E40)
- Prestel, Alexander (with Ziegler, Martin) Model-theoretic methods in the theory of topological fields. *J. Reine Angew. Math.* 299(300) (1978), 318-341. (G. Cherlin) 80b:54034 54H13 (03C60, 12J99)
- Remarks on the Pythagoras and Hasse number of real fields. *J. Reine Angew. Math.* 303/304 (1978), 284-294. (Ron Brown) 80b:12020 12D15 (10C01, 15A63)
- Entscheidbarkeit mathematischer Theorien. *Jahresber. Deutsch. Math.-Verein.* 81 (1978/79), no. 4, 177-188. (Wolfgang Thomas) 80b:03001 03-01 (03B30, 03D35)
- (with Ware, Roger) Almost isotropic quadratic forms. *J. London Math. Soc.* (2) 19 (1979), no. 2, 241-244. (Ron Brown) 80b:12024 12D15 (10C05, 15A63)
- Prestiti, E. On the phase problem for space curves. (Italian summary) *Boll. Un. Mat. Ital. A (5)* 16 (1979), no. 2, 316-321. (R. A. Struble) 80b:53103 53C65 (42A38, 42A50)
- Preston, Chris Canonical and microcanonical Gibbs states. *Z. Wahrsch. Verw. Gebiete* 46 (1978/79), no. 2, 125-158. (J. Fritz) 80b:60118 60K35 (60G60, 82A05)
- Preston, Gordon B. The construction of semigroups from groups and semilattices. *Group d'Étude d'Algèbre (Marie-Paule Malliarin), 1re année (1975/76)*, Exp. No. 5, 10p.



- Secrétariat Math., Paris*, 1978. (B. M. Schein) **80d:20061** 20M30
- Preterius, L. M.** Maximal classes of abelian groups that arise from the isomorphism  $G \cong T[\text{Ext}(X, G)]$ . (Afrikaans) *Algebra Symposium (Univ. Pretoria, Pretoria, 1975)*, 98–105. Univ. Pretoria, Pretoria, 1975. (Frans Loonstra) **80f:20062** 20K40
- Preterius, Oliver** Another proof of Dilworth's decomposition theorem. *Discrete Math.* **25** (1979), no. 1, 91–92. (Joel Berman) **80d:06003** 06A10
- Preuss, Dietmar** Residuen symmetrischer differentialformenwertiger Bilinearformen. *Arch. Math. (Basel)* **31** (1978/79), no. 1, 44–60. (W.-D. Geyer) **80e:14005** 14F10 (10Cxx)
- Preuss, Gerhard** Connection properties in topological categories and related topics. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 293–307. *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (H. Gonsior) **80j:18009** 18B30
- See also *Categorical topology*, **80f:18002**
- Preuss, Wolfgang** A topology for transformable operators. *Proceedings of the Conference Topology and Measure, I (Zinnowitz, 1974)*, Part 2, pp. 293–298. Ernst-Moritz-Arndt Univ., Greifswald, 1978. (D. Przeworska-Rolewicz) **80h:44009** 44A40
- Einige Bemerkungen zur Rücktransformation im Zusammenhang mit einem Körper transformierbarer Operatoren. *Beiträge Anal.* **11** (1978), 159–164. (R. G. Buschman) **80g:44011** 44A40 (44A10)
- Remarks on the solution of linear s-differential equations in a field of transformable operators. *Generalized functions and operational calculus (Proc. Conf., Varna, 1975)*, pp. 170–177. *Bulgar. Acad. Sci., Sofia*, 1979. (L. Berg) **80j:44014** 44A40
- Prevalaka, K. G.** (with Dokovski, P. D.) On a case of solution of Abel's equation in quadratures. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Prilozna Mat.* **13** (1977), no. 1, 59–64 (1978). (From the summary) **80k:34004** 34A05
- (with Dokovski, P. D.) An Abel differential equation that is solvable in quadratures. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Prilozna Mat.* **13** (1977), no. 2, 69–74 (1978). (Authors' summary) **80k:34005** 34A05
- (with Dokovski, P. D.) A nonlinear second-order differential equation. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Prilozna Mat.* **13** (1977), no. 2, 75–85 (1978). (Authors' summary) **80k:34006** 34A05
- Previsto, Emma** Errata: "Groups in which the Dedekind relation is transitive" (Rend. Sem. Mat. Univ. Padova **54** (1975), 215–229 (1976)). (Italian) *Rend. Sem. Mat. Univ. Padova* **57** (1977), 323 (1978). (Editors) **80a:20035** 20E07
- Groups in whose dual lattice the Dedekind relation is transitive. (Italian) *Rend. Sem. Mat. Univ. Padova* **58** (1977), 287–308 (1978). (J. Wiegold) **80f:20028** 20E15
- Prévosto, Dominique** Caractérisation des directions de croissance minimale pour une réalisation d'un problème elliptique dégénéré. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 7, A519–A522. (Author's summary) **80b:35070** 35J70
- Price, Douglas B.** Comments on: "Linear filtering of singularly perturbed systems" (IEEE Trans. Automat. Control **AC-21** (1976), no. 4, 515–519) by A. H. Haddad. With a reply by Haddad. *IEEE Trans. Automat. Control* **24** (1979), no. 4, 675–677. (Author's summary) **80f:93076** 93E11
- Price, G. Bailey** Determinants with dominant principal diagonal: a personal historical note. *Linear and Multilinear Algebra* **6** (1978/79), no. 4, 247–250. (Thomas Hawkins) **80c:01018a** 01A70 (15-03, 15A15)
- See also *Tamsky, Olga*, **80c:01018b**
- Price, John F.** (with McMullen, J. R.) Reversible hypergroups. (Italian summary) *Rend. Sem. Mat. Fis. Milano* **47** (1977), 67–85 (1979). (Stephen D. Smith) **80c:20010** 20C15 (20C35)
- Price, Thomas E., Jr.** Orthogonal polynomials for nonclassical weight functions. *SIAM J. Numer. Anal.* **16** (1979), no. 6, 999–1006. (A. G. Law) **80j:42042** 42C05
- Price, W. L.** An algorithm which generates the Hamiltonian circuits of a cubic planar map. *J. London Math. Soc.* (2) **18** (1978), no. 2, 193–201. (Arthur M. Hobbs) **80f:05060** 05C45
- Priest, Gordon D.** Terminating cycles for iterated difference values of five digit integers. *J. Reine Angew. Math.* **303/304** (1978), 379–388. (H. L. Abbott) **80c:10011** 10A30
- Pridy, Stewart B.** (with Fiedorowicz, Zbigniew) ★Homology of classical groups over finite fields and their associated infinite loop spaces. *Lecture Notes in Mathematics*, 674. Springer-Verlag, Berlin-New York, 1978. vi + 434 pp. ISBN 3-540-08932-2 (Peter J. Eccles) **80g:55018** 55P47
- (with Miller, Haynes R.) On G and the stable Adams conjecture. *Geometric applications of homotopy theory (Proc. Conf., Easton, Ill., 1977)*, II, pp. 331–348. *Lecture Notes in Math.*, 658, Springer, Berlin, 1978. (V. P. Snaith) **80k:55027** 55P35
- Pride, Stephen J.** On groups of finite height. *J. Austral. Math. Soc. Ser. A* **28** (1979), no. 1, 87–99. (A. A. Klimowicz) **80m:20028** 20E15 (20K25)
- (with Baumslag, Benjamin) Groups with one more generator than relators. *Math. Z.* **167** (1979), no. 3, 279–281. (Benjamin Fine) **80c:20014** 20F05
- Priemer, Roland** (with Kalata, Paul) Linear prediction, filtering, and smoothing: an information-theoretic approach. *Inform. Sci.* **17** (1979), no. 1, 1–14. (M. P. Mokijačuk) **80h:93062** 93E11
- Priese, Lutz** A note on asynchronous cellular automata. *J. Comput. System Sci.* **17** (1978), no. 2, 237–252. (Author's summary) **80b:68069** 68D20
- Priest, Graham** The logic of paradox. *J. Philos. Logic* **8** (1979), no. 2, 219–241. (F. G. Asenjo) **80g:03007** 03A05
- Indefinite descriptions. *Logique et Anal. (N.S.)* **22** (1979), no. 85–86, 5–21. (Ayda I. Arruda) **80c:03015** 03B10
- Two dogmas of Quineanism. *Philos. Quart.* **29** (1979), no. 117, 289–301. (From the introduction) **80i:03015** 03A05 (03B45)
- Priestley, William McGowan** ★Calculus: an historical approach. Undergraduate Texts in Mathematics. Springer-Verlag, New York-Heidelberg, 1979. xvii + 441 pp. ISBN 0-387-90439-6 (R. P. Boas, Jr.) **80m:26003** 26-01 (00A05, 01A05)
- Prieto, Manuel** (with Chang, Y. F.; Fauss, John; Corliss, George F.) Convergence analysis of compound Taylor series. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1978)*, pp. 129–152. *Congress. Numer., XXII, Utilitas Math., Winnipeg, Man., 1979*. (Authors' summary) **80b:65068** 65L99
- Prigogine, Ilya** (with George, Cl.; Henin, F.; Mayné, F.) New quantum rules for dissipative systems. *Hadronic J.* **1** (1978), no. 2, 520–573. (P. Caldirola) **80a:81042** 81C99 (47B99, 82A30)
- (with Misra, B.; Courbage, M.) From deterministic dynamics to probabilistic descriptions. *Proc. Nat. Acad. Sci. U.S.A.* **76** (1979), no. 8, 3607–3611. (Lawrence Sklar) **80g:82015** 82A05
- (with Misra, B.; Courbage, M.) Lyapunov variable: entropy and measurement in quantum mechanics. *Proc. Nat. Acad. Sci. U.S.A.* **76** (1979), no. 10, 4768–4772. (Brian DeFazio) **80j:81011** 81B99 (82A30)
- (with Herman, Robert) A two-fold approach to town traffic. *Science* **204** (1979), no. 4389, 148–151. (Authors' summary) **80c:90064** 90B20
- Prigory, Stephen** (with Weinberg, Louis) The realizability boundary and the realization of nonsingular fourth-order conductance matrices by 6-terminal networks. *IEEE Trans. Circuits and Systems* **26** (1979), no. 8, 642–656. (Authors' summary) **80h:94046** 94C05
- Prümak, V. G.** (with Roždestvenskii, B. L.; Levitan, Ju. L.; Moiseenko, B. D.; Sidorova, V. K.) Methods of numerical modeling of turbulent flows of an incompressible viscous fluid. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 14* (1979), 20 pp. (Authors' summary) **80b:76020** 76F99 (65P05)
- Prijatelj, N.** Formal construction of a logical language. (Slovenian. English summary) *Obzornik Mat. Fiz.* **25** (1978), no. 1, 20–33. (Editors) **80m:03005** 03-01
- Prikaznikov, V. G.** (with Burhanov, Š. A.; Guminski, N. O.; Makarov, V. L.) Exact difference schemes for a fourth order ordinary differential equation. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1978**, no. 9, 778–781, 660. (Walter Gautschi) **80a:65166** 65L10
- (with Makarov, V. L.) A one-step iteration method for the calculation of eigenvalues. (Russian. English summary) *Vysš. Prikl. Mat. (Kiev)* **34** (1978), 152–157, 168. (B. I. Kvasov) **80a:65079** 65F15
- (with Makarov, V. L.; Makarov, I. L.) Exact difference schemes and schemes of any order of accuracy for systems of second-order differential equations. (Russian) *Differencial'nye Uravneniya* **15** (1979), no. 7, 1194–1205, 1340. (E. S. Čičkin) **80h:65060** 65L10
- (with Himič, A. N.) Accuracy of the integro-interpolation method for the problem of the deflection of a console plate. (Russian. English summary) *Vysš. Prikl. Mat. (Kiev)* **38** (1979), 90–97, 166. (Authors' summary) **80f:73056** 73K10 (65N20)
- (with Voichevskii, S. A.; Makarov, V. L.) Error of the method of nets in an eigenvalue problem for fourth-order ordinary differential equations. (Russian. English summary) *Vysš. Prikl. Mat. (Kiev)* **38** (1979), 138–145, 167. (Authors' summary) **80f:65090** 65L15
- Prkry, Karel** (with Jech, Thomas) Ideals over uncountable sets: application of almost disjoint functions and generic ultrapowers. *Mem. Amer. Math. Soc.* **18** (1979), no. 214, iii + 71 pp. (F. R. Drake) **80f:03059** 03E50 (03E05, 04A20, 04A30)
- (with Jech, Thomas) On projections of finitely additive measures. *Proc. Amer. Math. Soc.* **74** (1979), no. 1, 161–165. (J. C. Oxtoby) **80f:28002** 28A12 (54H10)
- Průchý, M. H.** (with Kazancev, E. N.) A class of controllable Markov chains. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 6(204), 213–214. (P. Neumann) **80c:90148** 90C40
- Primačuk, L. P.** An integrable case of the Riemann problem with a substitution matrix. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **22** (1978), no. 4, 310–313, 380. (V. G. Kravčenko) **80a:30048** 30E25
- Primak, M. E.** On the problem of determining the solution of a production-exchange model. (Russian) *Ekonom. i Mat. Metody* **15** (1979), no. 3, 559–571. (N. B. Lebedinskaja) **80j:90038** 90A14 (90A11)
- Primas, H.** Kinematical symmetries in molecular quantum mechanics. *Group theoretical methods in physics (Sixth Internat. Colloq., Tübingen, 1977)*, pp. 72–91. *Lecture Notes in Phys.*, 79, Springer, Berlin, 1978. (M. J. Maczyński) **80f:81039** 81C40 (20C35)
- (with Saraswati, Dipak K.) A system theoretic representation of mechanical systems. I. Decomposition of a mechanical system into a hierarchy of orthogonal stationary linear dynamical systems. *J. Math. Phys.* **19** (1978), no. 12, 2646–2654. (Authors' summary) **80b:82018a** 82A15 (47A99)
- (with Saraswati, Dipak K.) A system theoretic representation of mechanical systems. II. Stochastic interpretation. *J. Math. Phys.* **19** (1978), no. 12, 2655–2658. (From the summary) **80b:82018b** 82A15 (47A99)
- Prime, Mirko** Irreducibility of nonunitary principal series of semisimple Lie groups with one conjugacy class of Cartan subgroups. *Ber. Math.-Statist. Sect. Forsch. Graz* **10**, 110–115 (1978). *Ber. No. 114*, 5 pp. (1979). (J. S. Joel) **80m:22026** 22E46
- Primicerio, M.** (with Fasano, A.) Liquid flow in partially saturated porous media. *J. Inst. Math. Appl.* **23** (1979), no. 4, 503–517. (David Zachmann) **80g:76046** 76G05
- Prince, P. J.** (with Dornand, J. R.) New Runge-Kutta algorithms for numerical simulation in dynamical astronomy. *Celestial Mech.* **18** (1978), no. 3, 223–232. (Authors' summary) **80a:65146** 65L05
- Prisheponok, Serge** Topologie naturelle pour les représentations linéaires des algèbres de Lie semi-simples. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 1, A9–A12. (Jouko Mickelsson) **80j:17007** 17B35
- di Prisco, C. A.** See *Di Prisco, C. A.*
- di Prisco, Carlos A.** (with Zwicker, William) A remark on Part\*(n, λ). (Spanish summary) *Acta Cient. Venezolana* **29** (1978), no. 5, 365–366. (James Baumgartner) **80c:83048** 03E05 (03E55, 04A20)
- Pritchard, Anthony J.** (with Curtin, Ruth F.) ★Infinite dimensional linear systems theory. *Lecture Notes in Control and Information Sciences*, 8. Springer-Verlag, Berlin-New York, 1978. vii + 297 pp. ISBN 3-540-08961-6 (G. N. Mil'štein) **80h:93002** 93-02
- (with Blakeley, W. T. F.) Stability of abstract evolution equations. *Control of distributed parameter systems (Proc. Second IFAC Sympos., Coventry, 1977)*, pp. 121–132. *IFAC, Düsseldorf*, 1978. (V. B. Smirnova) **80g:34064** 34G20 (58D25)
- (with Curtin, Ruth F.) A semigroup approach to infinite-dimensional system theory. With discussion. *Recent theoretical developments in control (Proc. Conf., Univ. Leicester, Leicester, 1976)*, pp. 19–47. Academic Press, London, 1978. (Arthur J. Krener) **80c:93073** 93C25 (47D05, 93Bxx)
- (with Ichikawa, Akira) Existence, uniqueness, and stability of nonlinear evolution equations. *J. Math. Anal. Appl.* **68** (1979), no. 2, 454–476. (Elan Moritz) **80j:34079** 34G20 (47H06, 47H20)
- Infinite-dimensional linear-systems theory. *Proc. Inst. Electr. Eng.* **126** (1979), no. 6, 641–648. (Author's review) **80c:93074** 93C25
- See also *Control of distributed parameter systems*, **80c:93003**

- Prival'skii, V. B.** A. V. Netužil models. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 2 (Russian), pp. 179-188, Jaroslavl. Gas. Univ., Jaroslavl, 1977. (From the text) **80j:93086** 93C99
- Priya, Ved** Basic equations for source coding with side information at the decoder and encoder. *Kybernetika (Prague)* **14** (1978), no. 5, 328-338. (Robert Gray) **80b:94018** 94A29
- (with Sharma, Bhu Dev) Variational equations for a general and Gaussian channel with side information. *J. Combin. Inform. System Sci.* **4** (1979), no. 1, 23-31. (Authors' summary) **80j:94018** 94A34
- (with Sharma, Bhu Dev) Multiple channels under fidelity criteria. *Kybernetika (Prague)* **15** (1979), no. 6, 446-463. (Authors' summary) **80m:94044** 94A40
- Prjajinskii, V. I.** (with Suiko, V. G.) Small-parameter asymptotics of some solutions to the Cauchy problem for a quasilinear parabolic equation. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 2, 283-285. (V. M. Isakov) **80k:35046** 35K55
- Probert, Robert L.** An extension of computational duality to sequences of bilinear computations. *SIAM J. Comput.* **7** (1978), no. 1, 91-98. (Author's summary) **80j:68028** 68C05 (15A63, 68B99)
- (with Fischer, Patrick C.) Storage reorganization techniques for matrix computation in a paging environment. *Comm. ACM* **22** (1979), no. 7, 405-415. (Authors' summary) **80e:68055** 68B20 (65F30)
- Probert, Thomas** (with Kilmer, William) Depletion models for ecosystems with continuously delayed resource renewals. *Math. Biosci.* **47** (1979), no. 1-2, 35-53. (Juan Lin) **80j:92013** 92A17
- Probst, D.** (with Bulitko, V. K.) Computations with limited storage of entries. *Problemy Peredachi Informatsii* **14** (1978), no. 4, 105-108 (Russian); translated as *Problems Inform. Transmission* **14** (1978), no. 4, 313-315 (1979). (Authors' summary) **80f:68058** 68C40
- Procaccia, Itamar** (with Ross, John; Gutkowicz-Krusin, Dina) Analytic results for asymmetric random walk with exponential transition probabilities. *J. Statist. Phys.* **19** (1978), no. 5, 525-541. (J. Gillis) **80m:60075** 60J15 (82A99)
- Procecko, O. P.** (with Kil'čev'skii, M. O.) The current state and prospects of the development of general mechanics in the Ukrainian SSR. (Russian) *Prikl. Meh.* **15** (1979), no. 3, 26-109. (V. G. Kolomeic) **80h:70003** 70-03 (01A65)
- Procesi, Claudio** Les bases de Hodge dans la théorie des invariants. (English summary) *Séminaire d'Algèbre Paul Dubreil, 30ème année (Paris, 1976-1977)*, pp. 128-144, *Lecture Notes in Math.*, 641, Springer, Berlin, 1978. (V. L. Popov) **80h:15020** 15A72 (14M15, 15A75)
- Positive symmetric functions. *Adv. in Math.* **29** (1978), no. 2, 219-225. (G. B. Gurevich) **80d:15034** 15A72 (14M12, 14M15)
- (with Kraft, Hanspeter) Closures of conjugacy classes of matrices are normal. *Invent. Math.* **53** (1979), no. 3, 227-247. (V. L. Popov) **80m:14037** 14M99 (14L30, 15A72)
- Procopiuc, Gh.** The equations of radiation field. Invariance groups. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **24** (1978), no. 2, 389-398. (Giulio Mattei) **80d:76102** 76W05
- The equations of radiative relativistic magnetohydrodynamics. Invariance groups for one-dimensional flow. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **25** (1979), no. 2, 419-433. (From the introduction) **80m:76080** 76W05 (58G35, 76Y05)
- Prodan, N. V.** (with Čebotaru, I. S.) Necessary optimality conditions in differential games. (Russian) *Studies in functional analysis and differential equations* (Russian), pp. 12-20, 76, "Shtiinca", Kishinev, 1978. (Authors' summary) **80g:90132** 90D25
- Prodanov, Ivan** The measure of the image of a differentiable mapping. (Bulgarian summary) *Annuaire Univ. Sofia Fac. Math. Méc.* **68** (1973/74), 349-354 (1977). (J. G. Timourian) **80k:58015** 58C25 (26B05)
- Proding, Helmut** On a generalization of the Dyck-language over a two letter alphabet. *Discrete Math.* **28** (1979), no. 3, 269-276. (L. C. Eggan) **80j:68064** 68F05
- (with Urbanek, Friedrich J.) Language operators related to Init. *Theoret. Comput. Sci.* **8** (1979), no. 2, 161-175. (Branislav Rovani) **80e:68195** 68F05
- On the interpolation of DOL-sequences. *Theoret. Comput. Sci.* **10** (1980), no. 1, 107-108. (Author's summary) **80k:68062** 68F10
- Prohoda, G. M.** (with Suvorov, G. D.; Aptekar, A. S.; Gusarova, N. I.; Popov, V. I.; Ševčuk, V. S.) The method of simplex-splines (as applied to the optimal layout of gas pipelines). (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 9* (1979), 708-709, 777. (Authors' summary) **80k:90022** 90B99
- Prohorenko, V. I.** (with Balašov, L. A.) On the Fourier coefficients of contracted functions. (Russian summary) *Anal. Math.* **5** (1979), no. 1, 3-8. (G. Sunouchi) **80k:42009** 42A16
- Prohorov, D. V.** Integrals of univalent functions. (Russian) *Mat. Zametki* **24** (1978), no. 5, 671-678, 734. (Ju. E. Hohlov) **80h:30015** 30C45
- Prohorova, A. V.** Noethericity of Šilov-Lopatinskii problems for elliptic equations in a noncompact domain. (Russian) *Mat. Fiz. No. 24* (1978), 106-111, 124. (M. S. Agranovič) **80g:35052** 35J40
- Prokavtsov, E. V.** (with Franke, V. A.) The critical electric charge in the classical Weinberg-Salam model. (Russian. English summary) *Vestnik Leningrad. Univ. Fiz. Him.* **1979**, vyp. 1, 13-18, 121. (Authors' summary) **80e:81072** 81E10
- Prokhorov, V. V.** Letter to the editors: "Integrals that are constant on congruent domains" (*Mat. Zametki* **21** (1977), no. 2, 183-186). (Russian) *Mat. Zametki* **24** (1978), no. 2, 300. (Editors) **80e:26011** 26B35
- A graphic method of approximation of a set of points on the plane of a straight line. (Russian) *Ékonom. i Mat. Metody* **15** (1979), no. 1, 201. (Valery Fedorov) **80e:65019** 65D10 (65S05)
- Prokof'ev, V. N.** The maximin solution of the problem of detection with a vector informative parameter. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 5, 145-149, 222 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 5, 110-114. (Author's summary) **80i:94003** 94A12
- Prokop, Josef** The use of Boolean matrices in logic network synthesis. (Russian and German summaries) *TESLA Electron.* **12** (1979), no. 3, 66, 74-78. (Author's summary) **80k:94048** 94C10
- Prokopov, B. I.** (with Nosov, V. R.) Overall asymptotic stability of self-tuning systems with a reference model. *Prikl. Mat. Meh.* **41** (1977), no. 5, 850-858 (Russian); translated as *J. Appl. Math. Mech.* **41** (1977), no. 5, 871-880 (1979). (Authors' summary) **80a:34060** 34D05
- (with Kopysov, O. Ju.) Identification of parameters of nonlinear systems by adaptive model method. *Avtomat. i Telemekh.* **1978**, no. 12, 83-88 (Russian); translated as *Automat. Remote Control* **39** (1978), no. 12, part 1, 1803-1808 (1979). (Authors' summary) **80c:93072** 93C40 (93E12)
- The construction of adaptive control systems from a given form of the transition processes. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 6, 193-198 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 6, 163-168. (Author's summary) **80c:93032** 93C40
- Prolla, João B.** Non-Archimedean function spaces. *Linear spaces and approximation (Proc. Conf., Math. Res. Inst., Oberwolfach, 1977)*, pp. 101-117, *Internat. Schriftenreihe Numer. Math.*, 40, Birkhäuser, Basel, 1978. (Robert L. Ellis) **80d:46128** 46P05 (46E15)
- See also *Approximation theory and functional analysis*, **80i:41004**
- Prömel, H. J.** (with Abel, U.; Carstens, H. G.; Deuber, W.) On hypergraphic networks. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 2, pp. 1-4, *Operations Research Verfahren*, 32, Hain, Meisenheim, 1979. (Authors' summary) **80e:90039** 90B10
- Promislow, David** Dimension of null spaces with applications to group rings. *Canad. J. Math.* **30** (1978), no. 2, 289-300. (Robert S. Doran) **80d:46117** 46L10 (22D25)
- Pronin, V. G.** (with Serdobol'skii, V. I.) Properties of probabilistic languages. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 1(188), 117-122. (R. G. Buharav) **80d:68097** 68F05
- Pronozin, Ju. F.** The shortest-time problem. *Avtomat. i Telemekh.* **1977**, no. 9, 13-23 (Russian); translated as *Automat. Remote Control* **38** (1977), no. 9, part 1, 1281-1291 (1978). (T. R. Gičev) **80f:49016** 49B10
- Propol, A. I.** (with Krivonožko, V. E.) The method of successive improvement of control in dynamic linear programming problems. I. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 3, 5-16 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 3, 1-12. (Authors' summary) **80f:90140** 90C39 (90C50)
- (with Krivonožko, V. E.) The method of successive improvement of a control in dynamic linear programming problems. II. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 4, 5-15 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 4, 1-10 (1979). (Authors' summary) **80h:93032** 93C05 (90C39)
- Propp, Harold** (with Scarowsky, Manny; Boyarsky, Abraham) Some properties of piecewise linear expanding maps. *Nonlinear Anal.* **4** (1980), no. 1, 109-121. (T. Y. Li) **80m:26006** 26A18
- Proschan, Frank** (with El-Newehi, Emad; Sethuraman, Jayaram) Multistate coherent systems. *J. Appl. Probab.* **15** (1978), no. 4, 675-688. (Benjamin Epstein) **80a:62162** 62N05
- (with El-Newehi, Emad) Unified treatment of inequalities of the Weierstrass product type. *Amer. Math. Monthly* **86** (1979), no. 3, 206-208. (E. F. Beckenbach) **80b:26027** 26D20 (26A51)
- (with León, Ramón V.) An inequality for convex functions involving G-majorization. *J. Math. Anal. Appl.* **69** (1979), no. 2, 603-606. (V. Ganapathy Iyer) **80k:26014** 26D15 (26B25, 60E15)
- Proskurjakov, A. P.** ★Метод Пуанкаре в теории нелинейных колебаний. (Russian) [Poincaré's method in the theory of nonlinear oscillations] "Nauka", Moscow, 1977. 256 pp. (A. I. Perov) **80d:34044** 34C15 (34-02)
- Proskurjakov, I. V.** ★Problems in linear algebra. Translated from the Russian by George Yankovsky [G. Jankovskij]. Revised from the 1974 Russian edition. "Mir", Moscow, 1978. 453 pp. (Editors) **80b:15002** 15-01
- Proskurowski, Andrzej** (with Farley, Arthur; Hedetniemi, Stephen; Mitchell, Sandra L.) Minimum broadcast graphs. *Discrete Math.* **25** (1979), no. 2, 189-193. (B. R. Myers) **80g:94099** 94C15
- Minimum dominating cycles in 2-trees. *Internat. J. Comput. Inform. Sci.* **8** (1979), no. 5, 405-417. (James R. Evans) **80m:68059** 68E10 (05C05)
- On the generation of binary trees. *J. Assoc. Comput. Mach.* **27** (1980), no. 1, 1-2. (Author's summary) **80i:68053** 68E10
- Proskurowski, Włodzisław** Numerical solution of Helmholtz's equation by implicit capacitance matrix methods. *ACM Trans. Math. Software* **5** (1979), no. 1, 36-49. (John Crank) **80b:65129** 65N20
- (with Concus, Paul) Numerical solution of a nonlinear hyperbolic equation by the random choice method. *J. Comput. Phys.* **30** (1979), no. 2, 153-166. (Authors' summary) **80c:65014** 65C05 (65P05)
- Proskuryakov, I. V.** ★Camiz, P.; Dattoli, G.; Mignani, Roberto)  $SU_3$  subalgebras of  $SU_4$  and generalized U-spin in a new approach to the magnetic moments of charmed baryons. (Italian and Russian summaries) *Nuovo Cimento A* (11) **49** (1979), no. 3, 429-446. (Authors' summary) **80i:81106** 81G30 (22E70)
- (with Camiz, P.; Dattoli, G.; Mignani, Roberto)  $SU_3$  subalgebras of  $SU_4$  and mass sum rules for hadrons with charm, beauty and taste. (Italian and Russian summaries) *Nuovo Cimento A* (11) **53** (1979), no. 1, 97-131. (F. R. Halpern) **80j:81081** 81G30 (17B10)
- Proßdorf, Siegfried** ★Some classes of singular equations. Translated from the German original by Siegfried Dümmel. North-Holland Mathematical Library, 17. North-Holland Publishing Co., Amsterdam-New York, 1978. xiv + 417 pp. ISBN 0-7204-0501-7 (F. Smithies) **80d:47044** 47B35 (45Exx, 45F15, 47A50, 47G05)
- (with Silbermann, Bernd) Gestörte Projektionsverfahren und einige ihrer Anwendungen. (English summary) *Theory of nonlinear operators (Proc. Fifth Internat. Summer School, Central Inst. Math. Mech. Acad. Sci. GDR, Berlin, 1977)*, pp. 229-237. *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1978, 6, Akademie-Verlag, Berlin, 1978. (Authors' summary) **80e:65041** 65D32 (45L10)
- Prószyński, Andrzej** Some functors related to polynomial theory. II. Colloque sur les Formes Quadratiques, 2 (Montpellier, 1977). *Bull. Soc. Math. France Mém. No. 59* (1979), 125-129. (P. Abellanas) **80j:13012** 13E99 (13B25, 18E99)
- Prószyński, M.** Dynamics of a thin shell in Reissner-Nordström geometry. *Acta Phys. Polon. B 9* (1978), no. 7, 613-616. (Ann Stehney) **80a:83012** 83C10 (58F05)
- Protas, David** (with Chow, Kwang Nan) The maximal ideal space of bounded, analytic Dirichlet finite functions. *Arch. Math. (Basel)* **31** (1978/79), no. 3, 298-301. (Wolfgang Lusky) **80b:46062** 46J15 (30D50)
- Protasov, I. V.** Local theorems in the theory of topological groups. (Russian) *Dokl. Akad.*



- Nauk SSSR* 242 (1978), no. 4, 777-779. (K. A. Ross) **80c:22009** 22D05  
On the lattice of subgroups of a profinite group. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 11, 975-978, 1053. (S. P. Demuškin) **80c:20029** 20E15 (20E18, 22A05)  
(with Čarin, V. S.) Projections of topological groups. (Russian) *Mat. Zametki* 24 (1978), no. 3, 383-389, 447. (K. A. Ross) **80c:22006** 22D05  
Projection of zero-dimensional nilpotent groups. (Russian) *Mat. Zametki* 24 (1978), no. 5, 717-722, 735. (Klaus Keimel) **80d:22004** 22D05  
(with Muhin, Ju. N.) Projections of topological abelian groups. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 4, 551-556, 573. (Helmut Bock) **80c:65154** 65L05 (34A45)  
Topological groups with a compact lattice of closed subgroups. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 2, 378-385, 459. (M. I. Kabenjuk) **80c:22016** 22D05  
Dualisms of topological abelian groups. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 2, 207-211, 224. (K. A. Ross) **80c:22002** 22A05  
**Protić, Ljubomir** Two new analytical methods for finding approximate solutions of some systems of differential equations. (Serbo-Croatian. English summary) *Mat. Vesnik* 2(15)(30) (1978), no. 1, 75-84. (B. S. Popov) **80c:65154** 65L05 (34A45)  
Modifications and syntheses of some numerical methods for certain systems of differential equations. (Serbo-Croatian. English summary) *Mat. Vesnik* 2(15)(30) (1978), no. 2, 131-141. (Author's summary) **80c:65155** 65L05  
Some new numerical methods for finding approximate solutions of differential equations obtained by linear interpolation. (Serbo-Croatian. English summary) *Mat. Vesnik* 2(15)(30) (1978), no. 4, 391-402. (Author's summary) **80c:65075** 65L05 (34Axx)  
**Protonotarios, Emmanuel N.** (with Polydoros, Andreas D.) Digital interpolation of stochastic signals. *IEEE Trans. Circuits and Systems* 26 (1979), no. 11, 916-922. (Authors' summary) **80j:94005** 94A12 (68J05)  
(with Nicolis, John S.) Modelling communication and control between hierarchical systems. *Internat. J. Systems Sci.* 11 (1980), no. 1, 107-127. (From the summary) **80k:93010** 93A13 (92A27)  
**Protopopescu, V.** (with Angelescu, N.) Asymptotic equivalence between the hydrodynamic and kinetic stages for the Lorentz model. *Lett. Math. Phys.* 3 (1979), no. 2, 87-92. (A. Corciovei) **80j:82014** 82A40 (45K05)  
**Protter, M. H.** Inequalities for powers of nondecreasing operators. *Manuscripta Math.* 28 (1979), no. 1-3, 71-79. (V. V. Peller) **80h:47010** 47A30  
The generalized spectrum of second-order elliptic systems. *Rocky Mountain J. Math.* 9 (1979), no. 3, 503-518. (E. Müller-Pfeiffer) **80d:35117** 35P15 (35J55)  
**Proter, Philip** Markov solutions of stochastic differential equations. *Z. Wahrsch. Verw. Gebiete* 41 (1977/78), no. 1, 39-58. (Kiyosi Itô) **80c:60085** 60H10 (60G44, 60J25)  
 $\mathcal{M}^2$  stability of solutions of stochastic differential equations. *Z. Wahrsch. Verw. Gebiete* 44 (1978), no. 4, 337-352. (Norihiko Kazamaki) **80c:60077** 60H10 (60G42)  
A comparison of stochastic integrals. *Ann. Probab.* 7 (1979), no. 2, 276-289. (Dominique Lepingle) **80d:60078** 60H05  
(with Sharpe, Michael J.) Martingales with given absolute value. *Ann. Probab.* 7 (1979), no. 6, 1056-1058. (Dominique Lepingle) **80j:60076** 60G44  
**Prouza, Ludvík** On a detection method for known finite sequences. *Kybernetika (Prague)* 14 (1978), no. 6, 421-428. (Author's summary) **80c:94006** 94A12  
On recursive filters inverse to finite sequences in the minimum mean square sense. *Kybernetika (Prague)* 15 (1979), no. 1, 40-50. (Author's summary) **80c:94007** 94A05  
**le Provost, Christian** See *Le Provost, Christian*  
**Prozorčević, A. V.** (with Zubarev, D. N.; Smoljanskii, S. A.) Derivation of nonlinear generalized equations of quantum relativistic hydrodynamics. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 3, 394-407. (R. P. Gaido) **80k:76082** 76Y05 (45P05, 82A30)  
**Prucnal, Tadeusz** On Friedman's problem in mathematical logic. Preliminary report. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 7 (1978), no. 3, 137-142. (S. Comer) **80h:03038** 03B55 (03G25)  
**Prudnikov, A. G.** The WKB method for a system of Schrödinger equations and the order of its accuracy in the case of characteristics of variable multiplicity. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 8, 1522-1525, 1536. (J. S. Joel) **80i:35034** 35C20 (35J10)  
**Prudnikov, A. P.** (with Bryčkov, Ju. A.; Šišov, V. S.) Operational calculus. (Russian) *Mathematical analysis, Vol. 16 (Russian)*, pp. 99-148, 151, *VINITI, Moscow*, 1979. (L. Berg) **80c:44010** 44A40 (44-02)  
See also *Olver, F.* **80a:41031**  
**Pruss, Steven A.** (with Fulton, Charles T.) Numerical methods for a singular eigenvalue problem with eigenparameter in the boundary conditions. *J. Math. Anal. Appl.* 71 (1979), no. 2, 431-462. (I. Norman Katz) **80k:65071** 65L15 (80A20)  
(with Alexander, Winsor E.) Stability analysis of two-dimensional digital recursive filters. *IEEE Trans. Circuits and Systems* 27 (1980), no. 1, 11-15. (Authors' summary) **80m:94009** 94A12  
**Prüfer, Michael** Calculating global bifurcation. *Continuation methods (Proc. Sympos., Johannes Kepler Univ., Linz, 1977)*, pp. 187-213, *Academic Press, New York*, 1978. (Eugene Allgower) **80g:65058** 65H10 (34C35, 55M25, 58E05)  
(with Peitgen, Heinz-Otto) The Leray-Schauder continuation method is a constructive element in the numerical study of nonlinear eigenvalue and bifurcation problems. *Functional differential equations and approximation of fixed points (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978)*, pp. 326-409, *Lecture Notes in Math.*, 730, Springer, Berlin, 1979. (Christian Fenske) **80k:55007** 55M20 (58E07, 65H05)  
(with Sieberg, Hans Willi) On computational aspects of topological degree in  $\mathbb{R}^n$ . *Functional differential equations and approximation of fixed points (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978)*, pp. 410-433, *Lecture Notes in Math.*, 730, Springer, Berlin, 1979. (Gilles Fournier) **80k:55011** 55M25 (65H10)  
**Prugovečki, Eduard** Relativistic quantum kinematics on stochastic phase spaces for massive particles. *J. Math. Phys.* 19 (1978), no. 11, 2260-2270. (L. C. Thomas) **80c:82010a** 82A05  
Stochastic phase space kinematics of the photon. *J. Math. Phys.* 19 (1978), no. 11, 2271-2277. (L. C. Thomas) **80c:82010b** 82A05  
A unified treatment of dynamics and scattering in classical and quantum statistical mechanics. *Phys. A* 91 (1978), no. 1-2, 202-228. (P. Caldirola) **80i:81053** 81F99 (81C99)  
Consistent formulation of relativistic dynamics for massive spin-zero particles in external fields. *Phys. Rev. D* (3) 18 (1978), no. 10, 3655-3675. (G. R. Allcock) **80a:81056** 81D25 (45K05)  
Stochastic phase spaces and master Liouville spaces in statistical mechanics. *Found. Phys.* 9 (1979), no. 7-8, 575-587. (Steven M. Moore) **80g:82016** 82A05  
**Prum, Bernard** (with Guyon, Xavier) Martingales faibles sur  $[0, 1]^2$ : trace sur un chemin et applications de la formule de Itô. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 7, A543-A546. (Authors' summary) **80c:60069** 60G48 (60H05)  
(with Guyon, Xavier) Propriétés markoviennes des martingales fortes gaussiennes sur  $\mathbb{R}^2$ . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 3, A221-A224. (Authors' summary) **80c:60070** 60G60 (60H05)  
(with Guyon, Xavier) Propriétés de Markov au sens de Hida et représentations de Goursat pour des processus à indice dans  $\mathbb{R}$  ou  $\mathbb{R}^2$ . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 17, A839-A842. (Authors' summary) **80c:60078** 60G60 (60J99)  
**Pruski, S.** (with Grudziński, Hubert) The structure of the  $Q$ -family of mappings in the  $n$ -representability theory. II. *Rep. Math. Phys.* 14 (1978), no. 1, 43-56. (H. Wakita) **80c:81027** 81C10 (47D45)  
Contractions of expansions of fermion operators. *Rep. Math. Phys.* 15 (1979), no. 1, 99-110. (H. Wakita) **80k:81057** 81C99 (47D45)  
Superpositions of expansions and contractions and the  $p$ -reducibility of fermion operators. *Rep. Math. Phys.* 15 (1979), no. 2, 267-275. (H. Wakita) **80m:47017** 47A99 (81C99)  
**Prüss, Jan** On semilinear evolution equations in Banach spaces. *J. Reine Angew. Math.* 303/304 (1978), 144-158. (T. Kato) **80j:34107** 34G20 (47H15)  
**Pruszkowski, Tadeusz** Operational equations in space  $B_2^*$  and boundary value problems. *Demonstratio Math.* 12 (1979), no. 2, 317-329. (I. Fenýő) **80j:34026** 34B15  
**Pruszan, Peter Mark** (with Krarup, Jakob) Computer-aided layout design. Mathematical programming in use. *Math. Programming Stud.* No. 9 (1978), 75-94. (Authors' summary) **80a:90084** 90B99 (90C50)  
**Pruszkowski, Sandra** (with de Leeuw, Jan) A new computational method to fit the weighted Euclidean distance model. *Psychometrika* 43 (1978), no. 4, 479-490. (Authors' summary) **80c:62003** 62-07 (62P15)  
**Przanowski, M.** (with Plebanski, Jerzy F.) Generalized Goldberg-Sachs theorems in complex and real space-times. I. Algebraic classifications of the conformal tensor and the energy-momentum tensor on complex and real space-times. *Acta Phys. Polon. B* 10 (1979), no. 6, 485-514. (Authors' summary) **80i:83031** 83C99 (53B30)  
**Przybycki, Olgierd** Series for calculating more precise values of the constant modular-elliptic function  $q = q(k)$  as applied to electric filters. (Polish. English, French, German and Russian summaries) *Rozprawy Elektrotech.* 25 (1979), no. 4, 1061-1090. (Author's summary) **80m:94048** 94A99  
**Przeworska-Rolewicz, Danuta** Integration of a unit in linear rings with right invertible operators. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 4, 227-230. (I. Fenýő) **80k:47003** 47A05 (46J99, 47A50)  
On trigonometric identity for right invertible operators. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 1 (1978), 267-277. (I. Fenýő) **80a:47020** 47A50 (44A40)  
Introduction to algebraic analysis. (Bulgarian) *Fiz.-Mat. Spis. B* 19 (1978), no. 2, 121-136. (From the text) **80k:47001** 47-01  
A generalization of Wroński theorems. *Math. Nachr.* 85 (1978), 47-55. (I. Fenýő) **80a:47021** 47A50 (44A40)  
Operational calculus and algebraic analysis. *Generalized functions and operational calculus (Proc. Conf., Varna, 1975)*, pp. 178-181, *Bulg. Acad. Sci., Sofia*, 1979. (C. L. Kou) **80i:44005** 44A45  
**Przybyłski, Tadeusz** See *Jaczeński, Jerzy*, **80h:94053**  
**Przybyłski, Halina** (with Kopociński, Bolesław) A remark on preventive replacement strategies. (Polish) *Mat. Stos.* (3) 15 (1979), 75-79. (Roman Słowiński) **80m:90056** 90B25 (60K10, 62N05)  
**Przymusiński, Teodor C.** Topological properties of product spaces and the notion of  $n$ -cardinality. Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977). *Topology Proc.* 2 (1977), no. 1, 233-241 (1978). (Brian M. Scott) **80k:54008** 54B10 (54G20)  
Collectionwise normality and absolute retracts. *Fund. Math.* 98 (1978), no. 1, 61-73. (Michael Starbird) **80g:54021a** 54C55 (54D15)  
Collectionwise normality and extensions of continuous functions. *Fund. Math.* 98 (1978), no. 1, 75-81. (Michael Starbird) **80g:54021b** 54C55 (54D15)  
(with Lutzer, David J.) Continuous extenders in normal and collectionwise normal spaces. *Fund. Math.* 102 (1979), no. 3, 165-171. (Sergio Salbany) **80d:54014** 54C40  
(with van Douwen, Eric K.) First countable and countable spaces all compactifications of which contain  $\beta N$ . *Fund. Math.* 102 (1979), no. 3, 229-234. (H. L. Bentley) **80c:54031** 54D35  
Normality and paracompactness in finite and countable Cartesian products. *Fund. Math.* 105 (1979/80), no. 2, 87-104. (Anne K. Steiner) **80m:54010** 54B10 (54D15, 54D18)  
On the dimension of product spaces and an example of M. Wage. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 315-321. (Stojan Nedev) **80c:54033** 54F45 (54G20)  
**Przytycki, Józef H.** A unique decomposition theorem for 3-manifolds with boundary. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 2, 209-215. (H. J. Charlton) **80k:57018** 57N10  
**Pšenič, I.** (with Popov, M. M.) Whispering gallery waves in the vicinity of the point of unbending of a concave boundary. (Russian. English summary) Mathematical questions in the theory of wave propagation. *9. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 78 (1978), 203-210, 250. (From the text) **80g:78015** 78A45 (35J15)  
**Pšeničnov, V. I.** The structure of lattice-ordered groups with a topology. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 12, 9-11. (Klaus Keimel) **80m:06018** 06F15 (22A30)  
**Pšeničny, B. N.** (with Danilin, Ju. M.) Numerical methods in extremal problems. Translated from the Russian by V. Zhitomirsky [V. Zhitomirski]. Revised edition. "Mir", Moscow, 1978. 276 pp. (Editors) **80g:90001** 90-01 (65-01)  
Nonsmooth optimization and nonlinear programming. *Nonsmooth optimization*

- (Proc. ILLASA Workshop, Laxenburg, 1977), pp. 71–78, *ILLASA Proc. Ser.*, 3, Pergamon, Oxford, 1978. (John J. Dinkel) **80i:90125** 90C30
- (with Mahmudov, E. N.) The optimality principle for polyhedral differential inclusions. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 25 Neobhodim. Uslov. Ekstremum. dlja Differencial. Vključen. i Zadač. Ubehan.* (1978), 3–22. (Vadim Komkov) **80i:49024** 49B99
- (with Medvedevskii, I. B.) Necessary conditions for the extremum in a problem with mixed constraints. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 25 Neobhodim. Uslov. Ekstremum. dlja Differencial. Vključen. i Zadač. Ubehan.* (1978), 40–46. (From the text) **80i:49048** 49B99
- (with Mihalevič, V. M.) An optimal control problem on an abstract manifold. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 1, 70–73, 96. (Authors' summary) **80i:58032** 58E25 (49B99)
- (with Mahmudov, E. N.) The optimality principle for polyhedral differential inclusions. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 6, 26–29. (Rémi Vaillancourt) **80i:49003** 49A10 (93C99)
- Pševorska-Rolevič, Danuta** See *Prawowska-Roliewicz, Danuta*
- Pukaczev, B. N.** See *Pieniknyi, B. N.*
- Pukaczev, B. N.** See *Pieniknyi, B. N.*
- Plák, P.** On extensions of uniformly continuous Banach-space-valued mappings. *Comment. Math. Univ. Carolin.* 20 (1979), no. 1, 101–105. (Edwin Duda) **80i:54011** 54C20 (54E15)
- Plák, Vlastimil** Perturbations and continuity of the spectrum. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics (Leipzig, 1977)*, pp. 177–186, Teubner, Leipzig, 1978. (J. J. Buoni) **80g:47016** 47A55 (46H05, 47A10)
- An infinite companion matrix. *Comment. Math. Univ. Carolin.* 19 (1978), no. 3, 447–458. (K. Veselić) **80i:15006** 15A24
- A maximum problem for matrices. *Linear Algebra Appl.* 28 (1979), 193–204. (M. F. Smiley) **80i:15035** 15A60 (15A45, 47A30)
- Platnik, B. I.** (with Poliščuk, V. N.) The periodic boundary value problem for a system of hyperbolic equations with constant coefficients. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 3, 326–333, 428. (O. Vejvoda) **80i:35100** 35L55 (35B10)
- (with Žuk, V. I.) A boundary value problem for a system of hyperbolic equations with constant coefficients. (Russian) *Mat. Metody i Fiz.-Meh. Polja No. 9* (1979), 3–9, 130. (Authors' summary) **80i:35076** 35L55
- Ptolemy of Alexandria** See *Drake, Stillman*, **80i:01012**
- Pu, Bao Ming** (with Liu, Ying Ming) Product and quotient spaces in fuzzy topology. (Chinese) *Kexue Tongbao* 24 (1979), no. 3, 97–100. (Kim-Peu Chew) **80i:54006** 54A40 (03E72, 54B10, 54B15)
- Pu, H. H.** See **Pu, Hui Hui Min**
- Pu, H. W.** (with Pu, Hui Hui Min) An approximative generalization of Zahorski's theorem on derivative. *Colloq. Math.* 39 (1978), no. 1, 81–86. (Michael Evans) **80i:26008** 26A24
- (with Pu, Hui Hui Min) On iterated Peano derivatives. *Bull. Inst. Math. Acad. Sinica* 7 (1979), no. 3, 323–328. (Richard J. O'Malley) **80i:26007** 26A24
- (with Pu, Hui Hui Min) On the approximate maxima of a function. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 2, 281–284. (James Foran) **80i:26003** 26A03
- Pu, Hui Hui Min** (with Pu, H. W.) An approximative generalization of Zahorski's theorem on derivative. *Colloq. Math.* 39 (1978), no. 1, 81–86. (Michael Evans) **80i:26008** 26A24
- (with Pu, H. W.) On iterated Peano derivatives. *Bull. Inst. Math. Acad. Sinica* 7 (1979), no. 3, 323–328. (Richard J. O'Malley) **80i:26007** 26A24
- (with Pu, H. W.) On the approximate maxima of a function. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 2, 281–284. (James Foran) **80i:26003** 26A03
- Pucci, Edvige** (with Balli, Raffaele) A class of cylindrical vortices in an incompressible viscous fluid. (Italian. French summary) *Rend. Mat.* (6) 11 (1978), no. 4, 591–600 (1979). (Carlos J. Lozano) **80i:76006** 76C05 (35C99)
- (with Balli, Raffaele) Exact solutions of the Strakhovitch type in magneto-fluid dynamics. (Italian. French summary) *Riv. Mat. Univ. Parma* (4) 4 (1978), 305–313 (1979). (R. Thibault) **80i:76045** 76W05 (35C99)
- Pucci, Patrizia** (with Candeloro, Domenico) Some considerations regarding the Riemann-Stieltjes integral and the Weierstrass integral. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 3–4, 187–191 (1978). (S. Foglio) **80i:26008** 26A42 (49F25)
- (with Candeloro, Domenico) A lower closure theorem with respect to a sequence of measures for optimal control problems. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* 26 (1977), no. 2, 280–292 (1979). (J. E. Rubio) **80i:49009** 49A50
- The problem of determining all solutions of an orientor field. (Italian) *Rend. Circ. Mat. Palermo* (2) 26 (1977), no. 1–3, 156–164 (1978). (Author's summary) **80i:49021** 49A50 (34A60)
- Boundary value problems for systems of hyperbolic equations. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 1, 87–99. (S. Cinquini) **80i:35006** 35L50
- Pucker, N.** (with Peltzer, P.) Specific features of time-dependent  $P_N$  approximations in spherical geometry. *Acta Phys. Austriaca* 51 (1979), no. 1, 9–28. (A. Bellini-Morante) **80i:82053** 82A75 (65Rxx)
- Pucker, Norbert** (with Urban, Paul) Johannes Kepler: sa contribution au progrès des sciences naturelles. With discussion. *Ontologie und Logik/Ontology and logic (Proc. Internat. Colloq., Salzburg, 1976)*, pp. 247–265, Duncker & Humblot, Berlin, 1979. (William R. Shea) **80i:01024** 01A45
- Puczyłowski, Edmund R.** On lower strong radicals in alternative algebras. *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 6, 477–482. (Harry F. Smith) **80i:17017** 17D05
- Pudlak, P.** Symmetric embedding of finite lattices into finite partition lattices. *Comment. Math. Univ. Carolin.* 20 (1979), no. 1, 183–187. (Heinrich Werner) **80i:06007** 06B15 (05C99)
- Puel, J.-P.** A free boundary, nonlinear eigenvalue problem. *Contemporary developments in continuum mechanics and partial differential equations (Proc. Internat. Sympos., Inst. Mat., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 400–410, North-Holland Math. Studies, 30, North-Holland, Amsterdam, 1978. (P. K. C. Wang) **80i:49036** 49G05 (35Jxx, 82A45)
- Variational inequalities of evolution with nonregular obstacles. *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. 1 (Portuguese), pp. 183–195, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Antonino Maugeri) **80i:35106** 35K60
- (with Mignot, F.) Sur une classe de problèmes non linéaires avec non linéarité positive croissante, convexe. *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis (Rome, 1978)*, pp. 45–72, Pitagora, Bologna, 1979. (R. C. MacCamy) **80i:35054** 35J65
- (with Mignot, F.) Homogénéisation d'un problème de bifurcation. *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis (Rome, 1978)*, pp. 281–310, Pitagora, Bologna, 1979. (H. J. Weinitschke) **80i:73050** 73H05 (73K10)
- Pugačev, B. P.** A note on the subject of the application of the least squares method to the solution of systems of equations. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 6, 1593–1595, 1631. (Author's summary) **80i:65062** 65H10
- Pugačev, V. S.** Estimation of variables and parameters in stochastic systems that are described by differential equations. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 5, 1031–1034. (From the text) **80i:93112** 93E10
- Regurent estimation of variables and parameters in stochastic systems described by difference equations. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 5, 1131–1133. (S. P. Bingulac) **80i:93155** 93E10
- Canonical expansions of random variables in stochastic control problems. (Russian summary) *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* 7 (1978), no. 4, 227–235. (Stanley R. Pliska) **80i:93203** 93E20
- Estimation of state and of parameters of continuous nonlinear systems. *Avtomat. i Telemekh.* 1979, no. 6, 63–79 (Russian); translated as *Automat. Remote Control* 40 (1979), no. 6, part 1, 831–844. (Author's summary) **80i:34058** 34F05 (93E10)
- State and parameter estimation of Markov systems with discrete measurements. *Avtomat. i Telemekh.* 40 (1979), no. 7, 43–55 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 7, part 1, 981–990. (Author's summary) **80i:93052** 93E10
- Recurrent estimation of variables and parameters in Markov systems in the case of discrete measurements. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 5, 1077–1080. (Ivar Petersen) **80i:93170** 93E20
- Pugh, A. C.** Controllability and observability considerations for composite systems. *Recent theoretical developments in control (Proc. Conf., Univ. Leicester, Leicester, 1976)*, pp. 49–65, Academic Press, London, 1978. (B. P. Molinari) **80i:93021** 93B20
- (with Ratcliffe, P. A.) On the zeros and poles of a rational matrix. *Internat. J. Control* 30 (1979), no. 2, 213–226. (T. Kaczorek) **80i:93007** 93A10
- Puhareva, N. V.** An approximate method for the solution of integro-differential equations. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 1, 11–14. (S. D. Miluševa) **80i:45012** 45J05 (45L05)
- Puhl, J.** (with Carl, B.; Maurey, Bernard) Grenzzordnungen von absolut-(r, p)-summierenden Operatoren. *Math. Nachr.* 82 (1978), 205–218. (Theodore S. Bolis) **80i:47032** 47B10 (46A45)
- Puhli, V. A.** A method for the analytic solution of two-dimensional boundary value problems for systems of elliptic equations. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1275–1282, 1357–1358. (I. N. Molčanov) **80i:73047** 73L99 (65F05)
- An approach to the solution of boundary value problems of mathematical physics. (Russian) *Differencial'nye Uravnenija* 15 (1979), no. 11, 2039–2043, 2110. (Author's summary) **80i:65035** 65N40
- Puharshev, V. V.** On the isolated liquid volume motion. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stat.)* 30 (1978), no. 4–5, 603–617. (L. M. Hocking) **80i:76025** 76E99
- Linear approximation in the problem of the immersion of a blunt body in water. (Russian) *Dinamika Splošn. Sredy No. 38 Nestacionar. Problemy Gidrodinamiki* (1979), 143–150, 176. (Author's summary) **80i:76003** 76B10
- (with Andreev, V. K.) The motion of a finite mass of fluid. (Russian) *Ž. Prikl. Meh. i Tehn. Fiz.* 1979, no. 2, 25–43, 180. (Authors' summary) **80i:76009** 76C99
- Puhov, G. E.** See *Sin'kov, M. V.*; et al. **80i:10001** and *Mathematical modeling and the theory of electrical circuits*, **80i:94033a**
- Puhov, S. V.** Inequalities for the Kolmogorov and Bernstein widths in Hilbert space. (Russian) *Mat. Zametki* 25 (1979), no. 4, 619–628, 637. (P. Mankiewicz) **80i:46019** 46C05
- Puhtarevič, G. A.** (with Kovalenko, I. I.; Ravikovič, E. I.) Forecasting model system for national economic development in a long-term perspective. (Russian. English summary) *Issled. Operacii i ASU No. 13* (1979), 116–124, 136. (Authors' summary) **80i:90033** 90A17
- Puig, Luis** (with Enguehard, Michel) Un critère d'existence de  $[p, q]$ -complément normal. *J. Algebra* 55 (1978), no. 2, 281–292. (Bhama Srinivasan) **80i:20022** 20D20
- Structure locale et caractères. *J. Algebra* 56 (1979), no. 1, 24–42. (W. Feit) **80i:20011** 20C15
- Sur un théorème de Green. *Math. Z.* 166 (1979), no. 2, 117–129. (M. E. Keating) **80i:20006** 20C11 (20C20)
- Puila, Gabriel** (with Popa, Valeriu; Stan, Costică) Erratum: "Sur le point fixe commun de plusieurs applications dans des espaces Hausdorff" (Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.) 21(69) (1977), no. 3–4, 405–409). *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 22(70) (1978), no. 2, 224. (Editors) **80i:54007** 54H25
- Sur le groupe de mouvements de l'espace pseudo-euclidien hyperbolique. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 3, 433–435. (Adrian C. Albu) **80i:22022** 22E15 (53B99)
- Pujar, S. S.** (with Amur, Krishna) On submanifolds of a Riemannian manifold admitting a metric semisymmetric connection. *Tensor (N.S.)* 32 (1978), no. 1, 35–38. (K. Yam) **80i:53012** 53B25
- (with Amur, Krishna) On conformally flat submanifolds. *Tensor (N.S.)* 32 (1978), no. 1, 62–64. (Koichi Ogue) **80i:53025** 53B25 (53C40)
- Pujolte, Guy** (with Gelenbe, Erol) A diffusion model for multiple class queueing networks. *Measuring, modelling and evaluating computer systems (Proc. Third Internat. Sympos.*



- Bad Godesberg, 1977, pp. 189-199, North-Holland, Amsterdam, 1977. (Authors' summary) **80c:68085** 68C15
- (with Charlot, François) Recurrence in single server queues with impatient customers. (French summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* 14 (1978), no. 4, 399-410 (1979). (D. J. Daley) **80b:60122** 60K25
- (with Potier, Dominique) Réseaux de files d'attente à capacité limitée avec des applications aux systèmes informatiques. (English summary) *RAIRO Inform.* 13 (1979), no. 2, 175-197. (Authors' summary) **80c:68088** 68C15
- Pakal'skii, I. D. Boundary value problems for some degenerate equations of parabolic type. (Russian) *Mat. Fiz. No. 25* (1979), 109-113, 120. (A. P. Soldatov) **80b:35108** 35K65
- Pakelshelm, Friedrich (with Styan, George P. H.) Nonnegative definiteness of the estimated dispersion matrix in a multivariate linear model. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 3-4, 327-330. (J. Kleffe) **80j:62050** 62H12
- Pakushchov, V. V. See Putnaev, V. V.
- Pakhov, A. E. (with Chaichian, M.; Hayashi, M.; Nelipa, N. F.) On the problem of existence of quantum field theory. *J. Math. Phys.* 20 (1979), no. 8, 1783-1790. (James D. Fabry) **80b:81124** 81E99 (46N05, 47H10)
- Palat, P. S. (with Elmaghaby, Salah E.) Optimal project compression with due-dated events. *Naval Res. Logist. Quart.* 26 (1979), no. 2, 331-348. (Authors' summary) **80c:90058** 90B10
- Palatov, A. I. A criterion for the orthogonality of a system of trigonometric polynomials. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 10(197), 56-60. (J. Németh) **80c:42002** 42A05
- Palatov, A. K. The influence of zero paths on the complexity of the realization of Boolean functions by contact circuits. (Russian) *Diskret. Analiz No. 30 Metody Diskret. Anal. o Rešeni Kombinatornykh Zadach* (1977), 30-37, 77. (N. A. Karpova) **80m:94099** 94C10 (68C25)
- On the absence of the localization of the expansion in the Laplace series of a function from the Hölder class  $C^{1/2}$  on the sphere. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 6, 1076-1080, 1150. (Erich Miersemann) **80a:35094** 35P10
- Pak, J. V. (with Verbeure, André) The classical limit of quantum dissipative generators. *J. Math. Phys.* 20 (1979), no. 4, 733-735. (H. Wakita) **80b:81026** 81C20 (47D45)
- (with Nandts, J.; Verbeure, André) Linear response and relaxation in quantum lattice systems. *J. Statist. Phys.* 21 (1979), no. 3, 279-300. (Francesco Guerra) **80a:82026** 82A15 (47Bxx, 82A67)
- Palikowski, W. (with Marchow, E.) Equivalent Whitney immersion theorem. *Comment. Math. Prace Mat.* 20 (1977/78), no. 2, 409-415. (R. Paul Beem) **80b:57040** 57R42
- Palleyblank, W. R. A note on graphs spanned by Eulerian graphs. *J. Graph Theory* 3 (1979), no. 3, 309-310. (Authors' summary) **80m:68041** 68C25 (03D15, 05C45)
- (with Giles, F. R.) Total dual integrality and integer polyhedra. *Linear Algebra Appl.* 25 (1979), 191-196. (Authors' summary) **80d:90056** 90C10
- Palila, D. I. The large-scale structure of unsteady self-similar rolled-up vortex sheets. *J. Fluid Mech.* 88 (1978), no. 3, 401-430. (Authors' summary) **80i:76015** 76C05
- Pallman, Norman J. (with Geramita, Joan M.) On the history of populations governed by a Leslie matrix. *Theoret. Population Biol.* 14 (1978), no. 2, 231-250. (R. Fischler) **80d:92025** 92A15
- Palmannová, Sylvia Joint distributions of observables on quantum logics. *Internat. J. Theoret. Phys.* 17 (1978), no. 9, 665-675. (S. Gudder) **80c:81018** 81C20
- A remark on the comparison of Mackey and Segal models. (Russian summary) *Math. Slovaca* 28 (1978), no. 3, 297-304. (S. Gudder) **80b:46085** 46N05 (81B05)
- Palou, J. (with Moalla, M.; Sifakis, Joseph) Synchronized Petri nets: a model for the description of non-autonomous systems. *Mathematical foundations of computer science, 1978 (Proc. Seventh Sympos., Zakopane, 1978)*, pp. 374-384, *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (Guy Vidal-Naquet) **80d:68075** 68D90
- (with Moalla, M.; Sifakis, Joseph) Réseaux de Petri synchronisés. *RAIRO Automat.* 12 (1978), no. 2, 103-130. (Rüdiger Valk) **80b:68006** 68A05 (68B20, 68D90)
- Paltr, Aleš On productive classes of graphs determined by prohibiting given subgraphs. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 805-820, *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (Bruno D'Amore) **80c:05093** 05C99
- (with Nešetřil, Jaroslav) On classes of relations and graphs determined by subobjects and factorobjects. *Discrete Math.* 22 (1978), no. 3, 287-300. (Pavol Hell) **80c:05086** 05C99
- Palvirenti, G. (with Santagati, G.) On the uniqueness of the solution to a minimum problem for a control process with distributed parameters. *J. Optim. Theory Appl.* 28 (1979), no. 1, 109-124. (Klaus Glaschoff) **80b:49011** 49B22 (93C20)
- Palvirenti, M. (with Marchioro, C.; Pellegrinotti, A.; Triolo, L.) Velocity of a perturbation in infinite lattice systems. *J. Statist. Phys.* 19 (1978), no. 5, 499-510. (Authors' summary) **80b:82053** 82A60 (58F05)
- (with Marchioro, C.; Pellegrinotti, A.; Suhov, Yu.) Time evolution of Gibbs states for an anharmonic lattice. *Comm. Math. Phys.* 66 (1979), no. 2, 131-146. (Authors' summary) **80i:82014** 82A05 (60K35)
- Pavlené, J. (with Golosov, Ju. I.) Choice of discretization step in numerical modeling of a continuous-time filtration scheme. (Russian. Lithuanian summary) *Trudy Akad. Nauk Litov. SSR Ser. B* 1978, no. 1(104), 121-133. (K. B. Datta) **80b:76052** 76S05 (65L99)
- Papešis, Rimantas (with Kaminskas, V. A.) The accuracy of the estimation of the parameters of linear continuous dynamical systems by discrete observations. (Russian. Lithuanian and English summaries) *Statist. Problemy Upravleniya—Trudy Sem. Protsessy Optimal. Upravleniya V Sekcija No. 35* (1978), 51-64, 132. (Authors' summary) **80d:83085** 83E10
- Papkov, K. A. (with Frolov, E. B.) An attainability property for nonlinear systems on manifolds. I. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 10(197), 61-71. (V. V. Obuhovskii) **80g:57037** 57R27 (49E15, 93B05)
- Pappe, Dieter Friedrich Schmidt 22.9.1901-25.1.1977. (German) *Jbuch. Heidelberger Akad. Wiss.* 1978, 66-68 (1 plate) (1979). (Editors) **80j:01034** 01A70
- Purcaru, Ion A measure of the degree of organization. *An. Univ. București Mat.* 28 (1979), 91-93. (Editors) **80j:94009** 94A17
- Some considerations from the mathematical theory of systems. (French and Russian summaries) *Econom. Comput. Econom. Cybernet. Stud. Res.* 13 (1979), no. 1, 71-86. (M. S. Štil'man) **80g:93016** 93A99
- Parcell, S. (with Holton, D. A.) The four colour theorem—a short history. *Austral. Math. Soc. Gaz.* 6 (1979), no. 1, 11-14. (Editors) **80b:05028** 05C15 (01A55)
- Pardun, Paul W. Tree size by partial backtracking. *SIAM J. Comput.* 7 (1978), no. 4, 481-491. (E. M. Reingold) **80f:68032** 68C05 (68E05)
- Pardue, Peter The single server queue in a random environment. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 3, pp. 363-372, *Operations Research Verfahren*, 33, Hain, Meisenheim, 1979. (K. Balagopal) **80g:60106** 60K25
- Purdy, George B. Polytopes with prescribed contents of  $(n-1)$ -facets. *Israel J. Math.* 30 (1978), no. 1-2, 54-56. (A. Altshuler) **80b:52016** 52A25
- Triangles in arrangements of lines. *Discrete Math.* 25 (1979), no. 2, 157-163. (J. W. Freeman) **80b:05017** 05B35 (51M20)
- (with Strommer, Thomas O.) The maximal sizes of faces and vertices in an arrangement. *Discrete Math.* 28 (1979), no. 3, 331-334. (Kenneth Kalmanson) **80j:51003** 51A20 (05B30)
- The minimum genus of a two-point universal graph. *J. Combin. Theory Ser. B* 26 (1979), no. 1, 75-77. (E. A. Nordhaus) **80m:05028** 05C10
- Puri, K. K. Viscous damping of gravity waves over a permeable bed. *Internat. J. Math. Math. Sci.* 1 (1978), no. 4, 497-507. (Authors' summary) **80a:76047** 76S05 (35Q99)
- Puri, M. C. (with Bhatia, H. L.; Swarup, Kanti) Time enumeration technique for time-cost trade-off in a transportation problem. *Cahiers Centre Études Rech. Opér.* 21 (1979), no. 1, 63-75. (Authors' summary) **80c:90061** 90C08
- Puri, Madan L. (with Mardia, K.) A spherical correlation coefficient robust against scale. *Biometrika* 65 (1978), no. 2, 391-395. (C. G. Khatri) **80c:62074** 62H20
- (with Akritas, M. G.; Roussas, George G.) Sample size, parameter rates and contiguity—the I.I.D. case. *Comm. Statist. A—Theory Methods* 8 (1979), no. 1, 71-83. (Constantin Drossos) **80d:62038** 60G30 (62B20)
- (with Mitra, Sujit Kumar) Shorted operators and generalized inverses of matrices. *Linear Algebra Appl.* 25 (1979), 45-56. (Donald Kershaw) **80b:15009** 15A09
- Puri, N. N. (with Sannuti, P.) Generation of symbolic network functions via exterior algebra. 1978 *IEEE International Symposium on Circuits and Systems (New York, 1978)*, pp. 190-194, *IEEE, New York*, 1978. (Authors' summary) **80b:94056** 94C99
- Puri, P. D. (with Nigam, A. K.) Balanced factorial experiments. II. *Comm. Statist. A—Theory Methods* 7 (1978), no. 6, 591-605. (J. A. John) **80c:62096** 62K15
- Puri, Prem S. A limit theorem for point processes with applications. *J. Appl. Probab.* 15 (1978), no. 4, 726-747. (D. J. Daley) **80a:60076** 60G55
- On certain problems involving nonidentifiability of distributions arising in stochastic modeling. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977)*, pp. 403-418, *Academic Press, New York*, 1979. (Izzet Sahin) **80j:60117** 60K10 (62N05, 62P10)
- (with Goldie, Charles M.) Poisson mixtures and quasi-infinite divisibility of distributions. *J. Appl. Probab.* 16 (1979), no. 1, 138-153. (F. W. Steutel) **80b:60028** 60E07
- Purkert, Walter (with vom Scheidt, Jürgen) Zum Mittelungsproblem bei stochastischen Eigenwertaufgaben. *Beiträge Anal. No. 10* (1977), 47-61. (A. T. Bharucha-Reid) **80b:60064** 60H99 (60H10)
- (with vom Scheidt, Jürgen) Randwertprobleme mit schwach korrelierten Prozessen als Koeffizienten. (English summary) *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 107-118, *Reidel, Dordrecht*, 1978. (Ludwig Arnold) **80b:60051** 60H10 (34F05)
- (with vom Scheidt, Jürgen) Stochastic eigenvalue problems for differential equations. *Rep. Math. Phys.* 15 (1979), no. 2, 205-227. (A. T. Bharucha-Reid) **80m:60071** 60H10 (34F05)
- Purnachandra Rao, V. (with Rao, K. Ranganatha) Optimal feedback control via block-pulse functions. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 372-374. (A. S. C. Sinha) **80f:93063** 93D15
- Pursley, Michael B. (with Hajek, Bruce E.) Evaluation of an achievable rate region for the broadcast channel. *IEEE Trans. Inform. Theory* 25 (1979), no. 1, 36-46. (G. Dueck) **80b:94020** 94A40
- Purushothaman, R. Fluctuating boundary layers in a rotating fluid with variable suction. *Quart. Appl. Math.* 36 (1978/79), no. 4, 428-433. (P. W. Duck) **80b:76009** 76D10 (35Q99)
- Purzitsky, Norman A cutting and pasting of noncompact polygons with applications to Fuchsian groups. *Acta Math.* 143 (1979), no. 3-4, 233-250. (C. MacLachlan) **80b:30045** 30F35 (20H10)
- Puscas, Elena M. Sur la géométrie différentielle d'un objet géométrique de classe 3. *Papers from the National Colloquium on Geometry and Topology (Univ. Timișoara, Timișoara, 1977)*, pp. 213-219, *Univ. Timișoara, Timișoara*, 1977. (Adrian C. Alba) **80a:53041** 53B99
- Pushkin, S. V. See Puškin, S. V.
- Puškarev, O. A. (with Omarov, T. B.) On properties of inhomogeneous cosmological Tolman models. (Russian. English summary) *Akad. Nauk Kazah. SSR Trudy Astrfiz. Inst.* 33 (1979), 3-9, 87. (Authors' summary) **80c:83043** 83F05 (85A40)
- Puškarev, T. M. The problem of the conjugation of nonstationary linear differential equations with a parameter. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 9, 1706-1709, 1727. (M. Tvrdý) **80d:34085** 34G10
- Puškín, S. V. (with Kazakov, D. I.; Pervulin, V. N.) Invariant renormalization for theories with nonlinear symmetry. (Russian. English summary) *Teoret. Mat. Fiz.* 31 (1977), no. 2, 169-176. (I. Ju. Kriv'skii) **80b:81056** 81E15 (35A30)
- (with Kazakov, D. I.; Pervulin, V. N.) An invariant renormalization method for nonlinear realisations of dynamical symmetries. *J. Phys. A* 11 (1978), no. 10, 2093-2105. (Jouko Mickelsson) **80j:81051** 81E15 (22E70)
- (with Isaev, G. V.; Pervulin, V. N.) Dynamical affine symmetry and renormalisation in gravity. *J. Phys. A* 12 (1979), no. 9, 1499-1506. (Kenneth Dunn) **80b:83020** 83C45 (58A99)
- Püst, L. Identification of dynamical systems. (Russian. English summary) *Adv. in Mech.* 1 (1978), no. 1-2, 183-205. (Authors' summary) **80b:93142** 93E10
- Pustylnik, E. I. Dual Banach pairs. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 3, 603-609, 693. (Jóran Bergh) **80g:46061** 46M35 (46E30)
- Pustylnikov, L. D. Unbounded growth of the action variable in certain physical models

- and the problem of stochasticity. (Russian) *Dokl. Akad. Nauk SSSR* **241** (1978), no. 5, 1035–1038. (G. Lassner) **80j:70013** 70K20
- Pustyl'nikov, L. M. Basic integral equations in problems of mobile control. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 2, 307–310. (A. Halanay) **80i:93046** 93C99 (49B99)
- Pusz, W. (with Woronowicz, S. L.) Form convex functions and the WYDL and other inequalities. *Lett. Math. Phys.* **2** (1977/78), no. 6, 505–512. (S. Kurepa) **80j:47019** 47A60 (47B15)
- Why the KMS states? *Mathematical problems in theoretical physics (Proc. Internat. Conf., Univ. Rome, Rome, 1977)*, pp. 433–435, *Lecture Notes in Phys.*, **80**, Springer, Berlin, 1978. (John C. Wolfe) **80b:82036** 82A35 (46L60)
- van der Put, M. Finite-dimensional normed  $K$ -vector spaces. *Proceedings of the Conference on  $p$ -adic Analysis (Nijmegen, 1978)*, pp. 143–160, *Report*, 7806, Katholieke Univ., Nijmegen, 1978. (E. Beckenstein) **80f:46064** 46P05 (12B40, 47D10)
- Pata, Mohan S. (with Chung, Lung O.; Luh, Jiang) Weakly scalar associative algebras. *Bull. Malaysian Math. Soc.* (2) **1** (1978), no. 2, 111–116. (R. A. Beauregard) **80d:17001** 17A30
- Subgroups of the power semigroup of a finite semigroup. *Canad. J. Math.* **31** (1979), no. 5, 1077–1083. (K. S. S. Namboripad) **80i:20043** 20M10
- (with Yaqub, Adil) Rings with a finite set of nonnilpotents. *Internat. J. Math. Math. Sci.* **2** (1979), no. 1, 121–126. (K. A. Byrd) **80b:16014** 16A44 (16A22)
- Quadratic semigroups on affine spaces. *Linear Algebra Appl.* **26** (1979), 107–121. (H. J. Weinert) **80g:20083** 20M99
- (with Nelson, James, Jr.) Word equations in a band of paths. *Pacific J. Math.* **82** (1979), no. 1, 189–196. (Fred W. Roush) **80i:20052** 20M20
- Puerman, Martin L. (with Shin, Moon Chirl) Modified policy iteration algorithms for discounted Markov decision problems. *Management Sci.* **24** (1977/78), no. 11, 1127–1137. (Uriel G. Rothblum) **80a:90146** 90C40
- (with Brumelle, Shelby L.) The analytic theory of policy iteration. *Dynamic programming and its applications (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 91–113, Academic Press, New York, 1978. (Mary W. Cooper) **80i:90097** 90C40
- (with Brumelle, Shelby L.) On the convergence of policy iteration in stationary dynamic programming. *Math. Oper. Res.* **4** (1979), no. 1, 60–69. (R. N. Kaul) **80k:90036** 90C39
- See also Dynamic programming and its applications, **80d:90002**
- Puinar, Mihai Un invariant centro-affine associé à quelques sous-variétés de l'espace euclidien. *Rec. Roumaine Math. Pures Appl.* **24** (1979), no. 4, 647–649. (P. Drăgăla) **80m:53005** 53A07
- Putnam, Alfred See Mac Lane, Saunders, **80k:01064**
- Putnam, C. R. Hyponormal operators and spectral multiplicity. *Indiana Univ. Math. J.* **28** (1979), no. 5, 701–709. (Kevin Clancey) **80j:47036** 47B20
- Hyponormal and essentially normal operators. *Proc. Roy. Soc. Edinburgh Sect. A* **83** (1979), no. 1–2, 123–132. (Kevin Clancey) **80j:47035** 47B20
- Putot, Claude (with Huy Duong Bui) Formulation, par équations intégrales, du problème d'une fissure plane débouchante à la surface libre. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 4, A311–A314. (Editors) **80e:45004** 45F15 (73M05)
- Pych-Taborska, Paulina Some approximation properties of Bernstein and Kantorovich polynomials. *Funct. Approx. Comment. Math.* **6** (1978), 57–67. (D. Leviatan) **80j:41026** 41A25 (41A10)
- On the degree of pointwise convergence of some singular integrals. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* **2** (1979), 289–299. (W. R. Madych) **80k:42006** 42A10 (41A25, 41A35)
- Pyctor, Helena M. Benjamin Peirce's *Linear associative algebra*. *Isis* **70** (1979), no. 254, 537–551. (H. C. Kennedy) **80j:01022** 01A55 (15–03, 15A99)
- Pymonov, Lewis Physics in the shadow of mathematics: the Göttingen electron-theory seminar of 1905. *Arch. Hist. Exact Sci.* **21** (1979/80), no. 1, 55–89. (H. Tredor) **80k:01046** 01A60 (83–03)
- Pytchev, G. N. (with Šokolov, I.) A property of a singular Cauchy-type integral of special type and its use in obtaining a priori estimates of moduli of the derivatives of the required solution of a singular integro-differential equation. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadzhik. SSR* **21** (1978), no. 11, 12–16. (K. Seitz) **80g:45014** 45J05
- Pytlarinos, Othón Sur certains types de congruences de droites, dont les paramètres distributeurs principaux sont liés par une relation. (Greek summary) *Prakt. Akad. Athénōn* **50** (1975), 347–376 (1976). (Josef Vala) **80k:53018** 53A25
- Sur trois types de congruences de droites, pourvus d'une même propriété. (Greek summary) *Prakt. Akad. Athénōn* **52** (1977), 426–452 (1978). (Josef Vala) **80k:53019** 53A25
- Pym, John Footnote to a paper of J. W. Baker and P. Milnes: "The ideal structure of the Stone-Čech compactification of a group" (*Math. Proc. Cambridge Philos. Soc.* **82** (1977), no. 3, 401–409). *Math. Proc. Cambridge Philos. Soc.* **85** (1979), no. 2, 315. (C. Chou) **80d:22002** 22A15
- Pyragas, K. A. (with Ždánov, V. I.; Aleksandrov, A. N.; Pyragas, L. E.) Some nonlinear effects in the relativistic two-body problem. *Astrophys. and Space Sci.* **57** (1978), no. 2, 303–320. (Authors' summary) **80e:83020** 83C35 (34C15)
- Pyragas, L. E. (with Pyragas, K. A.; Ždánov, V. I.; Aleksandrov, A. N.) Some nonlinear effects in the relativistic two-body problem. *Astrophys. and Space Sci.* **57** (1978), no. 2, 303–320. (Authors' summary) **80e:83020** 83C35 (34C15)
- Pyk'Janov, A. M. Perturbation of the poles of the scattering operator for a system of Maxwell equations. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 11, 2052–2059, 2109. (J. Wiesner) **80f:81022** 81C05 (35Q20)
- Poles of the "exterior domain" of the scattering operator for the system of Maxwell equations. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 3, 465–478, 572. (Boris Pavlov) **80i:35146** 35P25
- Pyžikova, N. V. Computation of the Ljapunov exponents for solutions of imbeddable systems. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* **1978**, no. 2, 23–26, 93. (Gapurulla Dairov) **80d:34060** 34D05
- al-Qazwini See Tee, Garry J., **80d:01009b**
- nguyen Q. Duc See Nguyen Q. Duc
- Qi, Ming Gao Application of continued fractions to matching the number of teeth in gears. (Chinese) *Knowledge Practice Math.* No. 3 (1978), 21–28. (Yi-Yuan Yu) **80a:70003** 70B15 (53A17)
- Qian, Min Ping Decomposition of a stationary Markov chain into a detailed balance part (reversibility) and a cyclic part. (Chinese) *Kexue Tongbao* **24** (1979), no. 9, 389–390. (Editors) **80g:82051** 82A70 (60J10)
- Qin, Yuan Xun Periodic solutions of Riccati's equation with periodic coefficients. (Chinese. English summary) *Kexue Tongbao* **24** (1979), no. 23, 1062–1066. (Lu-San Chen) **80m:34024** 34B30 (93D05)
- Qu, Chao Chun Distribution of the electric potential of a point source in azimuthally heterogeneous media. (Chinese) *Acta Math. Appl. Sinica* **1** (1978), no. 4, 300–311. (Tuan W. Chen) **80e:78013** 78A30
- Quaback, Hartwig See Vorobiev, M. M., **80k:10008**
- Quach thi Cẩm Vã Polynôme d'Alexander des noeuds fibrés. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 6, A375–A377. (Author's summary) **80j:57003** 57M25 (20F99)
- Quackenbush, Robert W. Sheffer quasigroups. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1978)*, pp. 439–443, *Congress. Numer., XXII, Utilitas Math., Winnipeg, Man., 1979*, (V. Sathyabhama) **80b:20106** 20N05
- Pseudovarieties of finite algebras isomorphic to bounded distributive lattices. *Discrete Math.* **28** (1979), no. 2, 189–192. (Maurizio Fattorosi-Barnaba) **80i:08007** 08C99
- Quade, C. Richard Development of canonical transformations from Hamilton's principle. *Amer. J. Phys.* **47** (1979), no. 6, 535–538. (Author's summary) **80d:70031** 70H05 (49C05, 58F05)
- Quadling, D. A. Last words on adventurous angles. *Math. Gaz.* **62** (1978), no. 421, 174–183. (H. R. Müller) **80a:51011** 51M15
- Quadri, Muriza A. On a generalization of Lie rings of simple associative rings. *Math. Japon.* **23** (1978/79), no. 4, 375–379. (R. L. Tangeman) **80d:17002** 17A40
- Quaisser, Erhard (with Klotzke, B.) ★Nichteuklidische Geometrie. Eine Einführung. Studienbücherei. Mathematik für Lehrer, 17. VEB Deutscher Verlag der Wissenschaften, Berlin, 1978. 238 pp. (L. W. Szczerba) **80i:51001** 51–01
- Zu metrischen affinen Ebenen unter endlichem Aspekt. (Russian and English summaries) *Wiss. Z. Pädagog. Hochsch. "Karl Liebknecht" Potsdam* **22** (1978), no. 1, 71–78. (A. Barlotti) **80b:51014** 51F99
- Spiegelungsgeometrische Darstellungen der desarguesschen Ebenen mit Fano-Axiom. (Russian and English summaries) *Wiss. Z. Pädagog. Hochsch. "Karl Liebknecht" Potsdam* **23** (1979), no. 1, 47–51. (G. Ewald) **80g:51007** 51D15 (51F15)
- Quandale, Philippe (with Nussbaumer, Henri J.) Fast computation of discrete Fourier transforms using polynomial transforms. *IEEE Trans. Acoust. Speech Signal Process.* **27** (1979), no. 2, 169–181. (Authors' summary) **80e:94003** 94A11
- Quandt, Richard E. (with Ramsey, James B.) Estimating mixtures of normal distributions and switching regressions. With comments and a rejoinder by the authors. *J. Amer. Statist. Assoc.* **73** (1978), no. 364, 730–752. (N. Giri) **80a:62040** 62F10 (62J05)
- nguyen-Quang-Do Thong See Nguyen-Quang-Do Thong
- Quarternio, Alfio Error estimates for the assumed stresses hybrid methods in the approximation of 4th-order elliptic equations. (French summary) *RAIRO Anal. Numér.* **13** (1979), no. 4, 355–367. (Author's summary) **80i:65135** 65N99
- Quattrocchi, Pasquale (with Heise, Werner) Survey on sharply  $k$ -transitive sets of permutations and Minkowski- $m$ -structures. *Atti Sem. Mat. Fis. Univ. Modena* **27** (1978), no. 1, 51–57 (1979). (A. Barlotti) **80m:51006** 51E25 (05B25, 20B20)
- ngô van Quê See Ngô van Quê
- Quebbemann, Heinz-Georg Schiefkörper als Endomorphismenringe einfacher Moduln über einer Weyl-Algebra. *J. Algebra* **59** (1979), no. 2, 311–312. (S. Elliger) **80i:16026** 16A39 (16A19, 16A65)
- Queffelec, Hervé Sur les ensembles de type  $S_{n,r}$ . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 3, A131–A133. (Authors' summary) **80m:43008** 43A46
- Quek, T. S. (with Yap, Leonard Y. H.) Multipliers vanishing on  $L_1(G)$  to a Lipschitz space. *J. Math. Anal. Appl.* **69** (1979), no. 2, 531–539. (Harald E. Krogstad) **80g:43009** 43A22
- Quéré, Alain (with Broy, M.; Wirsing, Martin; Finance, Jean-Pierre; Rémy, Jean-Luc) Methodical solution of the problem of ascending subsequences of maximum length within a given sequence. *Inform. Process. Lett.* **8** (1979), no. 5, 224–229. (From the introduction) **80e:68013** 68B05 (68E99)
- See also Livercy, C., **80k:68004**
- Querré, Julien Sur les anneaux complètement intégralement clos. *Séminaire d'Algèbre Paul Dubreil, 29ème année (Paris, 1975–1976)*, pp. 77–85, *Lecture Notes in Math.*, **586**, Springer, Berlin, 1977. (Alain Bouvier) **80d:13002** 13B20 (13F20)
- Intersections d'anneaux intégraux. II. *Séminaire d'Algèbre Paul Dubreil, 30ème année (Paris, 1976–1977)*, pp. 358–367, *Lecture Notes in Math.*, **641**, Springer, Berlin, 1978. (J. L. Mott) **80i:13021** 13G05 (14M10)
- Sur la clôture intégrale des anneaux intégraux noethériens. (English summary) *Bull. Sci. Math.* (2) **103** (1979), no. 1, 71–76. (C. P. L. Rhodes) **80e:13004** 13B20
- Quesada, J. Daniel Referential presuppositions and three-valued logic. (Spanish) *Teorema* **9** (1979), no. 1, 79–94. (Editors) **80m:03019** 03A05 (03B50)
- Quesenberry, C. P. On similarity and independence properties of composite EDF goodness of fit tests. *Comm. Statist. A—Theory Methods* **7** (1978), no. 8, 717–723. (A. N. Pettit) **80a:62030** 62F03
- (with Rincon-Gallardo, S.; O'Reilly, Federico J.) Conditional probability integral transformations and goodness-of-fit tests for multivariate normal distributions. *Ann. Statist.* **7** (1979), no. 5, 1052–1057. (N. Giri) **80k:62079** 62H15
- Quigg, C. (with Rosner, Jonathan L.) Quantum mechanics with applications to quarkonium. *Phys. Rep.* **56** (1979), no. 4, 167–235. (Editors) **80m:81020** 81C05 (81G25)
- Quigg, David L. On an integral equation arising in age-dependent branching processes. *J. Math. Anal. Appl.* **65** (1978), no. 2, 344–360. (Alan Agresti) **80a:60107** 60J80 (45D05)
- Quillen, Daniel Homotopy properties of the poset of nontrivial  $p$ -subgroups of a group. *Adv. in Math.* **28** (1978), no. 2, 101–128. (Kenneth S. Brown) **80k:20049** 20J99
- See also Bass, Hyman, **80c:01010**
- Quine, M. P. A functional central limit theorem for a generalized occupancy problem.



- Stochastic Process. Appl.* 9 (1979), no. 1, 109–115. (Lars Holst) **80j:60042** 60F17 (60C05)
- Quine, Willard Van Orman ★ *Mengenlehre und ihre Logik*. Ullstein Buch, 3532. Verlag Ullstein GmbH, Frankfurt, 1978. xv + 263 pp. ISBN 3-548-03532-9 (Editors) **80b:03075** 03E30 (04-01)
- See also Thiers, W., **80b:03006**
- Quinegeton, Joël (with Simon, Jean-Claude) Une technique de classification utilisant un balayage multidimensionnel de Peano. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 14, A655–A658. (Authors' summary) **80a:68109** 68G10
- Quinn, Frank Finite nilpotent group actions on finite complexes. *Geometric applications of homotopy theory* (Proc. Conf., Ecanston, Ill., 1977), I, pp. 375–407, Lecture Notes in Math., 657, Springer, Berlin, 1978. (Guido Mislin) **80i:55012** 55P60 (57S17)
- Quinn, M. D. Lagrange's theorem for weak functions of several variables. *Mathematika* **25** (1978), no. 1, 160–178. (A. Oleviskii) **80d:46070** 46F10 (58C20)
- Quintas, Louis V. (with Hell, Pavol) Partial joins and graphs with given group, order, and size. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1978), pp. 357–371, Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978. (Gareth A. Jones) **80b:05065** 05C25 (20B25)
- See also Conference: Combinatorial Mathematics, **80j:05003**
- Quiring, D. See Robertson, James B., **80k:28018**
- Quirós, M. (with León, J.; Ramírez Mittelbrunn, J.) Probabilistic interpretation, group contraction and the Galilean limit of relativistic quantum mechanics. (Italian and Russian summaries) *Nuovo Cimento B* (11) **46** (1978), no. 1, 109–120. (Lawrence P. Horwitz) **80a:81036** 81C40 (22E70)
- (with León, J.; Ramírez Mittelbrunn, J.) Group content of the Foldy-Wouthuysen transformation and the nonrelativistic limit for arbitrary spin. *J. Math. Phys.* **20** (1979), no. 6, 1068–1076. (Philip Huddleston) **80g:81026** 81C40 (22E70)
- (with Ramírez Mittelbrunn, J.) On the infinite momentum limit of relativistic elementary systems. *Lett. Nuovo Cimento* (2) **26** (1979), no. 18, 633–636. (From the text) **80k:83037** 83C99
- Khū Quoc Anh. See Khu Quoc Anh
- rauf Qureshi, M. A. See Rauf Qureshi, M. A.
- nguyen dinh Quyet. See Nguyen Dinh Quyet
- nguyen xuan Quynh. See Nguyen Xuan Quynh
- nguyen ho Quynh. See Nguyen Ho Quynh
- xuan Quynh Nguyen. See Xuan Quynh Nguyen
- wehrhahn R., Erich. See Wehrhahn R., Erich
- ten Raa, Thijs (with Baumol, William J.; Fischer, Dietrich) The price-iso return locus and rational rate regulation. *Bell J. Econom.* **10** (1979), no. 2, 648–658. (Wilhelm Gehrig) **80j:90026** 90A12
- Rabbat, Naguib B. (with Sangiovanni-Vincentelli, Alberto; Hsieh, Hsueh Y.) A multilevel Newton algorithm with macromodeling and latency for the analysis of large-scale nonlinear circuits in the time domain. *IEEE Trans. Circuits and Systems* **26** (1979), no. 9, 733–741. (Authors' summary) **80h:94047** 94C05
- Rabier, Patrick Résultats d'existence dans des modèles non linéaires de plaques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 10, A515–A518. (Author's summary) **80k:73051** 73K10
- Étude d'un type d'équation fonctionnelle non linéaire. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 11, A563–A566. (Author's summary) **80j:47085** 47H15 (26A51, 39B70)
- Rabin, Michael O. Digitalized signatures. *Foundations of secure computation* (Workshop, Georgia Inst. Tech., Atlanta, Ga., 1977), pp. 155–168, Academic Press, New York, 1978. (From the introduction) **80b:94017** 94A24 (68C25)
- Rabinović, I. M. See Reizaj, L.; et al., **80a:01042**
- Rabinović, L. M. The influence of soluble surface-active substances on the stability of liquid films and streams. (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* **1978**, no. 6, 26–33. (From the introduction) **80d:76024** 76D05
- Rabinović, M. I. Stochastic self-oscillations and turbulence. *Uspehi Fiz. Nauk* **125** (1978), no. 1, 123–168 (Russian); translated as *Soviet Phys. Uspekhi* **21** (1978), no. 5, 443–469. (P. J. Holmes) **80k:58076** 58F13 (34C35, 58F14, 58F15, 58F40, 76Fxx)
- (with Gaponov-Grehov, A. V.; Sapiro, M. F.) A possible mechanism for the stochasticization of pulsations of the radiation intensity of OQG. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* **19** (1978), no. 4, 125–136. (L. A. Bunimovich) **80b:78005** 78A40
- Rabinović, V. M. (with Ljascenko, M. Ja.) The two-sided Runge-Kutta method for numerical solution of the Cauchy problem for third-order differential equations. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 37 (1979), 92–102, 143–144. (Authors' summary) **80c:65152** 65L05
- Rabinović, V. S. The solvability of differential-difference equations on  $\mathbb{R}^n$  and in a half-space. (Russian) *Dokl. Akad. Nauk SSSR* **243** (1978), no. 5, 1134–1137. (V. V. Ivanov) **80b:35125** 35R10
- The Cauchy and Goursat problems for a class of nonhyppoelliptic pseudodifferential operators. (Russian) *Izv. Severo-Kavkaz. Nauch. Centra Vysš. Školy Ser. Estestv. Nauk.* **1979**, no. 1, 4–7, 104. (Author's summary) **80e:35067** 35S05
- Rabinović, Z. L. (with Višinskii, V. A.) Possible improvement of computer performance by increasing the speed of vector-matrix operations. *Kibernetika (Kiev)* **1979**, no. 1, 120–122 (Russian); translated as *Cybernetics* **15** (1979), no. 1, 142–147. (From the text) **80j:68022** 68B20 (68C05)
- Rabinovich, M. I. See Rabinović, M. I.
- Rabinovich, Z. L. See Rabinović, Z. L.
- Rabinovitch, I. Characteristics of minimal realizers. (French summary) *Problèmes combinatoires et théorie des graphes* (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 335–337, Colloques Internat. CNRS, 260, CNRS, Paris, 1978. (V. S. Krishnan) **80g:06001** 06A10
- (with Rival, Ivan) The rank of a distributive lattice. *Discrete Math.* **25** (1979), no. 3, 275–279. (Evelyn Nelson) **80f:06010** 06D05 (06A10)
- Rabinovitz, Moshe Closure properties and languages defined by bilinear automata. *J. Comput. System Sci.* **17** (1978), no. 3, 414–423. (W. Wechler) **80a:68098** 68F10 (68D15)
- Rabinowicz, Włodzimierz Utilitarianism and conflicting obligations. *Theoria* **44** (1978), no. 1, 19–23. (Akira Nakamura) **80j:03032** 03B45
- Rabinowitz, Joshua H. On monoidal transformations of coherent sheaves. *Proc. Amer. Math. Soc.* **74** (1979), no. 2, 389–390. (J. A. Morrow) **80g:32023** 32C45
- Rabinowitz, Paul H. A variational method for finding periodic solutions of differential equations. *Nonlinear evolution equations* (Proc. Sympos., Univ. Wisconsin, Madison, Wis., 1977), pp. 225–251, Publ. Math. Res. Center Univ. Wisconsin, 40, Academic Press, New York, 1978. (Charles C. Conley) **80b:34043** 34C25 (35B10, 58E05, 58F22)
- (with Benci, Vieri) Critical point theorems for indefinite functionals. *Invent. Math.* **52** (1979), no. 3, 241–273. (J. Dancs) **80i:58019** 58E05 (47H15, 58E30, 58F22)
- Rabinowitz, Philip On avoiding the singularity in the numerical integration of proper integrals. *BIT* **19** (1979), no. 1, 104–110. (Author's summary) **80c:65052** 65D30
- Rabitz, Herschel (with Hwang, Jenn Tai) The Green's function method of sensitivity analysis in quantum dynamics. *J. Chem. Phys.* **70** (1979), no. 10, 4609–4621. (Authors' summary) **80b:81064** 81D99 (35Q99, 93B35)
- Rabl, Karl Über die Koinzidenzgebilde von linearen Zweibilderverfahren für den  $n$ -dimensionalen Raum. I. Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II **187** (1978), no. 4, 197–218. (O. Bottema) **80b:51013** 51N05
- Raboin, Pierre Le problème du  $\bar{\partial}$  sur un espace de Hilbert. *Séminaire Pierre Lelong-Henri Skoda (Analyse), Année 1976/77*, pp. 214–227, Lecture Notes in Math., 694, Springer, Berlin, 1978. (Jacques Vauthier) **80g:32035** 32F20 (46G20)
- Application de la théorie de la mesure en dimension infinie à la résolution de l'équation  $\bar{\partial}$  sur un espace de Hilbert. *Vector space measures and applications* (Proc. Conf., Univ. Dublin, Dublin, 1977), I, pp. 356–367, Lecture Notes in Math., 644, Springer, Berlin, 1978. (Jacques Vauthier) **80g:32034** 32F20 (46G20)
- The  $\bar{\partial}$  equation on a Hilbert space and some applications to complex analysis on infinite dimensional vector spaces. *Advances in holomorphy* (Proc. Sem. Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977), pp. 713–734, North-Holland Math. Studies, 34, North-Holland, Amsterdam, 1979. (Jacques Vauthier) **80g:32036** 32F20 (46G20)
- Le problème du  $\bar{\partial}$  sur un espace de Hilbert. (English summary) *Bull. Soc. Math. France* **107** (1979), no. 3, 225–240. (Jacques Vauthier) **80k:32052** 32F20 (47B15)
- Rabotnov, Ju. N. (with Zobnin, A. I.) A kinetic model of the propagation of a crack in polymer materials. (Russian) *Prikl. Meh.* **14** (1978), no. 2, 18–23, 140. (Authors' summary) **80c:73065** 73M05
- Rabuffo, I. (with Barut, A. O.; Vitiello, G.) On electrodynamics with internal fermionic excitations. *Lett. Nuovo Cimento* (2) **26** (1979), no. 8, 253–255. (P. Achuthan) **80b:81084** 81L05 (81G25)
- Raca, M. F. (with Kuznecov, Aleksandr Vladimirovich) A criterion for functional completeness in first-order classical predicate logic. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 3, 540–544. (P. Štěpánek) **80m:03026** 03B10
- Račaný, V. Computation of recursive programs. *Scripta Fac. Sci. Natur. UJEP Brunensis — Math.* **8** (1978), no. 10, 59–62. (D. Vaida) **80b:68008** 68B05
- Rachman, A. (with Dutheil, R.) Sur la théorie de la relativité restreinte dans la région du genre espace. (English summary) *Bull. Soc. Roy. Sci. Liège* **47** (1978), no. 5–8, 161–191. (Kishore Marathe) **80d:83083** 83A05
- Rack, H.-J. The explicit inverse of a quasi-tridiagonal matrix. *Matrix Tensor Quart.* **29** (1978/79), no. 1, 27–28, 26. (Author's summary) **80b:15016a** 15A09
- The explicit inverse of a quasi-tridiagonal matrix. *Matrix Tensor Quart.* **29** (1978/79), no. 2, 31–34. (Author's summary) **80b:15016b** 15A09
- Rackoff, Charles Relativized questions involving probabilistic algorithms. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing* (San Diego, Calif., 1978), pp. 338–342, ACM, New York, 1978. (G. Wechsung) **80b:68056** 68C25
- cehan-Racoviță, M. See Cehan-Racoviță, M.
- Raczka, Ryszard (with Balaban, T.) An alternative approach to constructive  $\lambda\phi_4^4$  quantum field theory. *Mathematical physics and physical mathematics* (Proc. Internat. Sympos., Warsaw, 1974), pp. 203–228, Math. Phys. and Appl. Math., 2, Reidel, Dordrecht, 1976. (From the introduction) **80k:81079** 81E10 (81M05)
- (with Budini, Paolo; Furlan, P.) A possible geometrical origin of isotopic symmetry group in strong interactions. *Hadronic J.* **1** (1978), no. 5, 1364–1382. (L. E. H. Trainor) **80a:81103** 81G20 (22E70)
- Nonperturbative construction of nonrenormalizable models of quantum field theory in four-dimensional space-time. *Symposium on Mathematical Methods in the Theory of Elementary Particles* (Liblice, 1978). *Czechoslovak J. Phys. B* **29** (1979), no. 1, 99–106. (Author's summary) **80k:81117** 81E15 (58E15)
- (with Budini, Paolo; Furlan, P.) Weyl and conformal covariant field theories. (Italian and Russian summaries) *Nuovo Cimento A* (11) **52** (1979), no. 2, 191–246. (G. R. Allcock) **80k:81123** 81E99 (53A30)
- (with Budini, Paolo; Furlan, P.) Possible origin of isotopic spin from extended conformal symmetry. *Phys. Lett. B* **81** (1979), no. 1, 15–18. (Eckehard W. Mielke) **80g:81073** 81G20 (22E70, 81G05)
- (with Flato, Moshe) Parity, charge-conjugation, and time-reversal violation in models of relativistic quantum field theory. *Phys. Rev. D* (3) **21** (1980), no. 2, 341–351. (Authors' summary) **80k:81127** 81E99 (81M05)
- See also *Mathematical physics and physical mathematics*, **80i:00006**
- Raczynski, S. On nonconvex control in a separable Banach space. (Russian summary) *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* **9** (1980), no. 2, 121–132. (T. I. Seidman) **80m:49031** 49E10 (34A60)
- Radeva, V. A. (with Monastyrnyi, P. L.) On the question of a complete estimate of computational error in the orthogonal differential double sweep method. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 4, 30–36, 140. (Authors' summary) **80g:65096** 65L10
- Radder, A. C. On the parabolic equation method for water-wave propagation. *J. Fluid Mech.* **95** (1979), no. 1, 159–176. (G. A. Nariboli) **80b:76017** 76B15
- Radenović, Stojan Sur un type de la réflexivité d'espaces localement convexes. *Publ. Inst. Math. (Beograd) (N.S.)* **24**(38) (1978), 133–137. (H. Hogbe-Niend) **80j:46010** 46A25
- Sur deux classes d'espaces localement convexes. *Publ. Inst. Math. (Beograd) (N.S.)* **24**(38) (1978), 138–142. (T. Husain) **80c:46005** 46A07
- Sur une propriété de permanence de certaines classes d'espaces localement convexes. *Publ. Inst. Math. (Beograd) (N.S.)* **25**(39) (1979), 143–147. (K. Floret) **80i:46004** 46A07

- Sur les espaces tonnels et bornologiques. *Publ. Inst. Math. (Beograd) (N.S.)* 25(39) (1979), 149-152. (H. Hogbe-Nlend) 80b:46009 46A20 (46A09)
- Rademacher, F. J.** (with Möhring, R.) Profiles and homomorphisms. *First Symposium on Operations Research (Univ. Heidelberg, Heidelberg, 1976)*, Teil 3, pp. 88-112, *Operations Research Verfahren, XXVII*, Hain, Königstein, 1977. (Authors' introduction) 80b:90059 90B10 (06B99)
- (with Billstein, N.) Time-cost optimization. *First Symposium on Operations Research (Univ. Heidelberg, Heidelberg, 1976)*, Teil 3, pp. 274-294, *Operations Research Verfahren, XXVII*, Hain, Königstein, 1977. (Kenneth D. Shere) 80b:90054 90B10 (90C35)
- Radford, D. J.** (with Klotz, A. H.) Geometric properties of Dirac fields in a Riemannian space-time. *J. Phys. A* 12 (1979), no. 8, 1205-1214. (Authors' summary) 80c:83040 83C99 (53C80)
- Radford, David E.** (with Newman, Kenneth) The cofree irreducible Hopf algebra on an algebra. *Amer. J. Math.* 101 (1979), no. 5, 1025-1045. (Mitsuhiro Takeuchi) 80a:16017 16A24
- Embedding commutative irreducible Hopf algebras into cofree irreducible Hopf algebras. *Comm. Algebra* 7 (1979), no. 12, 1211-1243. (R. G. Larson) 80m:16006 16A24 (14L17)
- When pro-affine monoid schemes are group schemes. *J. Algebra* 57 (1979), no. 2, 497-501. (Andy R. Magid) 80d:14025 14L25 (16A24)
- A natural ring basis for the shuffle algebra and an application to group schemes. *J. Algebra* 58 (1979), no. 2, 432-454. (E. J. Taft) 80b:16016 16A24 (14L15)
- Radhakrishna, A.** (with Bhandari, M. C.) On lattice ordered near-rings. *Pure Appl. Math. Sci.* 9 (1979), no. 1-2, 1-6. (Günter Pilz) 80d:16023 16A76 (06F25)
- Radhakrishna, L.** (with Bhasale, D. R.) On the Fermi propagation and Lie propagation of tensors in general relativity. *Proceedings of the International Symposium on Relativity and Unified Field Theory (Calcutta, 1975-1976)*, pp. 265-268, *Bose Inst. Phys. Sci., Univ. Calcutta, Calcutta, 1978*. (L. K. Patel) 80a:83047 83C55 (58F06)
- (with Khade, V. D.) Nijenhuis tensor and electrodynamics. *Proceedings of the International Symposium on Relativity and Unified Field Theory (Calcutta, 1975-1976)*, pp. 283-286, *Bose Inst. Phys. Sci., Univ. Calcutta, Calcutta, 1978*. (L. K. Patel) 80a:83044 83C55 (53B50)
- Radhakrishnan Rao, C.** See Rao, C. Radhakrishnan
- Radin, Charles** (with Simon, Barry) Invariant domains for the time-dependent Schrödinger equation. *J. Differential Equations* 29 (1978), no. 2, 289-296. (Teruo Ikebe) 80j:35078 35P25 (81C05)
- Radiokhin, V. T.** See Radjuhin, V. T.
- Radi Saleh, Ahmed Salvat Abd el'-Radl**
- Radjabalipour, Mehdi** Decomposable operators. *Bull. Iranian Math. Soc. No. 9* (1978), 1L-49L. (R. G. Bartle) 80d:47059 47B40 (47A15)
- Equivalence of decomposable and 2-decomposable operators. *Pacific J. Math.* 71 (1978), no. 1, 243-247. (F.-H. Vasilescu) 80c:47032 47B40
- (with Fong, Che Kao; Nordgren, Eric A.; Radjavi, Heydar; Rosenthal, Peter) Extensions of Lomonosov's invariant subspace theorem. *Acta Sci. Math. (Szeged)* 41 (1979), no. 1-2, 55-62. (R. G. Bartle) 80d:47006 47A15
- (with Jafarian, Ali A.) Transitive algebra problem and local resolvent techniques. *J. Operator Theory* 1 (1979), no. 2, 273-285. (R. G. Bartle) 80m:47003 47A15 (47B20, 47B40)
- Radjakin, N. K.** Normal oscillations of a revolving liquid drop. (Russian) *Izv. Akad. Nauk SSSR Meh. Zhidk. Gaza* 1979, no. 4, 78-87. (Author's summary) 80j:76028 76D99
- Radjavi, Heydar** (with Fong, Che Kao; Nordgren, Eric A.; Radjabalipour, Mehdi; Rosenthal, Peter) Extensions of Lomonosov's invariant subspace theorem. *Acta Sci. Math. (Szeged)* 41 (1979), no. 1-2, 55-62. (R. G. Bartle) 80d:47006 47A15
- (with Hadwin, Donald W.; Nordgren, Eric A.; Rosenthal, Peter) Most similarity orbits are strongly dense. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 250-252. (Lawrence Fialkow) 80d:47029 47A65 (47A15)
- Radjuhin, V. T.** (with Ostrovskii, E. I.) On a one-dimensional Markov process's getting beyond a curve of a special form. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 2, 100-103, 221 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 2, 77-80 (1979). (Authors' summary) 80b:60095 60J25
- Radkevich, E. V.** (with Oleinik, O. A.) The method of introducing a parameter for the investigation of evolution equations. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 5(203), 7-76, 237. (L. Cattabriga) 80d:35074 35K22 (35-02)
- Radmore, P. M.** The Schrödinger equation with an anharmonic oscillator potential. *J. Phys. A* 13 (1980), no. 1, 173-179. (Evans M. Harrell) 80m:81021 81C05 (34B25)
- Radner, Roy** (with Arrow, Kenneth J.) Allocation of resources in large teams. *Econometrica* 47 (1979), no. 2, 361-392. (Roman Słowiński) 80c:90075 90B30 (90A16)
- Rational expectations equilibrium: generic existence and the information revealed by prices. *Econometrica* 47 (1979), no. 3, 655-678. (Author's summary) 80f:90029 90A14
- Radó, F.** (with Orbán, B.) Nomograms with minimal global error. *Anal. Numer. Théor. Approx.* 6 (1977), no. 2, 163-170. (Zbl 384:65065) 80f:65151 65S05
- A generalization of the valued vector space. *Mathematica (Cluj)* 19(42) (1977), no. 2, 203-209 (1978). (Witold Wiegław) 80c:12029 12J99 (46A99)
- On the definition of skew-fields. *Arch. Math. (Basel)* 32 (1979), no. 5, 441-444. (Steve Light) 80b:16026 16A39 (16A76)
- Radó, Richard** Problems in combinatorial set theory. *Higher combinatorics (Proc. NATO Advanced Study Inst., Berlin, 1976)*, pp. 69-78, *NATO Adv. Study Inst. Ser., Ser. C: Math. and Phys. Sci.*, 31, Reidel, Dordrecht, 1977. (E. C. Milner) 80g:04006 04A20
- (with Artztner, Philippe) A theorem on flow in directed graphs. *J. London Math. Soc.* (2) 19 (1979), no. 1, 187-191. (I. Fennell Burns) 80c:90033 90B10
- Radoux, Christian** Divisibilité de  $\alpha_n(p)$  par un nombre premier. *Séminaire Delange-Pisot-Poitou, 19e année (1977/78), Théorie des nombres, Fasc. 1, Exp. No. 3, 5 pp., Secrétariat Math., Paris, 1978*. (J. B. Kelly) 80b:10064 10H25
- Rada, N.** (with Brezuleanu, A.) Excellent rings and good separation of the module of differentials. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 10, 1455-1470. (Jean Marot) 80b:13029 13N05 (13H99)
- Rădulescu, Marcel** (with Frătilă-Oancea, Elena) Sur l'aspect informationnel des intervalles de confiance du point d'intersection des deux droites de régression. *Mathematica (Cluj)* 19(42) (1977), no. 2, 189-193 (1978). 80a:62106 62J05 (62F25)
- (with Frătilă-Oancea, Elena) Une méthode statistique extrême pour déterminer la valeur d'un paramètre inconnu. (English summary) *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 8, 1187-1190. (H. L. Harter) 80c:62048 62F25
- (with Frătilă-Oancea, Elena) L'information associée à une région de confiance. (Romanian summary) *Studia Univ. Babeş-Bolyai Math.* 23 (1978), no. 1, 37-40. 80a:62105 62J05 (62F25)
- Un problème de programmation paramétrique. (Romanian summary) *Studia Univ. Babeş-Bolyai Math.* 23 (1978), no. 2, 16-25. (Andrew R. Conn) 80c:90108 90C31
- Radyno, Ja. V.** Linear differential equations in locally convex spaces. III. Examples of regular operators. (Russian) *Differentsial'nye Uravneniya* 13 (1977), no. 10, 1796-1803, 1907. (G. Marinescu) 80b:46062 46G05 (35R15)
- (with Antonevič, A. B.; Knjazez, P. N.) ★ Задачи и упражнения по функциональному анализу. (Russian) (Problems and exercises in functional analysis) Edited by S. G. Krein. "Vys' Škola", Minsk, 1978. 205 pp. (F. Smithies) 80f:46001 46-01 (47-01)
- (with Erugin, N. P.; Bogdanov, Ju. S.; Vuvunikan, Ju. M.; Ivanov, E. A.; Krylov, V. I.; Kudrjavec, L. D.; Uspenskii, S. V.) Sergei L'vovič Sobolev (on the occasion of his seventieth birthday). (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 10, 1907-1910. (Editors) 80c:01013 01A70 (35-03, 65-03, 70-03)
- Radzabov, B. A.** (with Verdiev, I. A.; Kerimov, G. A.) On the theory of representations of the de Sitter group SO(3, 2). (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 7, 13-16. (Kishore Marathe) 80c:22025 22E70 (81C40)
- (with Verdiev, I. A.; Kerimov, G. A.) On the theory of Wigner coefficients for the de Sitter group. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 8, 19-21. (Jifi Patera) 80c:22023 22E70
- (with Verdiev, I. A.; Kerimov, G. A.) Wigner coefficients of the de Sitter group SO(4, 1). (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 1, 3-7. (Wayne J. Holman, III) 80j:22029 22E70 (81C40)
- Radzabov, N. R.** Elementary solutions and integral representations for a class of differential equations with  $n$  singular hyperplanes. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 10, 1832-1843, 1917-1918. (Author's summary) 80d:35025 35C15 (35J99)
- Uniqueness theorems for the solutions to a problem of Dirichlet or Neumann type for a second-order general singular equation of elliptic type. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 1, 14-19. (K. Seitz) 80g:35047 35J25
- See also *Differential and Integral Equations*, 80b:35004
- Radziśewski, G. V.** The completeness of part of the root vectors of the operator pencil  $L(\lambda) = I - \lambda^{-k}B - \lambda^{-l}A$ . (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 1(205), 241-242. (N. Tita) 80m:47016 47A70
- Radzik, T.** (with Orłowski, K.) A game of timing with  $k$  noisy and  $n$  silent actions versus one noisy action. (Polish summary) *Zastos. Mat.* 16, no. 3, 405-414 (1979). (From the introduction) 80m:93077 93E03
- Radzikowski, Jerzy** Propriétés asymptotiques des solutions d'un système de deux équations différentielles linéaires homogènes du premier ordre. *Demonstratio Math.* 11 (1978), no. 1, 83-103. (N. Onuchic) 80m:34047 34D05
- Radziszewski, Bogusław** Investigation of the stability of motion on the basis of the "best" Liapunov function. (Polish) *Stability and sensitivity in mechanical systems (Lectures Qualitative Investigations in Nonlinear Discrete Systems, Jabłonna, 1978)* (Polish), pp. 80-171. *Ossolineum, Wrocław, 1978*. (M. M. Konstantinov) 80i:34080 34D20 (45J05, 45M10)
- Radziszowski, Stanisław** Programmability and P=NP conjecture. *Fund. Inform.* (4) 2 (1978), no. 1, 71-82. (Editors) 80c:68046 68C25
- Rae, A.** (with Syed, Z. H.) Sylow subgroups in a pair of locally finite groups. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 9, 288-291. (M. J. Tomkinson) 80b:20040 20E25
- Rae, Donald S.** (with Smith, Paul J.; Manderscheid, Ronald W.; Silbergeld, Sam) Exact and approximate distributions of the chi-square statistic for equiprobability. *Comm. Statist. B—Simulation Comput.* 8 (1979), no. 2, 131-149. (Authors' summary) 80c:62023 62E15 (62G10)
- Raeburn, Iain** (with Phillips, John) Perturbations of  $C^*$ -algebras. II. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 1, 45-48. (Horst Behncke) 80a:46037 46L05
- (with Phillips, John) Automorphisms of  $C^*$ -algebras and second Čech cohomology. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 3, 129-132. (Editors) 80c:46038 46L05 (46M20)
- $K$ -theory and  $K$ -homology relative to a  $\Pi_*$ -factor. *Proc. Amer. Math. Soc.* 71 (1978), no. 2, 294-298. (Jerome Kaminker) 80a:55005 55N15 (46L99, 46M20)
- On Toeplitz operators associated with strongly pseudoconvex domains. *Studia Math.* 63 (1978), no. 3, 253-258. (Nicholas P. Jewell) 80a:47041 47B35 (32F15)
- An implicit function theorem in Banach spaces. *Pacific J. Math.* 81 (1979), no. 2, 525-535. (Jürgen Leiterer) 80i:32016 32A99 (32E99, 58C15)
- Raefsky, A.** (with Vemuri, V.) On a new approach to parameter estimation by the method of sensitivity functions. *Internat. J. Systems Sci.* 10 (1979), no. 4, 395-407. (J. O'Reilly) 80c:93037 93B30
- (with Vemuri, V.) On a method of solving sensitive boundary value problems. *J. Franklin Inst.* 307 (1979), no. 4, 217-243. (Authors' summary) 80b:93124 93D15 (65L10)
- Raeva, M. B.** Resonance periodical trajectories of autonomous systems with polynomial  $G_{n,2}$  nonlinearities. I. (Bulgarian. English and Russian summaries) *Godišnik Visš. Učebn. Zaoed. Priložna Mat.* 12 (1976), no. 1, 109-123 (1978). (Author's summary) 80d:34049 34C25
- On resonance periodic trajectories of autonomous systems with polynomial  $G_{n,2}$  nonlinearities. II. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaoed. Priložna Mat.* 13 (1977), no. 1, 31-38 (1978). (Author's summary) 80d:34060 34C25
- Rafa, J.** (with Chwalczyk, F.; Włodarczyk, Edward) Propagation of three component nonstationary acoustic waves in layer of ideal liquid. I. Basic solution. (Polish and Russian summaries) *J. Tech. Phys.* 19 (1978), no. 4, 467-480. (A. Ishimaru) 80f:78032 78Q05



- Rafajlowicz, Ewaryst** (with Suflita, Zbigniew) Two-level computation technique for distributed system parameter identification using maximum likelihood approach. (Russian summary) *Systems Sci.* 4 (1978), no. 2, 129-137. (O. A. Sebakhy) 80a:93156 93E10 (93C40)
- Design of experiments for parameter identification of the static disturbed systems. (Russian summary) *Systems Sci.* 4 (1978), no. 4, 349-361. (Author's summary) 80a:93125 93E12
- Rafanski, Paweł** (with Weichert, Dieter) On minimum principles for elastic-plastic plates. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 26 (1978), no. 11, 945-950. (R. D. Bhargava) 80a:73025 73E99
- On the existence and uniqueness of solutions in plasticity. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 3, 125-130. (Author's summary) 80m:76048 73E99 (49H05)
- Rafanell, S. Z.** Fourier-Legendre series with nonnegative coefficients. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozh.* No. 31 (1979), 134-139, 169. (D. P. Gupta) 80m:42035 42C10
- Rafanelli, K.** (with Orenstein, S.) An extended particle with interacting constituents. I. Relativistic center of mass. (Italian summary) *Nuovo Cimento A* (11) 48 (1978), no. 2, 227-234. (Authors' summary) 80a:70019a 70F99 (83A05)
- (with Orenstein, S.) An extended particle with interacting constituents. II. Hamiltonian formulation. (Italian and Russian summaries) *Nuovo Cimento A* (11) 50 (1979), no. 4, 496-508. (Authors' summary) 80a:70019b 70F99 (70H99, 81M05, 83C99)
- Raffinetti, Richard C.** A simultaneous coordinate relaxation algorithm for large, sparse matrix eigenvalue problems. *J. Comput. Phys.* 32 (1979), no. 3, 403-419. (Author's summary) 80f:65042 65F15
- Rafsky, Lawrence C.** (with Klein, Roger W.; Sibley, David S.; Willig, Robert D.) Decisions with estimation uncertainty. *Econometrica* 46 (1978), no. 6, 1363-1387. (Authors' summary) 80b:90010 90A10 (62C99, 90A05)
- (with Friedman, Jerome H.) Multivariate generalizations of the Wald-Wolfowitz and Smirnov two-sample tests. *Ann. Statist.* 7 (1979), no. 4, 697-717. (B. Raja Rao) 80g:62026 62G10 (62H15)
- Raftery, Adrian** Un problème de ficelle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 14, A703-A705. (Author's summary) 80a:60019 60D05 (70C05)
- Ragade, Rammohan K.** See Applications of catastrophe theory in the behavioral and life sciences. 80a:92002 and Advances in fuzzy set theory and applications. 80a:00006
- Raghavan, T. E. S.** Some remarks on matrix games and nonnegative matrices. *SIAM J. Appl. Math.* 36 (1979), no. 1, 83-85. (C. B. Millham) 80a:90096 90D15
- Raghav Rao, D.** (with Mercado, R.) On designs balanced for residual effects. *Calcutta Statist. Assoc. Bull.* 26 (1977), no. 101-104, 121-122 (1978). (K. R. Shah) 80a:62123 62K99
- (with Federer, W. T.) Block total response as an alternative to the randomized response method in surveys. *J. Roy. Statist. Soc. Ser. B* 41 (1979), no. 1, 40-45. (K. Vijayan) 80m:62010 62D05
- Raghuwendra, V.** (with Joshi, S. R.) Fixed point techniques in the study of abstract measure integral equations. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 7, 1033-1046. (M. Z. Nashed) 80d:45063 45G10
- Raghuwathan, M. S.** Corrections to: "Vanishing theorems for cohomology groups associated to discrete subgroups of semisimple Lie groups" (Osaka J. Math. 3 (1966), 243-256). *Osaka J. Math.* 16 (1979), no. 1, 295-299. (S. Murakami) 80d:22015 22E40
- Ragimov, M. B.** (with Mahmudov, A. P.) On a study of a functional system. (Russian) *Functional analysis and its applications*, No. 3 (Russian), pp. 121-134, "Élm", Baku, 1978. (K. Lajko) 80a:39005 39B60
- (with Baskakov, A. G.) The spectral theory of Taylor and permutable operators in a Banach space and its applications. (Russian, Azerbaijani and English summaries) *Akad. Nauk Azerbaidzhan. SSR Dokl.* 34 (1978), no. 4, 19-21. (T. Andó) 80a:47004 47A10
- Spectral theory for mappings of topological spaces in the algebra of endomorphisms of a Banach space. (Russian, Azerbaijani and English summaries) *Akad. Nauk Azerbaidzhan. SSR Dokl.* 35 (1979), no. 3, 9-12. (F.-H. Vasilescu) 80a:47044 47D99
- Ragnedda, F.** (with Grimaldi, A.; Neri, Umberto) On a Cauchy problem (with  $L^p$  data) for the square of the heat operator. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 3, 552-559. (Maria Cinquini-Cibrario) 80a:35046 35K30 (35C15)
- Ragni, Marcello** (with Gori Cocchieri, Candida) Properties of functions with bounded second variation in the generalized sense. (Italian, English summary) *Rend. Istit. Mat. Univ. Trieste* 9 (1977), no. 1-2, 46-63 (1978). (Francesco Barbieri) 80a:26010 26A45 (49F25)
- Ragnisco, O.** (with Levi, D.) Extension of the spectral-transform method for solving nonlinear differential difference equations. *Lett. Nuovo Cimento* (2) 22 (1978), no. 17, 691-696. (Z. Janković) 80a:34092 34K05
- (with Bruchi, M.; Levi, D.) Evolution equations associated to the triangular-matrix Schrödinger problem solvable by the inverse spectral transform. (Italian and Russian summaries) *Nuovo Cimento A* (11) 45 (1978), no. 2, 225-237. (Authors' summary) 80a:34020 34B25 (35Q99)
- (with Bruchi, M.; Levi, D.) Discrete version of the modified Korteweg-de Vries equation with  $x$ -dependent coefficients. (Italian summary) *Nuovo Cimento A* (11) 48 (1978), no. 2, 213-226. (Authors' summary) 80a:35104 35Q20 (39A12)
- (with Bruchi, M.; Levi, D.) Discrete version of the nonlinear Schrödinger equation with linearly  $x$ -dependent coefficients. (Italian and Russian summaries) *Nuovo Cimento A* (11) 53 (1979), no. 1, 21-30. (Authors' summary) 80a:76021 76B25 (35Q20)
- Ragusa, V. V.** The formulation of a problem on the flow of an ideal fluid. (Russian) *Dinamika Splosh. Sredy No. 33 Nekotorye Problemy Mat. i Meh.* (1978), 76-83, 171. (Author's summary) 80f:76006 76B99
- Rahb, M.** (with del Junco, Andrés) Finitary codings and weak Bernoulli partitions. *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 259-264. (Nathaniel Friedman) 80a:28021 28D05
- (with Akcoglu, Mustafa A.; del Junco, Andrés) Finitary codes between Markov processes. *Z. Wahrsch. Verw. Gebiete* 47 (1979), no. 3, 305-314. (Richard Isaac) 80d:28043 28D20
- Rahimberdiyev, M. I.** (with Rozov, N. H.) Distribution of Ljapunov exponents in linear systems with periodic coefficients that are nearly constant in the mean. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 9, 1710-1714, 1727. (A. Somolinos) 80f:34043 34D05
- The relation of systems with exact mean value of the trace of the matrices to regular systems. (Russian) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1978, no. 5, 83-85, 95. (Author's summary) 80b:34065 34D99
- Rahimov, D. G.** (with Loginov, B. V.) The method of false perturbations for sharpening approximately given Jordan chains. (Russian) *Voprosy Vyisl. i Prikl. Mat. (Tashkent)* No. 52 (1978), 37-39, 154. (From the summary) 80a:47021 47A55
- Rahimov, I.** (with Badalbayev, I. S.) Bellman-Harris branching processes with nonhomogeneous immigration. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 9, 3-5. (Walter Warmuth) 80f:60073 60J80
- Critical Galton-Watson processes with increasing immigration. (Russian, Uzbek summary) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1978, no. 4, 22-27, 94. (E. Seneta) 80b:60113 60J80
- Rahimov, M.** Generalization of a theorem from optimal stability theory. (Russian, Turkmen summary) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* 1979, no. 1, 3-9. (S. H. Sirazdinov) 80m:93072 93D99
- Rahimov, R. M.** The singular integral over a system of intersecting nonsmooth contours. (Russian, Tajiki summary) *Dokl. Akad. Nauk Tadzhik. SSR* 22 (1979), no. 3, 159-163. (N. L. Vasilevskii) 80a:30040 30E20
- A Cauchy type integral along the boundary of a union of regions and the jump problem. (Russian, Tajiki summary) *Dokl. Akad. Nauk Tadzhik. SSR* 22 (1979), no. 4, 219-223. (F. I. Ibragimov) 80m:30046 30E20
- Rahmull, R. T.** Sharpening and inversion of some inequalities for convex and concave sequences. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 6, 840-845, 863. (Peter Bullen) 80f:26013 26D15
- Rahman, Miran** A positive kernel for Hahn-Eberlein polynomials. *SIAM J. Math. Anal.* 9 (1978), no. 5, 891-905. (Y. L. Luke) 80g:33023 33A65
- (with Hoare, M. R.) Distributive processes in discrete systems. *Phys. A* 97 (1979), no. 1, 1-41. (Steven M. Moore) 80i:82018 82A15
- An elementary proof of Dunkl's addition theorem for Krawtchouk polynomials. *SIAM J. Math. Anal.* 10 (1979), no. 2, 438-445. (G. Gasper) 80j:33022 33A65
- Rahman, Q. I.** (with Gervais, R.; Schneider, G.) Simultaneous interpolation and approximation by entire functions of exponential type. *Numerische Methoden der Approximationstheorie, Band 4 (Meeting, Math. Forschungsinstit., Oberwolfach, 1977)*, pp. 145-153, *Internat. Schriftenreihe Numer. Math.*, 42, Birkhäuser, Basel, 1978. (Marc Duc-Jacquet) 80c:65038 65D15 (30D15, 65E05)
- (with Gervais, R.) An extension of Carlson's theorem for entire functions of exponential type. II. *J. Math. Anal. Appl.* 69 (1979), no. 2, 585-602. (A. Bailliet) 80b:30022 30D20
- Rahmanov, P. A.** Propagation of elastoplastic displacement waves with lagging fluctuation. (Russian) *Investigation of questions in the theory of elasticity and plasticity*, No. 3 (Russian), pp. 91-102, "Élm", Baku, 1978. (J. A. König) 80a:73045 73E99
- Rahmat-Samii, Y.** (with Mitra, Raj) A spectral domain analysis of high frequency diffraction problems. *Electromagnetic scattering*, pp. 121-183, Academic Press, New York, 1978. (J. A. Bennett) 80a:78026 78A45 (35P25)
- (with Mitra, Raj; Ko, W. L.) Solution of electromagnetic scattering and radiation problems using a spectral domain approach—a review. *Wave Motion* 1 (1979), no. 2, 95-106. (Authors' summary) 80a:78027 78A40
- Rahmatullina, L. F.** The Green operator and the regularization of linear boundary value problems. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 3, 425-435, 571-572. (M. K. Grammatikopoulos) 80j:34090 34K10
- Rahmy, E.** (with Kátai, Imre) Inversion of block Toeplitz and Hankel matrices. *Publ. Math. Debrecen* 26 (1979), no. 3-4, 139-147. (B. Levinger) 80m:65020 65F05 (15A09)
- Rahula, M. O.** Orthogonal invariants of an immersion and a submersion. (Russian) *Ukrain. Geom. Sb. No. 21* (1978), 111-120, 4. (V. Oproiu) 80d:53037 53C42
- Rahunkova, I.** (with Kiguradze, I. T.) Solvability of a nonlinear problem of Kneser's type. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 10, 1754-1765, 1916. (Š. Schwabik) 80m:34015 34B15
- The Kneser problem for a system of nonlinear ordinary differential equations. (Russian, Georgian and English summaries) *Sobh. Akad. Nauk Gruzin. SSR* 94 (1979), no. 3, 545-548. (Author's summary) 80m:34009 34A34
- Rai, A.** (with Gaur, M.; Ram, R. D.) Propagation of weak MHD discontinuities in an optically thin medium. *Acta Phys. Acad. Sci. Hungar.* 45 (1978), no. 1, 9-14 (1979). (Magdi M. Shoucri) 80d:76104 76W05 (35Q99, 76E05)
- Rai, L. N.** (with Singh, T.) On spherically symmetric solutions of a scalar-tensor theory of gravitation in a Lyra manifold. *Indian J. Pure Appl. Math.* 10 (1979), no. 11, 1432-1436. (Kenneth Dunn) 80a:83048 83D05
- Rai, P. N.** (with Singh, S. N.) Representation of generalized Hermite polynomials. (Hindi, English summary) *Vijnana Parishad Amsandhan Patrika* 21 (1978), no. 3, 269-273. (S. L. Kalla) 80b:33021 33A65
- Rai, R. P.** (with Prasad, Baleshwar) On radiative boundary shock waves. *Defence Sci. J.* 28 (1978), no. 2, 67-72. (Authors' summary) 80c:76032 76L05 (35L99)
- Rai, S. N.** Normal approximate spectrum of operators. *Yokohama Math. J.* 26 (1978), no. 1, 77-81. (A. Ramm) 80a:47006 47A10
- On generalized paranormal operators. I. *Yokohama Math. J.* 26 (1978), no. 1, 91-100. (R. G. Bartle) 80c:47028 47B20
- Rai, S. P.** (with Mishra, R. S.; Srivastava, J. P.) Para  $f$ -structure in tangent bundle. *Indian J. Pure Appl. Math.* 9 (1978), no. 12, 1275-1281. (K. Yano) 80g:53028 53C15
- (with Srivastava, J. P.; Yadav, S. L.) On almost product and almost decomposable manifolds. *Publ. Inst. Math. (Beograd) (N.S.)* 25(39) (1979), 183-196. (E. Pavlov) 80a:53058 53C15
- Raibman, N. S.** Dispersion functions of random functions and some of their applications. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. 8, pp. 419-427, Academia, Prague, 1978. (From the introduction) 80b:93159 93E12
- Identification of controlled objects (survey). *Automat. i Telemekh.* 1979, no. 6, 80-93 (Russian); translated as *Automat. Remote Control* 40 (1979), no. 6, part 1, 845-856. (Author's summary) 80j:93042 93B30

- See also Identification and system parameter estimation, 80d:93010a; Identification and system parameter estimation, 80d:93010b and Identification and system parameter estimation, 80d:93010c
- Račinov, Ivan** Linear operators defined in spaces of complex functions of many variables and commuting with the operators of integration. *Serdica* 4 (1978), no. 4, 316-323. (M. I. Nagnibida) 80i:47045 47B38 (32A40)
- Raiconi, G.** (with Carotenuto, L.; Di Pillò, G.) On the identification of a variable coefficient in the diffusion equation. *Identification and system parameter estimation (Proc. Fourth IFAC Symp., Tbilisi, 1976)*, Part 3, pp. 1539-1556, North-Holland, Amsterdam, 1978. (O. Ibadapo-Obe) 80i:93079 93E12 (60H10)
- Räihä, Karl-Jouko** (with Zweben, Stuart H.) An optimal insertion algorithm for one-sided height-balanced binary search trees. *Comm. ACM* 22 (1979), no. 9, 508-512. (Authors' summary) 80b:68044 68C25 (68E10)
- maxim-Räileanu, Liliana** See Maxim-Räileanu, Liliana
- Raillier, Nicole** Sur les anneaux de Mori. *Groupe d'Étude d'Algèbre (Marie-Paule Malliacin)*, 1<sup>re</sup> année (1975/76), Exp. No. 1, 4 pp., Secrétariat Math., Paris, 1978. (J. W. Brewer) 80d:13007 13G05 (13F05)
- Sur les anneaux de Mori. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 9, A405-A407. (Authors' summary) 80a:13022 13G05 (13E99)
- Raimondo, Mario** (with Marinari, Maria Grazia) Properties of the regular functions ring of affine varieties defined over any field. *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 1, 63-70. (Luciana Picco Botta) 80a:14004 14A25
- Raina, A. K.** On the role of Hardy spaces in form factor bounds. *Lett. Math. Phys.* 2 (1977/78), no. 6, 513-519. (Shoji Kobayashi) 80a:30036 30D55
- Raina, Neelam** (with Sharma, Bhu Dev) Coding theorem for a generalized maximum likelihood decoding scheme. *Indian J. Pure Appl. Math.* 9 (1978), no. 10, 1091-1102. (O. Gulyás) 80a:94035 94B35
- (with Sharma, Bhu Dev) A coding theorem for multiple access channels using a maximum likelihood list decoding scheme. *Inform. Sci.* 16 (1978), no. 2, 81-87. (G. Dueck) 80j:94016 94A29 (94B35)
- (with Sharma, Bhu Dev) Coding theorem for partial received information. *Inform. Sci.* 20 (1980), no. 3, 181-189. (Authors' summary) 80m:94033 94A24
- Raina, R. K.** (with Koul, C. L.) On certain integral relations involving the  $H$ -function of two variables. *Proc. Nat. Acad. Sci. India Sect. A* 47 (1977), no. 3, 169-176. (Authors' summary) 80m:33013 33A35
- On the repeated differentiation of the  $H$ -function of two variables. (Hindi. English summary) *Vijnana Parishad Amusandhan Patrika* 21 (1978), no. 3, 221-228. (S. D. Bajpai) 80f:33008 33A35
- On some double Laplace transforms. (Hindi. English summary) *Vijnana Parishad Amusandhan Patrika* 22 (1979), no. 2, 147-153. (S. D. Bajpai) 80j:44001 44A10
- Rainhardt, H.** (with Pervusin, V. N.; Ebert, D.) The path integral in collective variables and its application to nuclear and hadron physics. (Russian. English summary) *Fiz. Elementar. Častic i Atom. Jadra* 10 (1979), no. 5, 1114-1155. (Authors' summary) 80i:81013 81C35
- Raiskil, S. M.** Some characteristic traits of L. I. Mandel'shtam. (Russian) *Vestnik Akad. Nauk SSSR* 1978, no. 5, 137-139. (Editors) 80a:01040 01A70
- Raisov, M. R.** (with Šaripov, Š. R.) Periodic trajectories of a generalized homogeneous differential system. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 11, 9-11. (E. S. Čičkin) 80c:34026 34C05
- (with Šaripov, Š. R.) Stability of a singular point  $O(0, 0)$  of a special differential system. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 3, 35-42, 92-93. (D. Bobrowski) 80i:34072 34D05
- Raitums, U.** Extension of extremal problems connected with linear elliptic equations. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 2, 281-283. (Pierre-Louis Lions) 80c:49005 49A22 (35J25)
- Some properties of the gradient of the solution of the Poisson equation in a convex domain. (Russian) *Lav. Mat. Ežegodnik* No. 22 (1978), 75-81, 281-282. (Author's summary) 80f:35037 35J05
- Convex extremal problems with constraints on the gradient of the solution of the Poisson equation. (Russian) *Lav. Mat. Ežegodnik* No. 22 (1978), 82-92, 282. (Jan Bochenek) 80a:49035 49B22
- On optimal control problems for linear elliptic equations. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 4, 828-830. (Constantin Vărsan) 80b:49016 49B22
- Raj, Baldev** (with Srivastava, Virender Kumar) The existence of the mean of the estimator in seemingly unrelated regressions. *Comm. Statist. A—Theory Methods* 8 (1979), no. 7, 713-717. (Jerry A. Hausman) 80k:62068 62J05 (62P20)
- Rajagopal, C. T.** See Sitaraman, V., 80a:01044
- Rajagopal, K. R.** (with Fosdick, Roger L.) Anomalous features in the model of "second order fluids". *Arch. Rational Mech. Anal.* 70 (1979), no. 2, 145-152. (Gérard A. Maugin) 80h:76002 76A05
- Rajagopalan, M.** Scattered spaces. III. *J. Indian Math. Soc. (N.S.)* 41 (1977), no. 3-4, 405-427 (1978). (R. Telgarsky) 80c:54044 54G20 (54B15, 54F45)
- (with Kannan, V.) Hereditarily locally compact separable spaces. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 185-195, *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (Olav Njåstad) 80i:54030 54D45 (54D55)
- (with Herrlich, Horst; Kannan, V.) Local compactness and simple extensions of discrete spaces. *Proc. Amer. Math. Soc.* 77 (1979), no. 3, 421-423. (Hans-Christian Reichel) 80i:54043 54D45
- Rajan, A. R.** (with Namboripad, K. S. S.) Structure of combinatorial regular semigroups. *Quart. J. Math. Oxford Ser. (2)* 29 (1978), no. 116, 489-504. (J. B. Kim) 80g:20074 20M10
- Rajan, S. C.** (with Damodaran, K. A.) Hodograph transformation. *J. Franklin Inst.* 307 (1979), no. 6, 379-394. (Authors' summary) 80c:76029 76G05 (58C27)
- Rajappa, N. R.** (with Amarnath, T.) Corrigendum: "Nonlinear theory of Taylor instability of superposed fluids of different densities in three dimensions" (*Quart. J. Mech. Appl. Math.* 30 (1977), no. 2, 131-141). *Quart. J. Mech. Appl. Math.* 32 (1979), no. 1, 93. (Editors) 80b:76013 76E20 (35Q99)
- Rajaram, R.** (with Kalra, G. L.; Tandon, J. N.) Stability of a collisionless contact discontinuity. *Astrophys. and Space Sci.* 67 (1980), no. 1, 137-145. (Authors' summary) 80m:85004 85A20 (82A45)
- Rajaraman, R.** Solitons of coupled scalar field theories in two dimensions. *Phys. Rev. Lett.* 42 (1979), no. 4, 200-204. (Author's summary) 80b:81079 81E10 (35Q20)
- Rajaraman, V.** (with Srinivasan, B.) On the normalization of relational databases. *Inform. Process. Lett.* 9 (1979), no. 2, 88-92. (Authors' introduction) 80i:68018 68B15
- Rajesekaran, M.** (with Shanmugam, G.; Subramanian, P. R.; Devanathan, V.) Nilsson states in cylindrical representation. *Proceedings of the Sixteenth Anniversary Symposium on New Particles—Do They Imply New Physics? (Inst. Math. Sci., Madras, 1978)*, Paper No. 12, 21 pp., *Matscience Rep.*, 92, Inst. Math. Sci., Madras, 1978. (Authors' summary) 80d:81131 81G35
- Rajasethupathy, K. S.** (with Shyamasundar, Rudrapatna Kalikote) Programmed OL-systems. *Inform. Sci.* 20 (1980), no. 2, 137-150. (Authors' summary) 80a:68063 68F10
- Rajbali** (with Roy, S. R.; Prakash, S.) A cylindrically symmetric universe in general relativity. *Proc. Indian Acad. Sci. Sect. A* 87 (1978), no. 9, 181-188. (Carl Brans) 80j:83007 83C15 (53B50)
- Rajman, N. S.** See Railman, N. S.
- Rajput, Balram** (with Tortrat, Albert) Un théorème de probabilité zéro ou un dans un groupe mesurable ou topologique quelconque. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 5, A251-A254. (Authors' summary) 80m:60013 60B15
- Rajput, Kamal S.** A note on the first-order differential equations for the Dirac and Schrödinger wave equations. (Hindi. English summary) *Vijnana Parishad Amusandhan Patrika* 21 (1978), no. 3, 265-267. (Author's summary) 80c:34005 34A30 (81C05)
- On minimal potentials for the Schrödinger equation with fixed eigenvalue for the associated Legendre equation. (Hindi. English summary) *Vijnana Parishad Amusandhan Patrika* 22 (1979), no. 3, 287-289. (Author's summary) 80m:34011 34B05
- Raka, Madhu** (with Hans-Gill, R. J.) An asymmetric inequality for nonhomogeneous ternary quadratic forms. *Monatsh. Math.* 87 (1979), no. 4, 281-295. (Mary E. Gbur) 80i:10029 10C25 (10E20)
- Rakestraw, Roy M.** A characterization of inner product spaces. *J. Math. Anal. Appl.* 68 (1979), no. 1, 267-272. (C. M. Schneberger) 80i:46019 46C05
- Rakin, L. V.** Estimation of the solutions of a countable system of differential equations with a small parameter. (Russian) *Control of dynamical systems (Russian)*, pp. 181-189, 319, Leningrad Univ., Leningrad, 1978. (S. D. Miluševa) 80j:34051 34C29 (34A10)
- Rakitskii, Ju. V.** (with Ustinov, S. M.; Černouckii, I. G.) ★ Численные методы решения жестких систем обыкновенных дифференциальных уравнений. (Russian) [Numerical methods for the solution of stiff systems of ordinary differential equations] *Leningrad. Politehn. Inst., Leningrad*, 1977, 84 pp. (F. I. Ibragimov) 80a:65153 65L05
- Rakočić, V. S.** (with Bošćaković, I. A.) ★ Прикладная теория случайных потоков. (Russian) [Applied theory of random flows] *Izdat. "Sovetskoe Radio", Moscow*, 1978, 248 pp. (Publisher's description) 80c:60055 60G99
- Rakosnik, Jiří** Some remarks to anisotropic Sobolev spaces. I. *Beiträge Anal.* No. 13 (1979), 55-68. (Philippe-A. Dionne) 80f:46039 46E35
- Rakotch, E.** Improved error estimates for numerical solutions of symmetric integral equations. *Math. Comp.* 32 (1978), no. 142, 399-404. (Syvert P. Nørsett) 80a:65272 65R20
- Rakowski, Waldemar** (with Jordan, Andrzej) Application of the finite element method to the analysis of stationary boundary value problems of electronics. (Polish. English, French, German and Russian summaries) *Rozprawy Elektrotech.* 25 (1979), no. 2, 311-320. (Authors' summary) 80f:65120 65N30
- Raktov, B. L.** (with Rayner, A. A.; Chalton, D. O.) On construction of confounded mixed factorial and lattice designs. *Austral. J. Statist.* 20 (1978), no. 3, 209-218. (J. A. John) 80m:62075 62K15 (05B05)
- (with Pesotan, H.; Worthley, R. G.) On main effect fold-over designs. *J. Statist. Plann. Inference* 2 (1978), no. 3, 277-291. (D. V. Chopra) 80c:62061 62K15
- Rač'čenko, V. F.** Qualitative properties of solutions of a mixed problem. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 8, 1491-1502, 1535. (V. M. Isakov) 80k:35017 35G05
- Rail, L. B.** Perturbation methods for the solution of linear problems. *Functional analysis methods in numerical analysis (Proc. Special Session, Annual Meeting, Amer. Math. Soc., St. Louis, Mo., 1977)*, pp. 248-281, *Lecture Notes in Math.*, 701, Springer, Berlin, 1979. (Author's summary) 80g:47017 47A55 (47A50, 65J10)
- The integral equation of image reconstruction. *Transactions of the Twenty-Fourth Conference of Army Mathematicians (Univ. Virginia, Charlottesville, Va., 1978)*, pp. 281-288, *ARO Rep.*, 79, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Author's summary) 80c:45004 45E10 (68G10)
- Rallis, S.** (with Schiffmann, G.) Automorphic forms constructed from the Weil representation: holomorphic case. *Amer. J. Math.* 100 (1978), no. 5, 1049-1122. (Stephen Gelbart) 80d:10038 10D15 (10D20, 22E45)
- Rallison, J. M.** Note on the Faxén relations for a particle in Stokes flow. *J. Fluid Mech.* 88 (1978), no. 3, 529-533. (J. C. Burns) 80c:76019 76D99 (35Q99)
- The role of rigidity constraints in the rheology of dilute polymer solutions. *J. Fluid Mech.* 93 (1979), no. 2, 251-279. (M. N. L. Narasimhan) 80i:76004 76A05 (65P05)
- Ralston, James V.** (with Majda, Andrew) An analogue of Weyl's theorem for unbounded domains. II. *Duke Math. J.* 45 (1978), no. 3, 513-536. (D. M. Eidus) 80b:35114 35P20 (58G25)
- (with Guillot, Jean-Claude) Construction d'ondes de Rayleigh asymptotiques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 6, A375-A378. (Authors' summary) 80b:35031 35C20 (35L05)
- Erratum: "On the construction of quasimodes associated with stable periodic orbits" (*Comm. Math. Phys.* 51 (1976), no. 3, 219-242). *Comm. Math. Phys.* 67 (1979), no. 1, 91. (Editors) 80c:58044 58G25 (35P20, 58F10)
- Note on the decay of acoustic waves. *Duke Math. J.* 46 (1979), no. 4, 799-804. (P. A. Mišnaevskii) 80m:35051 35L05
- Ralston, Tom** On the distribution of squares in a finite field. *Geom. Dedicata* 8 (1979), no. 2, 207-212. (Maurice Flamant) 80i:12014 12C15 (51E99)
- Ram, B.** (with Halasa, R.) Dirac equation with a quadratic scalar potential—are quarks confined? *Lett. Nuovo Cimento* (2) 26 (1979), no. 17, 551-554. (From the text) 80k:81021 81C05 (81G05)
- Ram, Babu** On integral modulus of continuity of Fourier series. *Kyungpook Math. J.* 18



- (1978), no. 2, 251-255. (F. Móricz) **80d:42009** 42A32
- Ram, R. B.** (with Diaz, J. B.) A reflection principle for a fourth-order partial differential equation which is related to the biharmonic equation. *Bull. Calcutta Math. Soc.* **69** (1977), no. 3, 125-130. (V. M. Isakov) **80k:35031** 35J30 (31B30)
- Ram, R. D.** (with Rai, A.; Gaur, M.) Propagation of weak MHD discontinuities in an optically thin medium. *Acta Phys. Acad. Sci. Hungar.* **45** (1978), no. 1, 9-14 (1979). (Magdi M. Shoucri) **80d:76104** 76W05 (35Q99, 76E05)
- A modification in the theorem of Bailey and Chen. (Italian summary) *Nuovo Cimento B* (11) **48** (1978), no. 1, 9-14. (Author's summary) **80b:80008** 80A25 (76N15)
- (with Lal, Shiva Narain) On the localization of the summability  $\{R, \lambda_n, 1\}(C, r)$  of the  $r$ th derived series of a Fourier series. *Indian J. Pure Appl. Math.* **10** (1979), no. 11, 1343-1350. (H. P. Dikshit) **80j:42019** 42A28 (40G05)
- Ram, Shri** (with Kashyap, J. N. S.) Faraday's electromagnetic induction in Einstein's unified field theory. *J. Math. Phys. Sci.* **12** (1978), no. 6, 569-579. (Kishin Mariwalla) **80a:83068** 83E05 (35Q99)
- Ramachandra, K.** Some remarks on a theorem of Montgomery and Vaughan. *J. Number Theory* **11** (1979), no. 3, 305-310. (D. R. Heath-Brown) **80j:10053** 10H99 (10H08)
- Ramachandran, D.** Existence of independent complements in regular conditional probability spaces. *Ann. Probab.* **7** (1979), no. 3, 433-443. (Jan Pachl) **80d:28005** 28A05 (60A10)
- Perfect mixtures of perfect measures. *Ann. Probab.* **7** (1979), no. 3, 444-452. (Jan Pachl) **80d:28015** 28A12 (60A10)
- Ramachandran, S.** On the reconstruction conjecture. *Proceedings of the Symposium on Graph Theory (Indian Statist. Inst., Calcutta, 1976)*, pp. 246-250. *ISI Lecture Notes, 4, Macmillan of India, New Delhi, 1979.* (Author's summary) **80m:05084** 05C60
- A test for legitimate decks. *Discrete Math.* **25** (1979), no. 2, 165-173. (R. L. Hemminger) **80d:05038** 05C60
- Ramachandran, V.** (with Ahmad, M. O.; Reddy, Harnatha C.; Swamy, M. N. S.) Cascade synthesis of a class of multivariable positive real functions. *IEEE Trans. Circuits and Systems* **25** (1978), no. 10, 871-878. (From the summary) **80m:93148** 93E10
- (with Ahmad, M. O.; Reddy, C. H.; Swamy, M. N. S.) A class of multivariable positive real functions realizable by resistively terminated lossless ladder networks. *IEEE Trans. Circuits and Systems* **26** (1979), no. 8, 659-662. (Authors' summary) **80h:94041** 94C05
- (with Ahmad, M. O.; Reddy, C. H.; Swamy, M. N. S.) Ladder realizations of multivariable positive real functions. *J. Franklin Inst.* **307** (1979), no. 2, 71-81. (Authors' summary) **80c:94016** 94C05
- (with Ahmad, M. O.; Reddy, C. H.; Swamy, M. N. S.) Partial derivative properties of multivariable cascaded networks. *J. Franklin Inst.* **307** (1979), no. 6, 315-329. (Authors' summary) **80c:94071** 94C05
- (with Karivaratharajan, P.; Reddy, Harnatha C.; Swamy, M. N. S.) Generation of two-dimensional digital functions without nonessential singularities of the second kind. *IEEE Trans. Acoust. Speech Signal Process.* **28** (1980), no. 2, 216-223. (Authors' summary) **80m:94008** 94A11
- Ramachandran, Vijaya** Exact reduction of a polynomial matrix to the Smith normal form. *IEEE Trans. Automat. Control* **24** (1979), no. 4, 638-641. (Author's summary) **80h:93006** 93A10 (15A21)
- Ramachandra Rao, A.** Surface waves in a rotating fluid due to sources and internal boundaries. (German summary) *Acta Mech.* **31** (1978/79), no. 1-2, 13-23. (Alan Jeffrey) **80d:76015** 76C99 (35Q99)
- The clique number of a graph with a given degree sequence. *Proceedings of the Symposium on Graph Theory (Indian Statist. Inst., Calcutta, 1976)*, pp. 251-267. *ISI Lecture Notes, 4, Macmillan of India, New Delhi, 1979.* (From the summary) **80m:05058** 05C30
- See also *Proceedings: Symposium on Graph Theory*, **80j:05055**
- Ramachandra Rao, B. S.** (with Singhal, A. K.) A note on an orthogonality relation for stress analysis in a multilayered laminated disc. *Indian J. Pure Appl. Math.* **10** (1979), no. 9, 1146-1150. (Yi-Yuan Yu) **80j:73014** 73C99
- Ramacharyulu, N. Ch. Pattabhi** (with Narasimacharyulu, V.) Steady flow in a porous region between two slowly rotating spheres. *J. Indian Inst. Sci.* **60** (1978), no. 10, 247-252. (Jaroslav Jelen) **80j:76044** 76S05 (76C99)
- Ramadge, Peter J.** (with Goodwin, Graham C.) Design of restricted complexity adaptive regulators. *IEEE Trans. Automat. Control* **24** (1979), no. 4, 584-588. (K. Amborski) **80i:93038** 93C40 (49A36)
- Sita Ramaiah, V.** See Sita Ramakrishna, V.
- Ramakrishna, D.** (with Santhakumari, C.) On right quasi-regular elements in a near-ring. *Arch. Math. (Basel)* **31** (1978/79), no. 5, 451-456. (Howard E. Bell) **80d:16024** 16A76
- (with Santhakumari, C.) On loop near-rings. *Bull. Austral. Math. Soc.* **19** (1978), no. 3, 417-435. (Steve Light) **80j:16046** 16A78 (16A26)
- (with Rao, G. K.) A topological formulation of the density theorem for 0-primitive near-rings. *Proc. Roy. Irish Acad. Sect. A* **78** (1978), no. 14, 127-135. (Gordon Mason) **80a:16050** 16A76
- (with Rao, Koteswara G.) 0-primitive near-rings of transformations. *Proc. Roy. Irish Acad. Sect. A* **79** (1979), no. 13, 131-146. (Marjory J. Johnson) **80k:16048** 16A76
- Ramakrishna, A.** (with Kudva, P.; Viswanadham, N.) Observers for linear systems with unknown inputs. *IEEE Trans. Automat. Control* **25** (1980), no. 1, 113-115. (Authors' summary) **80m:93020** 93B07
- Ramakrishnan, Alladi** On the matrix functional equation  $\alpha(\lambda z) = \beta(z) \cdot \alpha(z)$ . *Proceedings of the Conference on Mathematical Analysis and its Applications (Inst. Engrs., Mysore, 1977)*, pp. M158-M170. *Matscience Rep.*, 91, Inst. Math. Sci., Madras, 1978. (I. Stamate) **80h:39014** 39B60 (30D05)
- New facets and new concepts in the special theory of relativity. *Proceedings of the Sixteenth Anniversary Symposium on New Particles—Do They Imply New Physics? (Inst. Math. Sci., Madras, 1978)*, Paper No. 1, 9 pp., *Matscience Rep.*, 92, Inst. Math. Sci., Madras, 1978. (From the text) **80d:83008** 83B05
- Ramallo, Margarita** (with Almeida Costa, António)  $B^*$ -ideals and  $Q^*$ -ideals in noncommutative semirings. *Math. Slovaca* **28** (1978), no. 1, 11-20. (R. Gorton) **80f:16039** 16A78
- Ramanurthi, V. S.** On modules with projective character modules. *Math. Japon.* **23** (1978/79), no. 2, 181-184. (T. Cheatham) **80a:16036** 16A50 (16A49)
- Ramanurthy, K.** (with Athreya, K. B.) Convergence of state distribution in supercritical multitype Crump-Mode-Jagers branching processes. *J. Indian Math. Soc. (N.S.)* **41** (1977), no. 1-2, 27-57. (P. E. Ney) **80g:60085** 60J80
- Ramanathan, G. V.** A problem in classical mechanics. *J. Math. Phys. Sci.* **12** (1978), no. 5, 507-517. (V. S. Ol'hovskij) **80c:70017** 70F35
- Ramanathan, K. G.** See C. P. Ramanujam—a tribute, **80d:00018**
- Ramani, A.** (with Ablowitz, Mark J.; Segur, Harvey) Nonlinear evolution equations and ordinary differential equations of Painlevé type. *Lett. Nuovo Cimento* (2) **23** (1978), no. 9, 333-338. (From the introduction) **80a:58001** 58A15 (34A30, 70H99)
- Ramani, K. V.** Some Bayes tests and their asymptotic properties for the multivariate, multisample goodness-of-fit problem. *Necol. Res. Logist. Quart.* **26** (1979), no. 2, 237-247. (Lionel Weiss) **80k:62064** 62G10 (62F15)
- Ramanujan, Chidambaram Padmanabhan** See C. P. Ramanujam—a tribute, **80d:00018**
- Ramanujan, M. S.** (with Rosenberger, B.) On the Djakov-Mitiagin example of a nuclear Fréchet space without basis. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* **26** (1978), no. 3, 231-236. (William Robinson) **80m:46001** 46A12
- (with Alpeyem, M.; Terzioğlu, T.) Subspaces of some nuclear sequence spaces. *Nederl. Akad. Wetensch. Indag. Math.* **41** (1979), no. 2, 217-224. (E. Dubinsky) **80g:46010** 46A45
- Ramanujan, Srinivasa** See Andrews, George E., **80e:01018**
- Ramar, K.** See Sebaskhy, O. A., **80h:93018**
- Ramarajan, S.** (with Mishra, K. L. P.) Positivity of certain non-linear dynamic operators. *Internat. J. Control* **28** (1978), no. 5, 785-788. (A. P. Morgan) **80h:93122** 93D15
- Rama Rao, K. V.** Numerical solution of the thermal instability of a micropolar fluid layer between rigid boundaries. (German summary) *Acta Mech.* **32** (1979), no. 1-3, 79-88. (Author's summary) **80d:76083** 76R05 (65P05, 73B25)
- Rama Rao, V. V.** ★On a problem of Garrett Birkhoff and related topics. *Matscience Report, 94, MATSCIENCE—The Institute of Mathematical Sciences, Madras, 1978.* iii + 51 pp. (Keith R. Pierce) **80m:06021** 06F99
- (with Jayaram, C.) Characterization of a class of dually residuated lattice ordered semigroups by sheaves. *Proceedings of the Conference on Mathematical Analysis and its Applications (Inst. Engrs., Mysore, 1977)*, pp. M43-M53. *Matscience Rep.*, 91, Inst. Math. Sci., Madras, 1978. (R. S. Pierce) **80m:06015** 06F05
- Semi-dually residuated lattice ordered semigroup. *Proceedings of the Sixteenth Anniversary Symposium on New Particles—Do They Imply New Physics? (Inst. Math. Sci., Madras, 1978)*, Paper No. 15, 7 pp., *Matscience Rep.*, 92, Inst. Math. Sci., Madras, 1978. (R. S. Pierce) **80d:06012** 06F05
- (with Iséki, Kiyoshi) Note on BCK-algebras with condition (S). *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 1, 167-172. (R. Beazer) **80j:06016** 06E99 (03G25)
- Siva Rama Sarma, A.** See Siva Rama Sarma, A.
- Ramaswamy, Srinam** (with Yasskin, Philip B.) Birkhoff theorem for an  $R+R^2$  theory of gravity with torsion. *Phys. Rev. D* (3) **19** (1979), no. 8, 2264-2267. (J. W. Auer) **80d:83034** 83D05 (53B50)
- Ramazanov, S. A.** Eastern medieval theories on the motion of the Moon and the planets. (Russian) *Mathematics and astronomy in the works of scientists of the medieval East (Russian)*, pp. 97-107, 139, "Fan", Tashkent, 1977. (Author's summary) **80i:01006** 01A30
- Mathematical devices used by Arabic astronomers for determining the length of the shadow of a gnomon. (Russian) *Mathematics in the East in the Middle Ages (Russian)*, pp. 170-178, 197, "Fan", Tashkent, 1978. (E. S. Kennedy) **80k:01012** 01A30 (70-03)
- Ram Behari** (with Jain, B. S.) Some mathematical contributions of ancient Indian mathematicians as given in the works of Bhāskara II (12th cent. A.D.). *Indian J. Hist. Sci.* **12** (1977), no. 1, 45-56. (A. I. Volodarskij) **80m:01016** 01A32 (10-03)
- Ramey, James T.** (with Alam, Khursheed) A sequential procedure for selecting the most probable multinomial event. *Biometrika* **66** (1979), no. 1, 171-173. (Yung L. Tong) **80j:62026** 62F07
- Ramil' Al'vares, H.** Translation algorithms for systems with positive and negative base numbers. (Russian) *Vychisl. Tehn. i Voprasy Kibernet.* No. 15 (1978), 25-39. (B. D. Donevski) **80b:68044** 68C05
- Ramirez, A.** (with Barros, M.) Decomposition of quasi-Kähler manifolds which satisfy the first curvature condition. *Demonstratio Math.* **11** (1978), no. 3, 685-694. (R. Rosça) **80e:53026** 53B35
- Ramirez Martinez, Alcedo A.** (with Sahai, Hardeo) Formal Bayesian estimators in the general two-way random model with cross classification. (Spanish) *Trabajos Estadist. Investigación Oper.* **29** (1978), no. 2, 88-93. (Authors' summary) **80f:62067** 62J05 (62F15)
- Ramirez Mittelbrunn, J.** (with León, J.; Quirós, M.) Probabilistic interpretation, group contraction and the Galilean limit of relativistic quantum mechanics. (Italian and Russian summaries) *Nuovo Cimento B* (11) **46** (1978), no. 1, 109-120. (Lawrence P. Horvitz) **80a:81036** 81C40 (22E70)
- (with León, J.; Quirós, M.) Group content of the Foldy-Wouthuysen transformation and the nonrelativistic limit for arbitrary spin. *J. Math. Phys.* **20** (1979), no. 6, 1068-1076. (Philip Huddleston) **80g:81026** 81C40 (22E70)
- (with Quirós, M.) On the infinite momentum limit of relativistic elementary systems. *Lett. Nuovo Cimento* (2) **26** (1979), no. 18, 633-636. (From the text) **80k:83037** 83C99
- Ramis, Jean-Pierre** Géométrie analytique et géométrie algébrique (variations sur le thème "GAGA"). *Séminaire Pierre Lelong-Henri Skoda (Analyse)*, Année 1976/77, pp. 228-289. *Lecture Notes in Math.*, 694, Springer, Berlin, 1978. (C. Bănică) **80g:32014** 32C36 (32C37, 34A20, 35N10, 46F15, 58G07, 58G99)
- See also *Equations différentielles et systèmes de Pfaff dans le champ complexe*, **80f:34003**
- Ram, A. G.** Perturbations preserving asymptotics of spectrum. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **64** (1978), no. 1, 30-31. (Author's summary) **80e:47012** 47A55 (47A70)
- Existence in the large of solutions to simultaneous differential equations. (Russian

- summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 9-10, 795-797. (Author's summary) **80c:34005** 34A10 (34D20)
- The stability of control systems. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 9, 1670-1677, 1724. (O. V. Vasil'ev) **80c:93116** 93D05 (45D05, 93C22)
- Necessary and sufficient conditions for realizability of the principle of limiting amplitude. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 5(192), 96-102. (D. M. Ekdus) **80b:47025** 47A99 (35P05)
- A uniqueness theorem for the solution of the Dirichlet problem. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 6, 1421-1423, 1441. (J. Peetre) **80f:35038** 35J05
- (with Milnaevskii, P. A.) The uniqueness of a harmonic coordinate system in general relativity theory. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 1(205), 239-240. (M. A. H. MacCallum) **80g:83006** 83C05
- Rammelt, Klaus Analytical model of a multisource system. *Found. Control Engrg.* 4 (1979), no. 2, 79-93. (Author's summary) **80d:90040** 90B22 (68C15)
- Rammertorfer, F. G. (with Steiner, H.; Grossmayer, A.; Ziegler, F.) Plötzliche Veränderung von Randbedingungen eines Biegebalkens. (English summary) *Acta Mech.* 33 (1979), no. 3, 147-162. (Authors' summary) **80g:73046** 73K05
- Ramond, P. (with Gell-Mann, M.; Slansky, R.) Color embeddings, charge assignments, and proton stability in unified gauge theories. *Rev. Modern Phys.* 50 (1978), no. 4, 721-744. (A. O. Barut) **80c:81116** 81G05 (22E70)
- Ramos, J. J. (with Alvarez-Estrada, R. F.) Renormalization properties of a nonrelativistic persistent model. (Italian and Russian summaries) *Nuovo Cimento A* (11) 50 (1979), no. 3, 323-337. (Authors' summary) **80d:81005** 81E15
- Ramón, Zensida E. An integral expression for the generalized Kummer sum. *An. Inst. Mat. Univ. Nac. Autónoma México* 18 (1978), no. 1, 25-28 (1979). (M. I. Israilov) **80c:10032** 10G05 (33A10)
- Ramsey, James B. (with Quandt, Richard E.) Estimating mixtures of normal distributions and switching regressions. With comments and a rejoinder by the authors. *J. Amer. Statist. Assoc.* 73 (1978), no. 364, 730-752. (N. Giri) **80a:62040** 62F10 (62J05)
- Ramsey, L. Thomas (with Gerver, Joseph L.) Sets of integers with nonlong arithmetic progressions generated by the greedy algorithm. *Math. Comp.* 33 (1979), no. 148, 1353-1359. (D. Suryanarayana) **80c:10053** 10L10
- Ramshaw, Lyle On the gap structure of sequences of points on a circle. *Nederl. Akad. Wetensch. Indag. Math.* 40 (1978), no. 4, 527-541. (J. A. Haight) **80c:10031** 10F40
- Rana, S. P. (with Arora, R. K.) On module assignment in two-processor distributed systems. *Inform. Process. Lett.* 9 (1979), no. 3, 113-117. (From the introduction) **80i:68019** 68B20 (90B35)
- Rañada, Antonio F. See *Nonlinear problems in theoretical physics*, **80f:81002**
- Rančin, D. V. (with Popov, V. V.) A strengthening of the Fréchet-Uryson property. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 2, 75-80. (A. Császár) **80f:54017** 54D55
- Rand, David (with Jonker, Leo) Une borne inférieure pour l'entropie de certaines applications de l'intervalle dans lui-même. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 7, A501-A502. (Editors) **80c:58041** 58F11 (28D20)
- (with Jonker, Leo) The nonwandering set of unimodal maps of the unit interval. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 3, 137-140. (Editors) **80c:58037** 58F20 (28D20, 58F13)
- (with Jonker, Leo) Bifurcations of unimodal maps of the unit interval. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 4, 179-181. (Carl P. Simon) **80i:58034** 58F20 (58F13)
- Exotic phenomena in games and duopoly models. *J. Math. Econom.* 5 (1978), no. 2, 173-184. (Yves Balasko) **80c:90173** 90D40 (58F13)
- The topological classification of Lorenz attractors. *Math. Proc. Cambridge Philos. Soc.* 83 (1978), no. 3, 451-460. (Leo Jonker) **80j:58052** 58F12
- Rand, R. H. (with Johnson, T. L.) On the existence and bifurcation of minimal normal modes. (French and German summaries) *Internat. J. Non-Linear Mech.* 14 (1979), no. 1, 1-12. (L. G. Chambers) **80c:70028** 70K99 (34C15, 58F14)
- Randall, C. H. (with Foulis, D. J.) The operational approach to quantum mechanics. *Physical theory as logico-operational structure*, pp. 167-201. *Univ. Western Ontario Series in Philos. Sci.*, 7, Reidel, Dordrecht, 1979. (M. J. Męczyński) **80f:81013** 81B10 (03C12)
- Randell, Richard The Milnor number of some isolated complete intersection singularities with  $C^*$ -action. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 375-380. (I. N. Iomdin) **80a:32008** 32B30 (57Q45)
- On the topology of nonisolated singularities. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 445-473, Academic Press, New York, 1979. (Anatoly Libgober) **80f:14002** 14B05 (32B30, 57Q45)
- Randell, Milan Characterization of atoms, molecules and classes of molecules based on paths enumerations. *Proceedings of Bremer Konferenz zur Chemie (Univ. Bremen, Bremen, 1978)*, Part II. *Match No. 7* (1979), 5-64. (C. C. Rousseau) **80m:81116** 81G99 (05C50)
- Randol, Burton Cylinders in Riemann surfaces. *Comment. Math. Helv.* 54 (1979), no. 1, 1-5. (Scott Wolpert) **80j:30065** 30F10 (53C45, 58G25)
- The length spectrum of a Riemann surface is always of unbounded multiplicity. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 455-456. (Scott Wolpert) **80k:58100** 58G25 (30F10, 53C22)
- Rangachari, M. S. (with Natarajan, P. N.) Matrix transformations between sequence spaces over non-Archimedean fields. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 4, 615-618. (K. Chandrasekhara Rao) **80j:46118** 46P05 (47B37)
- Ranganathan, N. R. See *Proceedings: Conference on Mathematical Analysis and its Applications*, **80a:00007**
- Ranganathan, Sucharita (with Gupta, V. K.) Densifying mappings and their fixed points. *Kyungpook Math. J.* 18 (1978), no. 2, 183-187. (V. V. Obuhovskii) **80c:54009** 54H25
- A fixed point theorem for commuting mappings. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 2, 351-357. (L. Górniewicz) **80a:54008** 54H25
- Ranga Rao, P. Metric spaces with distances in a lattice ordered group. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 2, 189-200. (R. A. Melter) **80a:52017** 52A99 (06F20)
- Rangwamy, K. M. Some remarks on the endomorphism rings of quasiprojective modules. *Publ. Math. Debrecen* 26 (1979), no. 1-2, 71-73. (L. Bican) **80g:16036** 16A65 (16A50)
- Rangelov, C. V. An a priori estimate and hypocoercivity of a certain class of pseudodifferential operators with multiple characteristics. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 1, 12-20, 86. (A. I. Atanasov) **80d:35039** 35H05 (35S05)
- Ranghelo, P. P. An analog of Smyth's theorem of almost Hermitian manifold. *C. R. Acad. Bulgare Sci.* 31 (1978), no. 11, 1389-1391. (Yoshiaki Maeda) **80m:53035** 53C15
- Rani, Kusum (with Jindal, Sushma) A note on varieties generated by Hilbert spaces. *Indian J. Pure Appl. Math.* 7 (1976), no. 10, 1119-1121. (S. A. Morris) **80b:46014** 46A99
- Ranicki, Andrew On the algebraic L-theory of semisimple rings. *J. Algebra* 50 (1978), no. 1, 242-243. (Chan-nan Chang) **80a:18014** 18F25 (16A40)
- Rankin, R. A. Obituary: Thomas S. Graham. *Proc. Edinburgh Math. Soc.* (2) 21 (1978/79), no. 2, 187-188. (Editors) **80b:01024** 01A70
- Rankin, Samuel M. (with Graef, John R.; Spikes, Paul W.) Oscillation theorems for perturbed nonlinear differential equations. *J. Math. Anal. Appl.* 65 (1978), no. 2, 375-390. (J. S. W. Wong) **80c:34031** 34C10
- Oscillation results for a nonhomogeneous equation. *Pacific J. Math.* 80 (1979), no. 1, 237-243. (G. J. Egen) **80b:34044** 34C10
- (with Mahfoud, W. E.) Some properties of solutions of  $(r(t)\psi(x)')' + a(t)f(x) = 0$ . *SIAM J. Math. Anal.* 10 (1979), no. 1, 49-54. (Ch. G. Philos) **80b:34032** 34C10
- Rankine, William John Macquorn See *Umenaga, Kaoru*, **80f:01017**
- Rannacher, Rolf Zur Differenzenapproximation des Dirichlet-Problems elliptischer Differentialgleichungen zweiter Ordnung. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T432-T434. (J. R. Cannon) **80a:65231** 65N30
- Nonconforming finite element methods for eigenvalue problems in linear plate theory. *Numer. Math.* 33 (1979), no. 1, 23-42. (R. A. Nicolaides) **80i:65124** 65N30 (73K25)
- On nonconforming and mixed finite element method for plate bending problems. The linear case. (French summary) *RAIRO Anal. Numér.* 13 (1979), no. 4, 369-387. (Author's summary) **80i:65125** 65N30 (73K10)
- Finite element approximation of simply supported plates and the Babuška paradox. *Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I* (Brussels, 1978). *Z. Angew. Math. Mech.* 59 (1979), no. 3, T73-T76. (From the text) **80d:65122** 65N30
- Ranneby, Bo On necessary and sufficient conditions for consistency of MLE's in Markov chain models. *Scand. J. Statist.* 5 (1978), no. 2, 99-105. (G. Roussas) **80a:62132** 62M05
- Ransom, Michael R. (with McDonald, James B.) Alternative parameter estimators based upon grouped data. *Comm. Statist. A—Theory Methods* 8 (1979), no. 9, 899-917. (Jerry A. Hausman) **80k:62044** 62F10
- Rantala, Velkko The old and the new logic of metascience. *Synthese* 39 (1978), no. 2, 233-247. (David W. Miller) **80d:03007** 03A05
- Game-theoretical semantics and back-and-forth. *Essays on mathematical and philosophical logic (Proc. Fourth Scandinavian Logic Sympos. and First Soviet-Finnish Logic Conf., Jyväskylä, 1976)*, pp. 119-151, Synthese Library, 122, Reidel, Dordrecht, 1979. (Andreas Blass) **80i:03049** 03C75
- prabhakar Rao, A. See *Prabhakar Rao, A.*
- ramachandra Rao, A. See *Ramachandra Rao, A.*
- Rao, A. N. V. (with Schultz, George W.; Tsokos, Chris P.) Statistical properties of a linear stochastic system. *Inform. and Control* 39 (1978), no. 1, 92-117. (T. Tobias) **80c:93144** 93E10
- (with Tourge, R. A.; Tsokos, Chris P.) Stochastic systems and integral inequalities. *J. Math. Phys.* 19 (1978), no. 12, 2634-2640. (Authors' summary) **80c:93139** 93E20 (60H10)
- (with Padgett, W. J.) Solution of a stochastic integral equation using integral contractors. *Inform. and Control* 41 (1979), no. 1, 56-66. (J. S. Milton) **80i:60006** 60H20
- Rao, A. S. (with Lamba, S. S.; Rao, S. Vittal) Application of Routh approximant method for reducing the order of a class of time-varying systems. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 110-113. (Authors' summary) **80m:93049** 93C50
- Rao, Akundi S. (with Mallela, Parthasaradhi) Necessary and sufficient conditions for inadmissibility of transformations in time. *Internat. Econom. Rev.* 20 (1979), no. 1, 157-167. (Andrew Harvey) **80i:62093** 62P20
- prakash Rao, B. L. S. See *Prakash Rao, B. L. S.*
- ramachandra Rao, B. S. See *Ramachandra Rao, B. S.*
- Rao, B. V. (with Rao, K. P. S. Bhaskara) Atomless structures and  $\sigma$ -independence. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 9-10, 783-784. (Authors' summary) **80d:28006** 28A05
- (with Rao, K. P. S. Bhaskara) Lattice of Borel structures. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 9-10, 785-786. (Authors' summary) **80d:28007** 28A05
- (with Maitra, A.; Rao, K. P. S. Bhaskara) A problem in the extension of measures. *Illinois J. Math.* 23 (1979), no. 2, 211-216. (J. Lukeš) **80d:28011** 28A10
- amba-Rao, C. L. See *Amba-Rao, C. L.*
- Rao, C. R. A. Wave propagation in elastic media with prescribed variation in the parameters. *Modern problems in elastic wave propagation (Proc. IUTAM Symp., Northwestern Univ., Evanston, Ill., 1977)*, pp. 327-343, Wiley, New York, 1978. (M. C. Singh) **80g:73030** 73D99 (35C10)
- Epstein transition zones in nonhomogeneous isotropic elastic media. *Wave Motion* 1 (1979), no. 4, 259-270. (Authors' summary) **80m:73031** 73D99
- Rao, C. Radhakrishna (with Patil, G. P.) Weighted distributions and size-biased sampling with applications to wildlife populations and human families. (French summary) *Biometrika* 34 (1978), no. 2, 179-189. (Jon Stene) **80c:62010** 62E15 (62P10, 92A17)
- (with Shinozaki, Nobuo) Precision of individual estimators in simultaneous estimation of parameters. *Biometrika* 65 (1978), no. 1, 23-30. (Arthur Cohen) **80f:62010** 62C15 (62C20, 62F10)
- A note on the unified theory of least squares. *Comm. Statist. A—Theory Methods* 7 (1978), no. 5, 409-411. (Lubomir Kubáček) **80b:62080** 62J05
- Choice of best linear estimators in the Gauss-Markoff model with a singular



- dispersion matrix. *Comm. Statist. A—Theory Methods* 7 (1978), no. 13, 1199–1208. (R. Zmyslony) **80d:62051** 62J05
- Correction to: "Estimation of parameters in a linear model" (*Ann. Statist.* 4 (1976), no. 6, 1023–1037). *Ann. Statist.* 7 (1979), no. 3, 696. (Editors) **80d:62050** 62J05
- Separation theorems for singular values of matrices and their applications in multivariate analysis. *J. Multivariate Anal.* 9 (1979), no. 3, 362–377. (C. G. Khatri) **80j:15013** 15A42 (62H10, 62H20)
- Numerical solutions of Lotka-Volterra equations with stochastic approximations. *Texas J. Sci.* 31 (1979), no. 1, 75–83. (Author's summary) **80b:92035** 92A15 (65L99)
- Rao, D. R. K. Asymptotic equivalence of functional differential equations. *Proceedings of the Eighth National Mathematics Conference (Arya-Mehr Univ. Tech., Tehran, 1977)*, pp. 302–311, Arya-Mehr Univ. Tech., Tehran, 1977. (T. G. Hallam) **80d:34103** 34K20
- Rao, D. R. K. S. (with Murty, K. N.) On transformation of boundary value problems. *Bull. Calcutta Math. Soc.* 69 (1977), no. 5, 303–308. (J. W. Bebernes) **80c:34023** 34B05
- Rao, G. Koteswara (with Ramakotiah, D.) 0-primitive near-rings of transformations. *Proc. Roy. Irish Acad. Sect. A* 79 (1979), no. 13, 131–146. (Marjory J. Johnson) **80c:16048** 16A76
- (with Ramakotiah, D.) A topological formulation of the density theorem for 0-primitive near-rings. *Proc. Roy. Irish Acad. Sect. A* 78 (1978), no. 14, 127–135. (Gordon Mason) **80c:16050** 16A76
- Rao, G. L. N. The  $n$ -dimensional generalized Stieltjes transformation of distributions. *Indian J. Pure Appl. Math.* 8 (1977), no. 11, 1407–1414. (R. A. Askey) **80g:46038** 46F12 (44A15)
- Another real inversion theorem for a distributional  $F_T$ -transform. *Riv. Mat. Univ. Parma* (4) 4 (1978), 63–72 (1979). (D. Myers) **80b:44002** 44A10
- Rao, Ganil Prasad (with Srinivasan, T. N.) Analysis and synthesis of dynamic systems containing time delays via block-pulse functions. *Proc. Inst. Electr. Engrs.* 125 (1978), no. 10, 1064–1068. (Authors' summary) **80d:93018** 93A99
- (with Saha, Dines Chandra) Time domain synthesis via Poisson moment functionals. *Internat. J. Control* 30 (1979), no. 3, 417–426. (Authors' introduction) **80b:93044** 93C99
- Rao, Geetha S. Interpolative subspaces, interpolative widths and interpolative maps. *Multivariate approximation (Sympos., Univ. Durham, Durham, 1977)*, pp. 137–143, Academic Press, London, 1978. (Werner Haussmann) **80i:41032** 41A65
- Rao, Giuseppe (with Bondi, Antonino) A generalization of the theorem of Carathéodory on the Cauchy problem for the equation  $y' = f(x, y)$ . (Italian. English summary) *Atti Accad. Sci. Lett. Arii Palermo Parte I* (4) 35 (1975/76), 131–143 (1978). (Richard Brown) **80g:34003** 34A10
- Rao, Gururaj S. (with Stone, Harold S.; Hu, T. C.) Assignment of tasks in a distributed processor system with limited memory. *IEEE Trans. Comput.* 28 (1979), no. 4, 291–299. (Authors' summary) **80c:68018** 68B20 (90B35)
- Nagaraja Rao, I. H. See Nagaraja Rao, I. H.
- Rao, J. N. K. (with Fuller, Wayne A.) Estimation for a linear regression model with unknown diagonal covariance matrix. *Ann. Statist.* 6 (1978), no. 5, 1149–1158. (Prem K. Goel) **80c:62100** 62J05
- (with Hartley, H. O.; LaMotte, Lynn Roy) A simple "synthesis"-based method of variance component estimation. (French summary) *Biometrics* 34 (1978), no. 2, 233–242. (R. Zmyslony) **80d:62055** 62J10
- (with Bellhouse, D. R.) Optimal estimation of a finite population mean under generalized random permutation models. *J. Statist. Plann. Inference* 2 (1978), no. 2, 125–141. (B. Raja Rao) **80d:62013** 62D05
- Rao, J. S. (with Kent, J. T.; Mardia, K. A.) A characterization of the uniform distribution on the circle. *Ann. Statist.* 7 (1979), no. 4, 882–889. (M. Riedel) **80f:62018** 62E10
- Chandrasekhara Rao, K. See Chandrasekhara Rao, K.
- Kuppuswamy Rao, K. See Kuppuswamy Rao, K.
- Rao, K. Nageswara On the numbers of solutions of certain equations in a design. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 587–592, Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978. (A. L. Whiteman) **80c:05033** 05B05
- On the products of certain analogues of the Hall polynomial. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1977)*, pp. 525–534, Congress. Numer., XX, Utilitas Math., Winnipeg, Man., 1978. (R. A. Smith) **80i:05020** 05B10
- Rao, K. P. S. Bhaskara (with Rao, B. V.) Atorless structures and  $e$ -independence. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 9–10, 783–784. (Authors' summary) **80d:28006** 28A05
- (with Rao, B. V.) Lattice of Borel structures. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 9–10, 785–786. (Authors' summary) **80d:28007** 28A05
- (with Pol, Roman) Topological zero-one laws. *Colloq. Math.* 39 (1978), no. 1, 13–23. (J. C. Oxtoby) **80a:54069** 54H05 (60F20)
- (with Rao, M. Bhaskara) On the lattice of subalgebras of a Boolean algebra. (Russian summary) *Czechoslovak Math. J.* 29(104) (1979), no. 4, 530–545. (S. Rudeanu) **80j:06017** 06E99
- (with Maitra, A.; Rao, B. V.) A problem in the extension of measures. *Illinois J. Math.* 23 (1979), no. 2, 211–216. (J. Lukel) **80d:28011** 28A10
- Rao, K. R. (with Kuo, John G. K.; Narasimhan, M. A.) Slant-Haar transform. *Internat. J. Comput. Math.* 7 (1979), no. 1, 73–83. (Authors' summary) **80c:94004** 94A11
- Rao, K. Ranganatha (with Purnachandra Rao, V.) Optimal feedback control via block-pulse functions. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 372–374. (A. S. C. Sinha) **80f:93063** 93D15
- Rao, K. Surya Koteswara Characterization of structure lattices of certain kinds of join semilattices. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 3, 409–418. (K. L. N. Swamy) **80d:06004** 06A12 (06A23)
- Rama Rao, K. V. See Rama Rao, K. V.
- Rao, M. Bhaskara (with Bozorgnia, A.) On weak orthogonality and a strong law of large numbers. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 12, 1017–1021 (1979). (Robert L. Taylor) **80i:60003** 60B11 (60B12)
- (with Bozorgnia, A.) Some remarks on the strong law of large numbers for Banach-space valued weakly integrable random variables. *J. Multivariate Anal.* 8 (1978), no. 4, 579–583. (Robert L. Taylor) **80d:60014** 60B12
- (with Bozorgnia, A.) A strong law of large numbers for subsequences of random elements in separable Banach spaces. *Ann. Probab.* 7 (1979), no. 1, 156–158. (S. D. Chatterji) **80b:60014** 60B12
- (with Halevy, Avner) On an analogue of Komlós' theorem for strategies. *Ann. Probab.* 7 (1979), no. 6, 1073–1077. (Robert Chen) **80c:60035** 60F15
- (with Bozorgnia, A.) On summability methods and limit theorems for Banach space valued random variables. *Bull. Inst. Math. Acad. Sinica* 7 (1979), no. 1, 1–6. (Carol All O'Connor) **80d:60013** 60B12
- (with Rao, K. P. S. Bhaskara) On the lattice of subalgebras of a Boolean algebra. (Russian summary) *Czechoslovak Math. J.* 29(104) (1979), no. 4, 530–545. (S. Rudeanu) **80j:06017** 06E99
- Narayana Rao, M. L. See Narayana Rao, M. L.
- Rao, M. V. C. (with Baliga, G. V.) Comments on: "Global stability of two linearly interconnected nonlinear systems" [*IEEE Trans. Automat. Control* AC-20 (1975), no. 5, 678–682; MR 53 #5111] by N. H. McClamroch and G. D. Ianculescu. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 672–673. (M. M. Konstantinov) **80i:93048** 93D10
- Rao, Malempati Madhusudana Covariance analysis of nonstationary time series. *Developments in statistics, Vol. 1*, pp. 171–225, Academic Press, New York, 1978. (T. Pitcher) **80a:62149** 62M10 (60G30)
- Processus linéaires sur  $C_d(G)$ . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 2, A139–A141. (Author's summary) **80c:60056** 60G20
- Erratum: "Abstract nonlinear prediction and operator martingales" [*J. Multivariate Anal.* 1 (1971), no. 2, 129–157; MR 46 #949]. *J. Multivariate Anal.* 9 (1979), no. 4, 614. (Editors) **80c:60049** 60G25
- Rao, N. Prabhakara Brouwerian semigroups. *Proceedings of the Conference on Mathematical Analysis and its Applications (Inst. Engrs., Mysore, 1977)*, pp. M134–M151, Matscience Rep., 91, Inst. Math. Sci., Madras, 1978. (P. R. Jones) **80c:06009** 06F05 (20M10)
- Seminormal autometrized algebras. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 1, 91–114. (I. Petrescu) **80a:03074** 03G10 (06B99)
- Ranga Rao, P. See Ranga Rao, P.
- Rao, P. P. (with Tiwari, Ramji) A class of static Weyl solutions for the Brans-Dicke Maxwell fields. *Acta Phys. Acad. Sci. Hungar.* 45 (1978), no. 4, 285–291 (1979). (Steve Kloster) **80i:83028** 83C50
- Rao, P. Samba Shiva Geometry of streamlines in fluid flow theory. *Defence Sci. J.* 28 (1978), no. 4, 175–178. (Author's summary) **80a:76014** 76B99 (35Q99)
- Rao, Poduri S. R. S. (with Chaubey, Yogendra P.) Three modifications of the principle of the MINQUE. *Comm. Statist. A—Theory Methods* 7 (1978), no. 8, 767–778. (R. Zmyslony) **80d:62056** 62J10
- Sitaramachandra Rao, R. See Sitaramachandra Rao, R.
- Rao, Ram C. (with Rutenberg, David P.) Preempting an alert rival: strategic timing of the first plant by analysis of sophisticated rivalry. *Bell J. Econom.* 10 (1979), no. 2, 412–428. (Authors' summary) **80g:90139** 90D40 (90A05)
- Rao, S. Vittal (with Rao, A. S.; Lamba, S. S.) Application of Routh approximant method for reducing the order of a class of time-varying systems. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 110–113. (Authors' summary) **80m:93049** 93C50
- Rao, Siddanti Bhaskara (with Bhat-Nayak, Vasanti N.; Naik, Ranjan N.) Characterization of frequency partitions of Eulerian graphs. *Proceedings of the Symposium on Graph Theory (Indian Statist. Inst., Calcutta, 1976)*, pp. 124–137, ISI Lecture Notes, 4, Macmillan of India, New Delhi, 1979. (Authors' summary) **80m:05077** 05C45 (05A17)
- The number of open chains of length three and the parity of the number of open chains of length  $k$  in self-complementary graphs. *Discrete Math.* 28 (1979), no. 3, 291–301. (C. R. J. Clapham) **80c:05081** 05C38 (05C30)
- Rao, T. R. N. (with Agrawal, Dharna P.) On modulo  $(2^n + 1)$  arithmetic logic. *Proceedings of the 4th IFCE Symposium on Computer Arithmetic (Santa Monica, Calif., 1978)*, pp. 104–108, IEEE, Long Beach, Calif., 1978. (Authors' summary) **80g:68003** 68A05 (94C10)
- (with Constantin, Serban D.) On the theory of binary asymmetric error correcting codes. *Inform. and Control* 40 (1979), no. 1, 20–36. (J. J. Stiffler) **80f:94030** 94D60
- Purnachandra Rao, V. See Purnachandra Rao, V.
- Sree Hari Rao, V. See Sree Hari Rao, V.
- Rama Rao, V. V. See Rama Rao, V. V.
- Rao, Vadrevu Sree Hari Note on conditionally asymptotically invariant sets. *J. Math. Phys.* 21 (1978), no. 5, 469–471. (S. Leela) **80g:34054** 34D99
- Raoult, Jean-Claude (with Vuillemin, Jean) Operational and semantic equivalence between recursive programs. (French summary) *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 75–85, ACM, New York, 1978. (G. Berry) **80c:68036** 68B10
- (with Flajolet, Philippe; Vuillemin, Jean) The number of registers required for evaluating arithmetic expressions. *Theoret. Comput. Sci.* 9 (1979), no. 1, 99–125. (Authors' summary) **80c:68101** 68C25 (05C05)
- Rapaport, William J. Meinongian theories and a Russellian paradox. *Notul* 12 (1978), no. 2, 153–180. (From the introduction) **80a:03008** 03A05
- Raphaël, Marc (with Freedman, Allen R.; Sember, John J.) Some Cesàro-type summability spaces. *Proc. London Math. Soc.* (3) 37 (1978), no. 3, 508–520. (E. Jürimäe) **80c:40007** 40H05 (40D09)
- (with Sember, John J.) The unrestricted section properties of sequences. *Canad. J. Math.* 31 (1979), no. 2, 331–336. (N. J. Kalton) **80j:46021** 46A45
- Raphaël, R. (with Handelman, David) Regular Schur rings. *Arch. Math. (Basel)* 31 (1978/79), no. 4, 332–338. (K. A. Byrd) **80c:16010** 16A30 (15A09)
- Rapinčuk, A. S. (with Bondarenko, A. A.) On an estimate of the number of double cosets of adèle groups of algebraic groups. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 22 (1978), no. 5, 397–400, 475. (Editors) **80b:10030** 10C30
- (with Platonov, V. P.; Bondarenko, A. A.) Numbers of classes of algebraic groups.

- (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 1, 28–31. (Author's review (A. A. B.)) 80d:10035 10C30 (20G15)
- Rapoport, L. P. (with Agre, M. Ja.) Variational principles for the scattering problem in the presence of an intensive electromagnetic wave. (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 1, 121–127. (Authors' summary) 80d:81109 81F99
- Rapoport, M. Compactifications of the space of modules of Hilbert-Blumenthal. *Compositio Math.* 36 (1978), no. 3, 255–335. (Jean Giraud) 80j:14009 14D20 (10D20)
- Rapoport, R. I. (with Goz, N. Ja.) Equivalence of successive and single optimization. *Avtomat. i Telemekh.* 1978, no. 12, 98–108 (Russian); translated as *Automat. Remote Control* 39 (1978), no. 12, part 2, 1816–1824 (1979). (Authors' summary) 80f:90128 90C31
- Rapp, Birger (with Björk, Tomas) Optimal maintenance due to service life uncertainty. (French summary) *Operational research '78* (Proc. Eighth IFORS Internat. Conf., Toronto, Ont., 1978), pp. 1040–1053, North-Holland, Amsterdam, 1979. (Masanori Kodama) 80h:90070 90B25 (93C99)
- Rappoport, David (with Gertner, Izidor) Stochastic control of system with unobserved jump parameter process. *Inform. Sci.* 13 (1977), no. 3, 269–282. (Authors' summary) 80h:93072 93E20
- Rappoz, J. (with Descloux, J.; Nassif, N.) On properties of spectral approximations. *Equadiff IV* (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977), pp. 81–85, Lecture Notes in Math., 703, Springer, Berlin, 1979. (P. M. Anselone) 80f:47062 47A10 (47A55)
- Rappoport, I. S. A linear differential game of several persons with limited control resources. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 5, 69–73. (Author's summary) 80c:90172 90D25
- A pursuit problem for several control objects in the presence of integral constraints. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 3 (1979), 221–224, 240. (J. M. Skowronski) 80f:90166 90D25
- Rappoport, P. N. (with Swamy, P. A. V. B.; Mehta, J. S.) Two methods of evaluating Hoerl and Kennard's ridge regression. *Comm. Statist. A—Theory Methods* 7 (1978), no. 12, 1133–1155. (R. W. Farebrother) 80h:62052 62J07
- See also Vinod, Hrishikesh D. 80h:62053
- Rardin, Ronald L. (with Bazaraa, Mokhtar S.; Goode, Jamie J.) A finite steepest-ascent algorithm for maximizing piecewise-linear concave functions. *J. Optim. Theory Appl.* 25 (1978), no. 3, 437–442. (Ettore Santi) 80a:90110 90C25
- (with Rosenthal, Richard E.) Graph structures underlying submatrices of network flow tableaux. *Transportation Sci.* 13 (1979), no. 2, 98–111. (Authors' summary) 80m:90049 90B10 (90C08)
- Rai, Zbigniew On information storage and retrieval systems, an algebraic approach. I. *Mathematical foundations of computer science, 1978* (Proc. Seventh Sympos., Zakopane, 1978), pp. 436–441, Lecture Notes in Comput. Sci., 64, Springer, Berlin, 1978. (Witold Lipiński) 80d:68132 68H05 (68B15)
- Rasch, Dieter Selection problems in balanced block designs. (German summary) *Biometrical J.* 20 (1978), no. 3, 275–278. (E. H. Lehman) 80a:62036 62F07 (62K10)
- (with Herrendörfer, Günter) Weitere Bemerkungen zur Anzahl elementarer BUB in  $(v, k)$ -Familien. *Rostock. Math. Kolloq.* No. 9 (1978), 35–42. (L. D. Baumert) 80a:05016 05B05
- See also Kleffe, J. 80g:62048 and Grossa, Hans-Dietrich. 80a:05016a
- Rasche, G. (with Nenciu, G.; Stühi, M.; Woolcock, W. S.) General solution of multichannel partial-wave dispersion relations. I. Coincident thresholds, pole approximation. *Helv. Phys. Acta* 51 (1978), no. 4, 608–633. (N. Nakanishi) 80f:81096 81F15 (47A40)
- Rasche, Michel Sur une équation intégrale-différentielle non linéaire issue de la biologie. *J. Differential Equations* 32 (1979), no. 3, 420–453. (J. M. Cushing) 80f:45021 45K05 (92A05)
- Raievskii, P. K. (with Vasil'eva, M. V.; Efimov, N. V.) Grigorii Borisovič Gurevič (on the occasion of his eightieth birthday). (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 2(206), 241–242. (Editors) 80c:01019 01A70
- Rashid, M. A. Traces of products of angular momentum operators. *J. Phys. A* 12 (1979), no. 8, L199–L201. (Author's summary) 80d:81058 81D99
- Rashid, Salim Existence of equilibrium in infinite economies with production. *Econometrica* 46 (1978), no. 5, 1155–1164. (Truman Bewley) 80a:90026 90A14
- The relationship between measure-theoretic and nonstandard exchange economies. *J. Math. Econom.* 6 (1979), no. 2, 195–202. (Karl Shell) 80j:90049 90A16
- Rasin, V. V. On the lattice of varieties of completely simple semigroups. *Semigroup Forum* 17 (1979), no. 2, 113–122. (Anna Ja. Aizenstat) 80c:20073 20M07
- Raikov, P. I. Conditional stability in the critical case of a zero root for systems of differential-difference equations. (Russian. Bulgarian and English summaries) *Godinik Viss. Učebn. Zaved. Prilozna Mat.* 13 (1977), no. 4, 53–62 (1978). (Author's summary) 80k:34106 34K20
- Rasilembekov, S. N. (with Rogozin, V. S.) The Noether theory for integral equations of the third kind. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 9, 1678–1686, 1725. (G. S. Litvinčuk) 80c:45002 45B05
- (with Rogozin, V. S.) Noether theory for integral equations of the third kind in spaces of continuous and generalized functions. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* 1979, no. 1, 61–69. (S. G. Samko) 80j:45011 45G10 (47A53)
- Rasmussen, Carl H. Oscillation and asymptotic behavior of systems of ordinary linear differential equations. *Trans. Amer. Math. Soc.* 256 (1979), 1–47. (K. Kreith) 80k:34045 34C10 (34C11)
- Rasmussen, H. (with Rogers, C.) Solutions of free surface problems using a Rayleigh-Ritz procedure. *Information linkage between applied mathematics and industry* (Proc. First Annual Workshop, Naval Postgraduate School, Monterey, Calif., 1978), pp. 357–364, Academic Press, New York, 1979. (From the introduction) 80f:65144 65P05 (76S05)
- On an approximate solution for steady, viscous flow near a rotating disk. *Utilitas Math.* 15 (1979), 89–96. (A. Pozzi) 80f:76020 76D99
- Rasmussen, Ole Hjorth Exotic characteristic classes for holomorphic foliations. *Invent. Math.* 46 (1978), no. 2, 153–171. (D. B. Fuks) 80d:57015 57R32 (32L10)
- Rasmussen, Shelley L. (with Starr, Norman) Optimal and adaptive stopping in the search for new species. *J. Amer. Statist. Assoc.* 74 (1979), no. 367, 661–667. (R. A. Wijsman) 80m:62078 62L15 (62L12)
- Rasmussen, W. O. (with Salamó, S.) An algebraic approach to Coulomb scattering in  $N$  dimensions. *J. Math. Phys.* 20 (1979), no. 6, 1064–1067. (A. O. Barut) 80d:81102 81F05 (47A40)
- Rasopov, V. E. (with Šapeev, V. P.; Janenko, N. N.)  $D$ -properties of a system of equations of symmetric gas flows. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 2, 308–311. (From the text) 80f:76030 76N15
- Rasopova, N. S. The magnitude of the regularization parameter in the quasireversibility method. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* 1979, no. 2, 48–51. (A. Szep) 80j:34075 34G10
- Rasputin, G. G. Numerical solution for systems of nonlinear algebraic equations. (Russian) *Metody Vychisl. No. 11* (1978), 57–81, 188. (Gerhard Telschow) 80b:65063 65H10
- Some cubature formulas for a triangle and a square. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 51 (1978), 119–128, 229. (Author's summary) 80c:65061 65D32
- On the numerical solution of a system of algebraic equations by the method of elimination. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astron.* 1979, typ. 1, 65–70, 134. (C. Illoio) 80f:65060 65H10
- Rassbach, W. (with Monk, J. Donald) The number of rigid Boolean algebras. *Algebra Universalis* 9 (1979), no. 2, 207–210. (Sabine Koppelberg) 80c:06020 06E10
- Rassias, George M. On the Morse-Smale characteristic of a differentiable manifold. *Bull. Austral. Math. Soc.* 20 (1979), no. 2, 281–283. (Thomas E. Cecil) 80m:57029 57R70
- Rassias, Themistocles M. On Hilbert's sixteenth problem. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 4, 203–205. (V. M. Harlamov) 80k:14043 14H99 (14C30, 34A20)
- On the stability of the linear mapping in Banach spaces. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 297–300. (Maurice Gauthier) 80d:47094 47H15
- On the Morse-Smale index theorem and the stability of minimal surfaces. *Tamkang J. Math.* 9 (1978), no. 2, 251–257. (João Lucas Marques Barbosa) 80k:58042 58E12 (49F10, 53A10)
- Rastall, Peter The Newtonian theory of gravitation and its generalization. (French summary) *Canad. J. Phys.* 57 (1979), no. 7, 944–973. (Author's summary) 80c:83034 83D05
- Rastogi, S. C. On quarter-symmetric metric connection. *C. R. Acad. Bulgare Sci.* 31 (1978), no. 7, 811–814. (T. Okubo) 80f:53015 53B15
- On conformal invariants in an areal space. *Tensor (N.S.)* 32 (1978), no. 3, 253–256. (S. Watanabe) 80a:53037 53B40
- Rastriga, L. A. (with Ripa, K. K.; Tarasenko, G. S.) ★Адаптация случайного поиска. (Russian) [Adaptation of random search] "Zinaine", Riga, 1978. 242 pp. (D. M. Sudakov) 80k:93059 93E99 (90B40)
- (with Zdanok, A. I.) The dynamics of the dual-alternative choice in adaptation problems. (Russian) *Avtomat. i Vychisl. Tehn. (Riga)* 1978, no. 4, 51–54, 93. (Authors' summary) 80c:93075 93C40
- (with Ripa, K. K.) Optimal automata search algorithms in nonstationary random environments. (Russian) *Problemy Shuchain. Poiska No. 6 Zadači Optimizacii* (1978), 44–61, 331. (R. G. Buharev) 80a:68058 68D27 (68C05)
- Identification of complex systems by random search methods. (Russian) *Problemy Shuchain. Poiska No. 6 Zadači Optimizacii* (1978), 232–243, 334. (J. Mockus) 80a:93180 93E12
- Particularities of the calculation of bounds in random search processes. (Russian) Adaptation problems in technical systems. *Problemy Shuchain. Poiska No. 7* (1978), 13–21, 317. (Author's summary) 80c:65024 65C99 (90B40, 90C15)
- See also Adaptation problems in technical systems. 80a:90002
- Rasulov, A. S. Path integration in problems of nonlinear diffusion. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 51 (1978), 129–137, 230. (Author's summary) 80f:65005 65C05 (65Rxx)
- Rasulov, M. A. Investigation of the convergence of the grid method for problems of nonlinear heat conduction with absorption (Cauchy problem). (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1979, no. 3, 90–95. (G. W. Hedstrom) 80a:35037 65M05 (35K15, 35K60, 65M05)
- Rasulov, N. P. (with Holevo, A. S.) A regression problem for processes with continuous time. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 4, 762–771. (Ju. I. Petunin) 80e:62061 62M10
- Estimation of polynomial-trigonometric regression coefficients. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 1, 20–24, 93. (Ju. I. Petunin) 80j:62088 62M10
- Räsvan, V. I. (with Halanay, A.) Frequency domain conditions for forced oscillations in difference systems. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énergét.* 24 (1979), no. 1, 141–148, vii, viii. (D. H. Chyung) 80m:93033 93C10
- Ratani, R. T. (with Khatri, C. G.) On estimation of the mean parameter of a truncated normal distribution with known coefficient of variation. *Comm. Statist. A—Theory Methods* 8 (1979), no. 3, 237–244. (Rasul A. Khan) 80j:62032 62F10
- Ratcliffe, John G. Crossed extensions. *Trans. Amer. Math. Soc.* 257 (1980), no. 1, 73–89. (L. Ribes) 80m:20042 20J10 (18G15)
- Ratcliffe, P. A. (with Pugh, A. C.) On the zeros and poles of a rational matrix. *Internat. J. Control* 30 (1979), no. 2, 213–226. (T. Kaczorek) 80g:93007 93A10
- Rath, H. J. Ein Beitrag zur Berechnung einer peristaltischen Strömung in elastischen Leitungen. (English summary) *Acta Mech.* 31 (1978/79), no. 1–2, 1–12. (V. T. Golovchankin) 80a:73059 73P99 (65P05)
- Rathie, A. K. An integral involving the  $H$ -function and the Kampé de Fériet function. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 21 (1978), no. 4, 299–305. (S. L. Kalla) 80h:33011 33A35
- Rathie, Navratin Integrals involving the  $H$ -function. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 22 (1979), no. 3, 253–258. (Rekha Srivastava) 80a:33014 33A35 (33A30)
- Rathie, Pushpa N. Directed divergence and related statistical measures: axiomatic foundations and applications. *Proceedings of the Tenth Brazilian Colloquium (Poço de Caldas, 1975), Vol. II* (Portuguese), pp. 389–405, Cons. Nac. Desenvolvimento Ci. Tec. Inst. Mat. Pura Apl., Rio de Janeiro, 1978. (S. Cambanis) 80j:94010 94A17
- (with Kannappan, P.) On a generalized directed divergence and related measures.



- Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974), Vol. B, pp. 255-265, Academia, Prague, 1978. (Ram Autar)* 80d:94010 94A17
- (with Kannappan, P.) Generalization of sum representation functional equations. II. Generalized directed divergence. *Kybernetika (Prague)* 15 (1979), no. 1, 28-39. (Under Jeet Taneja) 80c:39012b 39B40 (94A17)
- Rathod, V. R. (with Shah, Shantilal M.) Prediction intervals for future order statistics in two-parameter exponential distributions. *J. Indian Statist. Assoc.* 16 (1978), 113-121. (J. F. Lawless) 80i:62027 62F25
- Rathore, Mahendra Pal Singh On Bochner curvature tensor and its applications. *Indian J. Pure Appl. Math.* 8 (1977), no. 11, 1420-1427. (T. Ohkubo) 80m:53023 53B35
- Concurrent vector fields and almost product manifolds. *Proceedings of the International Symposium on Relativity and Unified Field Theory (Calcutta, 1975-1976)*, pp. 227-230, Bose Inst. Phys. Sci., Univ. Calcutta, Calcutta, 1978. (Yvette Kosmann-Schwarzbach) 80a:53046 53C15 (83C99)
- Rathore, R. K. S. Lipschitz-Nikolskii constants and asymptotic simultaneous approximation of the  $M_\alpha$ -operators. *Aequationes Math.* 18 (1978), no. 1-2, 206-217. (A. Sharma) 80a:41022 41A35
- Rathore, T. S. (with Singh, B. M.; Kibe, A. V.) Continued fraction inversion and expansion. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 349-350. (Authors' summary) 80c:65027 65D05
- Ratloff, H. Donald (with Bartholdi, John J., III) Unnetworks, with applications to idle time scheduling. *Management Sci.* 24 (1977/78), no. 8, 850-858. 80c:90079 90B35
- Ratloff, Louis J., Jr. ★Chain conjectures in ring theory. An exposition of conjectures on catenary chains. Lecture Notes in Mathematics, 647. Springer-Verlag, Berlin-New York, 1978. v + 133 pp. ISBN 3-540-08758-3 (Richard Draper) 80c:13008 13C15 (13Exx)
- (with Pettit, M. E., Jr.) Characterizations of  $H_\ell$ -local rings and of  $C_\ell$ -local rings. *Amer. J. Math.* 100 (1978), no. 6, 1213-1234. (P. Schenzel) 80k:13004 13C15 (13H99)
- (with Robson, J. C.) Minimal bases for modules. *Houston J. Math.* 4 (1978), no. 4, 593-596. (G. Eisenreich) 80a:16042 16A64 (13H99)
- Two theorems on the prime divisors of zeros in completions of local domains. *Pacific J. Math.* 81 (1979), no. 2, 537-545. (P. Schenzel) 80k:13009 13G05 (13B20, 13C15)
- Note on simple integral extension domains and maximal chains of prime ideals. *Proc. Amer. Math. Soc.* 77 (1979), no. 2, 179-185. (Sylvia Wiegand) 80h:13009 13B20 (13A15)
- $A(X)$  and GB-Noetherian rings. *Rocky Mountain J. Math.* 9 (1979), no. 2, 337-353. (Evan G. Houston) 80h:13011 13B25 (13C15, 13H99)
- Ratnaparkhi, M. V. (with Patil, G. P.) Characterizations of certain statistical distributions based on additive damage models involving Rao-Rubin condition and some of its variants. *Sankhyā Ser. B* 39 (1977), no. 1, 65-75. (V. Seshadri) 80d:62017 62E10
- Ratner, Marina Horocycle flows are loosely Bernoulli. *Israel J. Math.* 31 (1978), no. 2, 122-132. (Peter Walters) 80b:58048 58F15
- Bernoulli flow over maps of the interval. *Israel J. Math.* 31 (1978), no. 3-4, 298-314. (Peter Walters) 80b:28026 28D05 (58F15)
- Ratschek, H. Zentrische Formen. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T434-T436. (From the introduction) 80a:65096 65G05
- Ratnay, B. A. (with Lambek, J.) Additive duality at cosmall injectives. *Bull. Soc. Math. Grèce (N.S.)* 18 (1977), no. 2, 186-203. (B. Stenström) 80j:18016 18E10
- (with Lambek, J.) Functional completeness and Stone duality. *Studies in foundations and combinatorics*, pp. 1-9, *Advances in Math., Suppl. Studies*, 1, Academic Press, New York, 1978. (H. Gonsior) 80c:18006 18C20 (03G05)
- (with Lambek, J.) A general Stone-Gelfand duality. *Trans. Amer. Math. Soc.* 248 (1979), no. 1, 1-35. (Lawrence Neff Stout) 80c:18012 18C10 (46M15, 54B30)
- Rätz, Jürg Quadratic functionals satisfying a subsidiary inequality. *General inequalities (Proc. First Internat. Conf., Math. Res. Inst., Oberwolfach, 1976)*, I, pp. 261-270, Birkhäuser, Basel, 1978. (M. Hosszu) 80k:39004 39B50 (46B99)
- Rauch, Herbert E. An engineering view of unsolved problems in constrained optimization. *Information linkage between applied mathematics and industry (Proc. First Annual Workshop, Naval Postgraduate School, Monterey, Calif., 1978)*, pp. 193-214, Academic Press, New York, 1979. (Authors' summary) 80c:49033 49C10 (90C99)
- Rauch, Jeffrey (with Williams, David N.) Euclidean nonlinear classical field equations with unique vacuum. *Comm. Math. Phys.* 63 (1978), no. 1, 13-29. (O. John) 80b:81053 81C99 (35J60)
- (with Williams, David N.) Topics on Euclidean classical field equations with unique vacuum. *Feynman path integrals (Proc. Internat. Colloq., Marseille, 1978)*, pp. 189-202, *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (Ivan F. Wilde) 80k:81134 81E99 (35J60)
- Raudys, Šarūnas On the accuracy of some estimates of the multivariate density function. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974), Vol. B, pp. 429-438, Academia, Prague, 1978. (L. B. Klebanov)* 80d:62031 62G05
- Rauf Qureshi, M. A. Commutativity of an  $(f_0, f_1, \dots, f_n)$ -extension of a ring  $R$ . *Karachi Math. Assoc. Riazi (Souvenir)* 1978, 42-43. (D. A. Towers) 80d:17006 17A99
- Raugi, Albert Théorème de la limite centrale sur les groupes extensions compactes d'un groupe de Lie résoluble connexe de type rigide. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 9, A409-A412. (Authors' summary) 80c:22015 22E30 (22E25, 60B15)
- Théorème de la limite centrale sur les groupes nilpotents. *Z. Wahrsch. Verw. Gebiete* 43 (1978), no. 2, 149-172. (Wilfried Hazod) 80j:60035 60B15 (43A05, 60J15, 60J45)
- Quelques remarques sur le théorème de la limite centrale sur un groupe de Lie. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 2, A103-A106. (Authors' summary) 80m:60016 60B15
- Rauben, Burkhard (with Schmitz, Norbert; Zachow, Ernst-Wilhelm) ★Spieltheorie. Eine Einführung in die mathematische Theorie strategischer Spiele. Leitfaden der Angewandten Mathematik und Mechanik, 49. B. G. Teubner, Stuttgart, 1979. 400 pp.
- ISBN 3-519-02351-2 (J. Rosenmüller) 80j:90001 90-01 (90D99)
- Raufels, Peter The connection between axiomatic and denotational semantics of programming languages. *Programmiersprachen (Fünfte GI Fachtagung, Braunschweig, 1978)*, pp. 169-177, *Informatik-Fachberichte*, 12, Springer, Berlin, 1978. (Klaus Indermark) 80k:68009 68B10
- Rauli, J.-C. (with Duhamel, P.) Automatic test generation techniques for analog circuits and systems: a review. Special issue on automatic analog fault diagnosis. *IEEE Trans. Circuits and Systems* 26 (1979), no. 7, 411-440. (Authors' summary) 80g:94072 94C05 (68J05)
- Raup, R. C. (with Meyer, Gerard G. L.) On the structure of cluster point sets of iteratively generated sequences. *J. Optim. Theory Appl.* 28 (1979), no. 3, 353-362. (L. Janos) 80h:54011 54C05 (90C30)
- Raup, Marco A. (with de Rezende, N. S.) Computation of longitudinal motions of a viscoelastic bar. *Bol. Soc. Brasil. Mat.* 8 (1977), no. 2, 131-147. (Peter J. Chen) 80d:73060 73F15 (65N30)
- (with Feijóo, Raúl A.; Taroco, Edgardo; Moura, Carlos A.) Approximate solutions of the problem of thin shells by the finite element method. (Spanish) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977), Vol. II (Portuguese)*, pp. 873-891, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Authors' summary) 80f:73067 73L20 (65N30)
- (with Feijóo, Raúl A.; Moura, Carlos A.) A nonlinear problem in dynamic visco-elasticity with friction. *Bol. Soc. Brasil. Mat.* 9 (1978), no. 1, 61-82. (Authors' summary) 80c:73036 73F15 (35Q99)
- Rausen, Martin (with Smith, Larry) A geometric interpretation of sphere bundle boundaries and generalized  $J$ -homomorphisms with an application to a diagram of I. M. James. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 117, 113-117. (Michael Eggart) 80e:55026 55Q50
- Rausser, Gordon C. (with Pekelman, Dov) Adaptive control: survey of methods and applications. *Applied optimal control*, pp. 89-120, *Studies in the Management Sci.*, 9, North-Holland, Amsterdam, 1978. (Zbigniew Nahorski) 80b:93083 93C40
- Rautenberg, Wolfgang More about the lattice of tense logics. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 8 (1979), no. 1, 21-26. (S. K. Thomason) 80h:03032 03B45 (03G10)
- Rautmann, Reimund On the uniqueness and stability of weak solutions of a Fokker-Planck-Vlasov equation. *Numerical treatment of differential equations in applications (Proc. Meeting, Math. Res. Center, Oberwolfach, 1977)*, pp. 141-150, *Lecture Notes in Math.*, 679, Springer, Berlin, 1978. (Clarence M. Ablow) 80b:35127 35Q20
- Die Helmholtzsche Wirbelgleichung mit einer Differenzannäherung. *Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978)*, *Z. Angew. Math. Mech.* 59 (1979), no. 3, T36-T38. (R. C. MacCamy) 80c:35058 35Q20
- Ravaska, Timo Frenet theory of surfaces. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 1, 151-168. (George Stamou) 80g:53003 53A07
- Ravenel, Douglas C. A novice's guide to the Adams-Novikov spectral sequence. *Geometric applications of homotopy theory (Proc. Conf., Evanston, Ill., 1977)*, II, pp. 404-475, *Lecture Notes in Math.*, 658, Springer, Berlin, 1978. (J. F. Adams) 80h:55057 55T15 (55N22, 55Q45)
- Ravey, J. C. (with Dognon, M.; Lucius, M.) Transient rheology in a new type of Couette apparatus. I. Theoretical study with Newtonian fluids. *Rheol. Acta* 19 (1980), no. 1, 51-59. (Authors' summary) 80m:76008 76A10
- Raviart, Pierre-Arnaud (with Crouzeix, Michel) Approximation d'équations d'évolution linéaires par des méthodes multiples. *Étude numérique des grands systèmes (Proc. Sympos., Novosibirsk, 1976)*, pp. 133-150, *Méthodes Math. de l'Informatique*, 7, Dunod, Paris, 1978. (Syvert P. Norsett) 80d:65063 65J05 (34G10, 65L05)
- (with Crouzeix, Michel) Approximation of linear evolution equations by means of linear multistep methods. (Russian) *Numerical methods in mathematical physics, geophysics and optimal control (Sympos., Novosibirsk, 1976)* (Russian), pp. 97-112, 233, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (Walter Gautschi) 80f:65063 65J10 (65L05)
- (with Brezzi, Franco; Hager, William W.) Error estimates for the finite element solution of variational inequalities. II. Mixed methods. *Numer. Math.* 31 (1978/79), no. 1, 1-16. (Georges A. Lebaud) 80c:65135 65N30
- Finite element methods and Navier-Stokes equations. *Computing methods in applied sciences and engineering (Proc. Third Internat. Sympos., Versailles, 1977)*, II, pp. 27-47, *Lecture Notes in Phys.*, 91, Springer, Berlin, 1979. (David F. Griffiths) 80b:65093 65N30 (76D05)
- (with Thomas, Jean Marie) Dual finite element models for second order elliptic problems. *Energy methods in finite element analysis*, pp. 175-191, Wiley, Chichester, 1979. (P. G. Ciarlet) 80j:65034 65N30 (35J25)
- (with Lesaint, Pierre) Finite element collocation methods for first-order systems. *Math. Comp.* 33 (1979), no. 147, 891-918. (Reinhard Scholz) 80d:65118 65N30
- Raviković, E. I. (with Kovalenko, I. I.; Puhtaevič, G. A.) Forecasting model system for national economic development in a long-term perspective. (Russian. English summary) *Issled. Operacii i ASU No. 13* (1979), 116-124, 136. (Authors' summary) 80g:90033 90A17
- Ravindra, G. Perfectness of normal products of graphs. *Discrete Math.* 24 (1978), no. 3, 291-298. (Alan Tucker) 80m:05046 05C15
- $B$ -graphs. *Proceedings of the Symposium on Graph Theory (Indian Statist. Inst., Calcutta, 1976)*, pp. 268-280, *ISI Lecture Notes*, 4, Macmillan of India, New Delhi, 1979. (Authors' summary) 80m:05095 05C99
- (with Parthasarathy, K. R.) The validity of the strong perfect-graph conjecture for  $(K_n - e)$ -free graphs. *J. Combin. Theory Ser. B* 26 (1979), no. 1, 98-100. (Alan Tucker) 80m:05045 05C15
- Ravindran, Reshika (with Prasad, P.) A mathematical analysis of nonlinear waves in a fluid filled visco-elastic tube. (German summary) *Acta Mech.* 31 (1978/79), no. 3-4, 253-280. (Alan Jeffrey) 80d:76106 76Z05 (35Q20)
- Trapped waves in the neighbourhood of a sonic-type singularity. *J. Fluid Mech.* 95 (1979), no. 3, 465-475. (Authors' summary) 80m:76021 76B15
- Ravisankar, T. S. (with Shukla, U. S.) Structure of  $\Gamma$ -rings. *Pacific J. Math.* 80 (1979), no. 2, 537-559. (J. Luh) 80i:16046 16A78

- Raviv, Artur** (with Harris, Milton) Optimal incentive contracts with imperfect information. *J. Econom. Theory* 20 (1979), no. 2, 231–259. (Jacob Paroush) **80a:90010** 90A05
- Rav'jar, P. A.** See Raviart, Pierre-Arnaud
- Ravkin, I. A.** (with Pavlov, A. I.; Pohodzel, B. B.) A method for the modeling of the exponential distribution based on the properties of the Poisson process. (Russian) *Ž. Vyšš. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1316–1320, 1359. (V. Dupac) **80a:65018** 65C10
- Rawlins, A. D.** A Bessel function inequality. *Proc. Roy. Soc. Edinburgh Sect. A* 81 (1978), no. 3-4, 187–194. (T. Erber) **80a:33007** 33A40  
(with Morgan, J. D.) Monotonic properties of analytic functions. *SIAM J. Math. Anal.* 9 (1978), no. 6, 1172–1178. (M. Ohtsuka) **80a:30002** 30A05
- Rawnsley, J. H.** Some properties of half-forms. *Differential geometrical methods in mathematical physics, II* (Proc. Conf., Univ. Bonn, Bonn, 1977), pp. 311–314, *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (Nicholas M. J. Woodhouse) **80a:58027** 58F06  
Differential geometry of instantons. *Comm. Dublin Inst. Adv. Stud. Ser. A No. 25* (1978), v+60 pp. (Vadim Komkov) **80a:81061** 81E10 (14Exx, 32Lxx, 53Cxx, 58Exx)  
Flat partial connections and holomorphic structures in  $C^\infty$  vector bundles. *Proc. Amer. Math. Soc.* 73 (1979), no. 3, 391–397. (A. Verona) **80a:58007** 58A30 (32L10, 58F06)
- Ray, Barada K.** (with Singh, Sankatha P.) Remarks on some fixed point theorems. II. *Indian J. Pure Appl. Math.* 9 (1978), no. 9, 881–885. (I. A. Rus) **80a:47078** 47H10  
On quasicontraction mappings in Banach spaces. *Mat. Vremik* 2(15)(30) (1978), no. 2, 159–160. (T. C. Lim) **80a:47053** 47H10  
Remarks on some theorems of Feller and Swokowski. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 2, 359–362. (J. Kuzmanovich) **80a:16011** 16A12  
On common fixed points. *Mathematica (Cluj)* 20(43) (1978), no. 1, 61–64. (L. Janos) **80a:54044** 54H25  
On common fixed points for sets of operators. *Mathematica (Cluj)* 20(43) (1978), no. 1, 65–69. (L. Janos) **80a:54045** 54H25  
(with Rhoades, B. E.) Corrections to: "Fixed-point theorems for mappings with a contractive iterate" [Pacific J. Math. 71 (1977), no. 2, 517–520; MR 57 #1467]. *Pacific J. Math.* 79 (1978), no. 2, 563. (Editors) **80a:54087** 54H25  
On an extension of a theorem of Ljubomir Ćirić. *Indian J. Pure Appl. Math.* 10 (1979), no. 2, 145–146. (Editors) **80a:47050** 47H10
- Ray, D.** (with Pister, K. S.; Polak, Elijah) Sensitivity analysis for hysteretic dynamic systems: theory and applications. *Comput. Methods Appl. Mech. Engrg.* 14 (1978), no. 2, 179–208. (Authors' summary) **80a:93058** 93B35 (73K05)
- Ray, Dipankar** Some solutions of SU(2) Yang-Mills-Higgs system. *J. Phys. A* 12 (1979), no. 3, L61–L66. (Author's summary) **80a:81073** 81E10 (58G35)  
On a class of solutions of nonlinear Boltzmann equations. *J. Statist. Phys.* 20 (1979), no. 1, 115–119. (Author's summary) **80a:82009** 82A05 (45K05)  
Comment on: "No-hair" theorems for the abelian Higgs and Goldstone models" [Phys. Rev. D (3) 18 (1978), no. 8, 2798–2803; MR 58 #25619] by S. L. Alder and R. B. Pearson. *Phys. Rev. D* (3) 20 (1979), no. 12, 3431. (Author's summary) **80a:81135** 81E99
- Ray, G. Deb** Similarity solutions for plane relativistic flow in a homogeneous medium. *Acta Phys. Acad. Sci. Hungar.* 46 (1979), no. 1, 39–43. (Author's summary) **80a:76055** 76Y05 (76L05)
- Ray, John R.** Lagrangians and systems they describe—how not to treat dissipation in quantum mechanics. *Amer. J. Phys.* 47 (1979), no. 7, 626–629. (Iraj Hormozdizari) **80a:81035** 81C99 (49H05)  
(with Reid, James L.) Noether's theorem, time-dependent invariants and nonlinear equations of motion. *J. Math. Phys.* 20 (1979), no. 10, 2054–2057. (L. G. Chambers) **80a:49002** 49A05 (70H35)
- Ray, Nigel** (with Bier, Tomas) Detecting framed manifolds in the 8 and 16 stems. *Geometric applications of homotopy theory* (Proc. Conf., Evanston, Ill., 1977), I, pp. 32–39, *Lecture Notes in Math.*, 657, Springer, Berlin, 1978. (Donald W. Kahn) **80a:55027** 55Q45 (55N22)  
Framed manifold models for the elements  $\beta_i$ . *Indiana Univ. Math. J.* 28 (1979), no. 2, 193–209. (M. Mahowald) **80a:55014** 55Q45 (55P42)
- Ray, Rose** (with Peritz, Eric) Some statistical methods for survival analysis with rare failures. *Comm. Statist. A—Theory Methods* 7 (1978), no. 7, 619–636. (S. M. Pandit) **80a:62164** 62N05 (62G10)
- Ray, Sekonai Chandru** (with Debnath, Lokenath; Chatterjee, Anadi Kumar) On the capillary-gravity wave problem in a running stream. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 26 (1978), no. 4, 363–372. (Robert Pearson) **80a:76007** 76B15
- Ray, W. H.** Some recent applications of distributed parameter control theory—a survey. *Control of distributed parameter systems* (Proc. Second IFAC Sympos., Coventry, 1977), pp. 21–34, IFAC, Düsseldorf, 1978. (Author's summary) **80a:93069** 93C20  
(with Soliman, M. A.) Nonlinear filtering for distributed parameter system having a small parameter. *Internat. J. Control* 30 (1979), no. 5, 757–772. (Authors' summary) **80a:93120** 93E11
- Ray, William O.** Zeros of accretive operators defined on unbounded sets. *Houston J. Math.* 5 (1979), no. 1, 133–139. (J. Kolomý) **80a:47083** 47H06  
An elementary proof of surjectivity for a class of accretive operators. *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 255–258. (Simeon Reich) **80a:47051** 47H06 (47H10)  
(with Kirk, W. A.) Fixed-point theorems for mappings defined on unbounded sets in Banach spaces. *Studia Math.* 64 (1979), no. 2, 127–138. (Norman Dancer) **80a:47065** 47H10
- Rayburn, Marlon C.** Maps and  $h$ -normal spaces. *Pacific J. Math.* 79 (1978), no. 2, 549–561. (Taiguo Tani) **80a:54031** 54D40
- Raychaudhuri, A. K.** (with Bandyopadhyay, N.) Charged dust distributions in equilibrium in Brans-Dicke theory. *Phys. Rev. D* (3) 18 (1978), no. 8, 2756–2758. (J. G. Taylor) **80a:83051** 83C99 (28D05)  
(with Maiti, S. R.) Conformal flatness and the Schwarzschild interior solution. *J. Math. Phys.* 20 (1979), no. 2, 245–246. (Authors' summary) **80a:83048** 83D05 (53C20)
- Ray-Chaudhuri, Dijen K.** Some characterization theorems for graphs and incidence structures. *Combinatorics* (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II, pp. 821–842, *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (J. I. Seidel) **80a:05020** 05Bxx (05Cxx)  
(with Chan, Agnes Hui) Characterization of "linegraph of an affine space". *J. Combin. Theory Ser. A* 26 (1979), no. 1, 48–64. (Francis Buekenhout) **80a:05020** 05B25 (05C99, 51Exx)
- See also Relations between combinatorics and other parts of mathematics. **80a:05005**
- Raychowdhury, P. N.** (with Boyd, J. N.) An application of projection operators to a one-dimensional crystal. *Bull. Inst. Math. Acad. Sinica* 7 (1979), no. 2, 133–144. (Authors' summary) **80a:82038** 82A60
- Raymon, Louis** (with Myers, Diane-Claire) Exact comonotone approximation. *J. Approx. Theory* 24 (1978), no. 1, 35–50. (G. G. Lorentz) **80a:41005** 41A10
- Raymond, Frank R. L.** Wilder's work on generalized manifolds—an appreciation. *Algebraic and geometric topology* (Proc. Sympos., Univ. California, Santa Barbara, Calif., 1977), pp. 7–32, *Lecture Notes in Math.*, 664, Springer, Berlin, 1978. (Mario Pezzana) **80a:01023** 01A65 (57–03, 57Pxx)  
(with Neumann, Walter D.) Seifert manifolds, plumbing,  $\mu$ -invariant and orientation reversing maps. *Algebraic and geometric topology* (Proc. Sympos., Univ. California, Santa Barbara, Calif., 1977), pp. 163–196, *Lecture Notes in Math.*, 664, Springer, Berlin, 1978. (M. Sebastiani) **80a:57006** 57N10 (14J17, 32B99)  
(with Conner, P. E.) Realizing automorphisms of  $\pi_1$  by homeomorphisms. *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 1, pp. 393–400, *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (Ja. A. Izrailevič) **80a:57015** 57N65  
(with Wigner, David) Constructions of aspherical manifolds. *Geometric applications of homotopy theory* (Proc. Conf., Evanston, Ill., 1977), I, pp. 408–422, *Lecture Notes in Math.*, 657, Springer, Berlin, 1978. (Herbert Abels) **80a:57003** 57M05 (55P40, 57S30)
- saint-Raymond, Jean** See Saint-Raymond, Jean
- Raynaud, J.** Localisations premières et copremières. Localisations stables par enveloppes injectives. *Ring theory* (Proc. Conf., Univ. Antwerp, Antwerp, 1977), pp. 81–111, *Lecture Notes in Pure and Appl. Math.*, 40, Dekker, New York, 1978. (R. Raphael) **80a:16026** 16A63 (16A08)
- Raynaud, Michel** Faisceaux amples et très amples (d'après T. Matsusaka). *Séminaire Bourbaki, 29e année* (1976/77), Exp. No. 493, pp. 46–58, *Lecture Notes in Math.*, 677, Springer, Berlin, 1978. (D. Lieberman) **80a:14005** 14D20 (14J10, 32J99)
- Rayne, Fred R.** The OLP method of nonlinear stability analysis of turbulence in Newtonian fluids. *Nonlinear equations in abstract spaces* (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977), pp. 417–437, *Academic Press*, New York, 1978. (W. O. Criminale, Jr.) **80a:76047** 76F05
- Rayner, A. A.** (with Raktke, B. L.; Chalton, D. O.) On construction of confounded mixed factorial and lattice designs. *Austral. J. Statist.* 20 (1978), no. 3, 209–218. (J. A. John) **80a:62075** 62K15 (05B05)
- Rayner, P. J. W.** (with Arambepola, B.) Multidimensional fast Fourier transform algorithm. *Electron. Lett.* 15 (1979), no. 13, 382–383. (Authors' summary) **80a:68069** 68C05 (68C25, 94A05)
- Rayski, Jerzy** A new approach to the Lorentz condition. (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 3, 297–302. (Author's summary) **80a:81061** 81E10 (00A89)  
Survey of physical theories from a methodological viewpoint. *Zeszyty Nauk. Univ. Jagielloń. Prace Fiz.* No. 14 (1978), 5–126. (Vadim Komkov) **80a:81001** 81–02  
Controversial problems of measurements within quantum mechanics. *Found. Phys.* 9 (1979), no. 3–4, 217–236. (Author's summary) **80a:81006** 81B05  
The problems of quantum gravity. *Gen. Relativity Gravitation* 11 (1979), no. 1, 19–24. (John Madore) **80a:83018** 83C45
- Rayward-Smith, V. J.** (with Rolph, R. N.) Finding linear and circular sequences of minimal and maximal total adjacency. *Inform. Process. Lett.* 10 (1980), no. 1, 9–13. (From the introduction) **80a:68015** 68B15 (68C25)
- Razar, Michael** (with Goldstein, Larry Joel) Ramanujan type formulas for  $\zeta(2k-1)$ . *J. Pure Appl. Algebra* 13 (1978), no. 1, 13–17. (J. Lehner) **80a:10048** 10H05  
Polynomial maps with constant Jacobian. *Israel J. Math.* 32 (1979), no. 2–3, 97–106. (W.-D. Geyer) **80a:14009** 14E07 (12E05, 14E20)
- Razavy, M.** Hamilton's principal function for the Brownian motion of a particle and the Schrödinger-Langevin equation. (French summary) *Canad. J. Phys.* 56 (1978), no. 3, 311–320. (Robin Hudson) **80a:82026** 82A30 (00A89, 81D05)  
Nonlinear wave equation for quantized frictional forces. (French summary) *Canad. J. Phys.* 56 (1978), no. 10, 1372–1381. (P. Caldirola) **80a:81014** 81C05 (35L99)  
Quantum-mechanical irreversible motion of an infinite chain. (French summary) *Canad. J. Phys.* 57 (1979), no. 10, 1731–1737. (Mary Beth Ruskai) **80a:81199** 81H05 (82A05)
- Rashev, I. V.** Stable Gale-von Neumann models. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 1, 37–39. (Author's introduction) **80a:90014** 90A16
- Razen, R. A.** Transversals and finite topologies. *Combinatorial mathematics* (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977), pp. 248–254, *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (Karsten Steffens) **80a:05008** 05A15 (54A25)  
(with Godsil, C. D.; Imrich, Wilfried) On the number of subgroups of given index in the modular group. *Monatsh. Math.* 87 (1979), no. 4, 273–280. (W. W. Stothers) **80a:10019** 10D07 (20H10)
- Razevig, V. D.** Reduction of stochastic differential equations with small parameters and stochastic integrals. *Internat. J. Control* 28 (1978), no. 5, 707–720. (Robert J. Mulholland) **80a:60093** 60J25 (60H10, 93E05)
- Razin, Assaf** (with Helpman, Elhanan) Participation equilibrium and the efficiency of stock market allocations. *Internat. Econom. Rev.* 19 (1978), no. 1, 129–140. (Giovanni M. Zambruno) **80a:90006** 90A05 (90A15)  
(with Helpman, Elhanan) Uncertainty and international trade in the presence of stock markets. *Rev. Econom. Stud.* 45 (1978), no. 2, 239–250. (From the introduction) **80a:90040** 90A16 (90A05)
- Razmyslov, Ju. P.** The Hall-Higman problem. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 4, 833–847. (M. Greendlinger) **80a:20040** 20F50 (20F16)
- Razmyslov, G. P.** (with Krahotko, V. V.) On the problem of complete control of



- dynamical systems. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 9, 1707-1709, 1727. (Authors' summary) 80g:93026 93B25 (34H05)
- Razumov, A. V. (with Tarasov, A. Ju.) Dipole interaction of an oscillator with a scalar field. (Russian. English summary) *Teori. Mat. Fiz.* 38 (1979), no. 3, 355-363. (Authors' summary) 80b:81034 81C12 (47A55)
- Razzaghi, M. Conjugate point conditions for linear quadratic control problems. *Automat. Control Theory Appl.* 6 (1978), no. 3, 51-53. (Author's summary) 80i:49024 49B10 (93C15)
- A computational solution for a matrix Riccati differential equation. *Numer. Math.* 32 (1979), no. 3, 271-279. (Bernard Lemaire) 80e:65085 65L99 (65L99, 93C15)
- Re, Pia Maria See Lo Re, Pia Maria
- Read, Campbell B. Tests of symmetry in three-way contingency tables. *Psychometrika* 43 (1978), no. 3, 409-420. (Jifi Andél) 80c:62071 62H17
- Read, Ronald C. (with Rosenstiel, P.) On the Gauss crossing problem. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II*, pp. 843-876. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (Richard D. Ringeisen) 80e:05057 05C10
- (with Jackson, D. M.) A note on permutations without runs of given length. *Aequationes Math.* 17 (1978), no. 2-3, 336-343. (Morton Abramson) 80e:05016 05A15
- On general dissections of a polygon. *Aequationes Math.* 18 (1978), no. 3, 370-388. (W. G. Brown) 80e:05069 05C30
- (with Colbourn, Charles J.) Orderly algorithms for graph generation. *Internat. J. Comput. Math.* 7 (1979), no. 3, 167-172. (Authors' summary) 80i:68049 68E10
- (with Kropar, Marg) On the construction of the self-complementary graphs on 12 nodes. *J. Graph Theory* 3 (1979), no. 2, 111-125. (E. M. Palmer) 80i:05051 05C30
- (with Colbourn, Charles J.) Orderly algorithms for generating restricted classes of graphs. *J. Graph Theory* 3 (1979), no. 2, 187-195. (A. K. Dewdney) 80i:05048 05C30
- Read, Stephen Identity and reference. *Mind* 88 (1978), no. 348, 533-552. (From the introduction) 80c:03015 03A05
- Read, Thomas T. Higher order differential equations with small solutions. *J. London Math. Soc.* (2) 19 (1979), no. 1, 107-122. (S. R. Bernfeld) 80f:34034 34C11
- Reade, J. B. Asymptotic behaviour of eigenvalues of certain integral equations. *Proc. Edinburgh Math. Soc.* (2) 22 (1979), no. 2, 137-144. (Jacques Lemordant) 80m:45002 45C05
- Reade, Maxwell O. (with Miller, Sanford S.; Mocanu, Petru T.) Starlike integral operators. *Pacific J. Math.* 79 (1978), no. 1, 157-168. (Author's review (P. T. M.)) 80g:30008 30C45
- Reas, Pier Giorgio (with Michelucci, Maria Letizia) Analyses of the nonlinear "predator-prey" model and its statistical-mechanical interpretation. (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) 35 (1975/76), 225-249 (1978). 80d:92032 92A15
- Rebbi, C. (with Jaciwski, R.; Jacobs, L.) Static Yang-Mills fields with sources. *Phys. Rev. D* (3) 20 (1979), no. 2, 474-486. (Martin B. Einhorn) 80g:81045 81E10 (53C05)
- Rebierre, J. P. (with Sahraoui, S.) Parametric resonance by combined frequencies of cantilever bars under periodic axial load by the elastic-joint-method. *Mech. Res. Comm.* 5 (1978), no. 1, 39-44. (Editors) 80d:73076 73H10 (49G05)
- Rebollo, Rolando Sur les applications de la théorie des martingales à l'étude statistique d'une famille de processus ponctuels. *Journées de Statistique des Processus Stochastiques (Grenoble, 1977)*, pp. 27-70. *Lecture Notes in Math.*, 636, Springer, Berlin, 1978. (Ju. M. Kabanov) 80a:62160 62M99 (60C46, 60G55)
- Sur le théorème de la limite centrale pour les martingales locales. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 18, A879-A882. (Author's summary) 80d:60065 60G44 (60F05)
- Sur les temps d'arrêt et la topologie étroite. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 14, A707-A709. (Author's summary) 80b:60010 60B10 (60G40)
- Martingales and convergence étroite de mesures de probabilité. *Kybernetika (Prague)* 15 (1979), no. 1, 1-7. (V. Mackevičius) 80j:60007 60B10 (60G42)
- Reboucas, M. J. (with Novello, M.) Rotating universe with successive causal and noncausal regions. *Phys. Rev. D* (3) 19 (1979), no. 10, 2850-2852. (Alan Barnes) 80f:83009 83C05
- Recami, Erasmo New evidence on the life of Ettore Majorana. *Tachyons, monopoles, and related topics (Proc. First Session, Interdisciplinary Sem., Erice, 1976)*, pp. 269-277 (1 plate). North-Holland, Amsterdam, 1978. (Editors) 80a:01041 01A70
- (with Caldirola, P.; Pavšić, M.) Explaining the large numbers by a hierarchy of "universes": a unified theory of strong and gravitational interactions. (Italian and Russian summaries) *Nuovo Cimento B* (11) 48 (1978), no. 2, 205-271. (From the summary) 80c:83054 83F05
- (with Shah, K. Tahir) A multiply-connected space-time, black holes, and tachyons. *Lett. Nuovo Cimento* (2) 24 (1979), no. 4, 115-119. 80c:83064 83D05 (53B50)
- Reichard, O. W. (with Nessett, D. M.) Allocation algorithms for dynamically microprogrammable multiprocessor systems. *Comput. J.* 22 (1979), no. 2, 155-163. (Authors' summary) 80f:68029 68B20
- Rechester, Alexander B. (with Stix, Thomas H.) Stochastic instability of a nonlinear oscillator. *Phys. Rev. A* (3) 19 (1979), no. 4, 1656-1665. (Authors' summary) 80b:70033 70K20 (34D99)
- Reichman, R. (with Penrose, O.) Continuity of the temperature and derivation of the Gibbs canonical distribution in classical statistical mechanics. *J. Statist. Phys.* 19 (1978), no. 4, 359-366. (Authors' summary) 80b:82030 82A30
- Reichsaffen, Edgar E. M. A geometrical difference of sets and some applications. (Portuguese) *Proceedings of the Tenth Brazilian Mathematical Colloquium (Poços de Caldas, 1975), Vol. I (Portuguese)*, pp. 311-320. *Cons. Nac. Desenvolvimento Ci. Tec., Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (P. Hagedorn) 80d:90103 90D26
- Recillas, Horacio See Tapia-Recillas, Horacio
- Recillas Plasmán, Sevin Morphisms between spaces of isomorphism classes of ramified covers of  $P^1$ . (Spanish) *Proceedings of the Ninth Brazilian Mathematical Colloquium (Poços de Caldas, 1973), Vol. I (Portuguese)*, pp. 155-161. *Inst. Mat. Pura Apl., São Paulo*, 1977. (Author's introduction) 80k:14038 14H10 (14H30)
- Reckhow, Robert A. (with Cook, Stephen A.) The relative efficiency of propositional proof systems. *J. Symbolic Logic* 44 (1979), no. 1, 36-50. (Richard Statman) 80e:03007 03B05 (03B35, 03D15, 03F20)
- Reckziegel, Helmut On the eigenvalues of the shape operator of an isometric immersion into a space of constant curvature. *Math. Ann.* 243 (1979), no. 1, 71-82. (Bang-yen Chen) 80a:53057 53C40 (53B25, 58G25)
- Reckziegel, Ingeborg (with Tasche, Manfred) Eine verallgemeinerte Inverse eines Matrizenpolynoms. *Rostock. Math. Kolloq. No. 9* (1978), 43-59. (Bryan E. Cain) 80k:15009 15A09 (15A21, 47A55)
- Recksi, András Contributions to the  $n$ -port interconnection problem by means of matroids. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II*, pp. 877-892. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (András Frank) 80e:04018 94C05 (05B35)
- Matroidal structure of  $n$ -ports. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II*, pp. 893-909. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (William N. Anderson, Jr.) 80b:04051 94C15 (05B35)
- Decompositions of a graphic matroid. *Colloque Mathématiques Discrètes: Codes et Hypergraphes (Brussels, 1978), Cahiers Centre Études Rech. Opér.* 20 (1978), no. 3-4, 437-442. (John H. Mason) 80k:05038 05B35
- Reczek, K. Zur Padéschen Approximation der konvergenten Funktionenfolgen. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat. No. 20* (1979), 183-187. (Gerhard Merz) 80i:41010 41A21
- Reddenko, G. A. (with Segeda, Ju. N.) The invariance of the equations of Newtonian mechanics with respect to transformation of the Schrödinger group. (Russian. English summary) *Group theoretic methods in mathematical physics (Russian)*, pp. 175-180, 195, 203. *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (Djordje Djukic) 80i:81044 81C40 (35A30)
- Reddenko, G. W. Difference approximations of boundary value problems for functional differential equations. *J. Math. Anal. Appl.* 63 (1978), no. 3, 678-686. (L. J. Grimm) 80b:65063 65L10 (34K10)
- (with Webb, G. F.) Numerical approximation of nonlinear functional differential equations with  $L^2$  initial functions. *SIAM J. Math. Anal.* 9 (1978), no. 6, 1151-1171. (G. S. Tabidze) 80c:65156 65L05 (34K99, 47H20)
- On Newton's method for singular problems. *SIAM J. Numer. Anal.* 15 (1978), no. 5, 993-996. (Author's summary) 80b:65064 65H10
- Difference approximations to boundary value problems with deviating arguments. *Functional analysis methods in numerical analysis (Proc. Special Session, Annual Meeting, Amer. Math. Soc., St. Louis, Mo., 1977)*, pp. 282-297. *Lecture Notes in Math.*, 701, Springer, Berlin, 1979. (From the introduction) 80m:65060 65L10 (34K10, 93C15)
- Collocation at Gauss points as a discretization in optimal control. *SIAM J. Control Optim.* 17 (1979), no. 2, 298-306. (J. C. Allwright) 80b:93171 93E20 (65K10)
- (with Mathis, F. H.) Ritz-Trefftz approximations in optimal control. *SIAM J. Control Optim.* 17 (1979), no. 2, 307-310. (Ja. I. Al'ber) 80e:49022 49D15 (41A15)
- Reddy, A. R. (with Erdős, Paul; Newman, Donald J.) Rational approximation. II. *Adv. in Math.* 29 (1978), no. 2, 135-156. (Myron S. Henry) 80e:41008 41A20 (30E10)
- (with Newman, Donald J.) Rational approximation to  $e^x$  and to related functions. *J. Approx. Theory* 25 (1979), no. 1, 21-30. (D. Leviatan) 80j:41024 41A20 (41A25)
- A note on rational approximation to  $(1-x)^{1/2}$ . *J. Approx. Theory* 25 (1979), no. 1, 31-33. (E. W. Cheney) 80j:41025 41A20
- Reddy, C. H. (with Ahmad, M. O.; Ramachandran, V.; Swamy, M. N. S.) A class of multivariable positive real functions realizable by resistively terminated lossless ladder networks. *IEEE Trans. Circuits and Systems* 26 (1979), no. 8, 659-662. (Authors' summary) 80b:94041 94C05
- (with Ahmad, M. O.; Ramachandran, V.; Swamy, M. N. S.) Ladder realizations of multivariable positive real functions. *J. Franklin Inst.* 307 (1979), no. 2, 71-81. (Authors' summary) 80c:94016 94C05
- (with Ahmad, M. O.; Ramachandran, V.; Swamy, M. N. S.) Partial derivative properties of multivariable cascaded networks. *J. Franklin Inst.* 307 (1979), no. 6, 315-329. (Authors' summary) 80g:94071 94C05
- Reddy, C. R. (with Loveland, D. W.) Presburger arithmetic with bounded quantifier alternation. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 320-325. *ACM, New York*, 1978. (M. I. Dehjar) 80d:68057 68C25 (03B25, 03F30, 68C01)
- Reddy, C. T. (with Oden, J. Tinsley) Finite element approximations of a class of highly nonlinear boundary-value problems in finite elasticity. *Numer. Funct. Anal. Optim.* 1 (1979), no. 1, 1-55. (S. J. Sackett) 80d:73036 73C50 (73K25)
- Reddy, Harinatha C. (with Ahmad, M. O.; Ramachandran, V.; Swamy, M. N. S.) Cascade synthesis of a class of multivariable positive real functions. *IEEE Trans. Circuits and Systems* 25 (1978), no. 10, 871-878. (From the summary) 80a:93148 93E10
- (with Karivaratharajan, P.; Swamy, M. N. S.; Ramachandran, V.) Generation of two-dimensional digital functions without nonessential singularities of the second kind. *IEEE Trans. Acoust. Speech Signal Process.* 28 (1980), no. 2, 216-223. (Authors' summary) 80b:94008 94A11
- Reddy, J. N. On the accuracy and existence of solutions to primitive variable models of viscous incompressible fluids. *Internat. J. Engrg. Sci.* 16 (1978), no. 12, 921-929. (Radu Bădescu) 80b:76011 76D99 (35Q10, 49A29)
- (with Satake, Akio) A numerical method for elastic-plastic torsion by variational inequality. *Internat. J. Solids and Structures* 16 (1980), no. 1, 1-18. (Authors' summary) 80i:73047 73K25
- Reddy, Sudhakar M. (with Ashjaee, M. J.) A new class of codes and their properties in the design of totally self-checking circuits. *Proceedings of the Eighth National Mathematics Conference (Arya-Mehr Univ. Tech., Tehran, 1977)*, pp. 52-77. *Arya-Mehr Univ. Tech., Tehran*, 1977. (K. L. Kodandapani) 80b:94039 94B60 (94C10)
- (with Kuhl, Jon G.) A multicode single transition-time state assignment for asynchronous sequential machines. *IEEE Trans. Comput.* 27 (1978), no. 10, 927-934. (A. N. Melikhov (Melihov)) 80b:68053 68D50
- Reddy, William L. (with DeGeorge, David L.) A Hopf inequality for branch sets. *Math. Z.* 164 (1978), no. 1, 81-91. (P. T. Church) 80b:57002 57M10 (54C10)
- Rédei, L. See Steinfeld, Ottó, 80e:16001
- Rédei, L. B. Bound for the harmonic oscillator Green's function. *Acta Phys. Acad. Sci.*

- Hungar. 45 (1978), no. 2, 149–151 (1979). (From the text) 80c:34020 34B25 (45K05)
- Redekopp, Larry G. (with Djordjević, Vladan D.) On the development of packets of surface gravity waves moving over an uneven bottom. (German summary) *Z. Angew. Math. Phys.* 29 (1978), no. 6, 950–962. (L. R. Mack) 80c:76006 76B15 (35Q99)
- (with Ma, Yan Chow) Some solutions pertaining to the resonant interaction of long and short waves. *Phys. Fluids* 22 (1979), no. 10, 1872–1876. (Alberto Valli) 80b:76006 76B15 (35Q20)
- Reder, Christine Localisation des solutions d'une équation de diffusion-réaction. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 9, A495–A498. (Author's summary) 80m:35044 35K55
- Redetzky, R.-R. Der gegenwärtige Stand beim Verteilungsproblem der stochastischen linearen Optimierung. I. *Wiss. Z. Tech. Hochsch. Ilmenau* 25 (1979), no. 1, 75–104. 80b:90107 90C15
- Redheffer, Raymond Matrix equations in the Siegel disk. *Optimal control and differential equations* (Proc. Conf., Univ. Oklahoma, Norman, Okla., 1977), pp. 277–292, Academic Press, New York, 1978. (From the text) 80g:34012 34A60 (30G99)
- (with Volkman, Peter) Differential equations in operator algebras. I. Invariance of the Siegel disk. *Math. Ann.* 239 (1979), no. 2, 97–110. (L. J. Grimm) 80i:34108 34G20 (46G99, 47D25)
- Redinho, G. Robert Optimum soft decision decoding with graceful degradation. *Inform. and Control* 41 (1979), no. 2, 165–185. (Author's summary) 80g:94050 94A40
- Redish, Edward F. (with Polyzou, Wayne N.) Unified connected theory of few-body reaction mechanisms in  $N$ -body scattering theory. *Ann. Physics* 119 (1979), no. 1, 1–42. (Chindru S. Warke) 80c:81088 81F10 (47A40)
- Red'kin, N. P. Realization of monotone Boolean functions by contact schemes. (Russian) *Problemy Kibernet.* No. 35 (1979), 87–110, 208. (Korolov Gilezan) 80m:94100 94C10
- Red'ko, S. F. (with Kremetulo, Ju. V.; Uliakov, V. F.; Šabel'skiĭ, V. P.; Jakovlev, V. P.) The determination of some parameters of mechanical systems with the aid of sensitivity functions. (Russian) *Complex control systems* (Russian), pp. 82–89, Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev, 1978. (Authors' summary) 80g:93030 93B35
- Redmond, Donald M. Mean value theorems for a class of Dirichlet series. *Pacific J. Math.* 78 (1978), no. 1, 191–231. (E. Grosswald) 80b:10065 10H25 (10H08)
- An asymptotic formula in the theory of numbers. III. *Math. Ann.* 243 (1979), no. 2, 143–151. (E. Grosswald) 80c:10052 10H25
- Redonchova, O. S. Some types of pairs  $\Theta$  of congruences. (Russian) *Kaliningrad. Gos. Univ. Differentsial' naja Geom. Mnogobraz. Figur* No. 9 (1978), 64–71, 138. (Vladislav Goldberg) 80m:53013 53A25
- Reeb, G. Structures feuilletées. *Differential topology, foliations and Gelfand-Fuks cohomology* (Proc. Sympos., Pontificia Univ. Católica, Rio de Janeiro, 1976), pp. 104–113, *Lecture Notes in Math.*, 652, Springer, Berlin, 1978. (C. S. Hartzman) 80b:57026 57R30
- Reed, George M. (with Fleissner, William G.) Para-Lindelöf spaces and spaces with a  $\sigma$ -locally countable base. Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977). I. *Topology Proc.* 2 (1977), no. 1, 89–110 (1978). (C. M. Pareek) 80j:54020 54D99 (54E99)
- See also Proceedings: Topology Conference, 80i:54001a; Proceedings: Topology Conference, 80i:54001b; Proceedings: Topology Conference, 80i:54002a; Proceedings: Topology Conference, 80i:54002b and Surveys in general topology, 80m:54001
- Reed, Harry L., Jr. Some bounds for optimal maneuvers and predictors. *Transactions of the Twenty-Fourth Conference of Army Mathematicians* (Univ. Virginia, Charlottesville, Va., 1978), pp. 13–37, *ARO Rep.*, 79, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Vera Winitzky de Spinadel) 80c:90173 90D25
- Reed, Irving S. (with Truong, T. K.; Miller, Robert L.) Fast algorithm for computing a primitive  $2^{2^k}$ th root of unity in  $\text{GF}(2^n - 1)$ . *Electron. Lett.* 14 (1978), no. 15, 493–494. (Authors' summary) 80c:68076 68C05 (94A05)
- (with Truong, T. K.; Miller, Robert L.) Simple method for computing elements of order  $2^n$ , where  $n|2^k - 1$  and  $2 < k < p + 1$ , in  $\text{GF}(2^p - 1)$ . *Electron. Lett.* 14 (1978), no. 21, 697–698. (Authors' summary) 80c:68077 68C05 (94A05)
- (with Truong, T. K.) Fast Mersenne-prime transforms for digital filtering. *Proc. Inst. Electr. Engrs.* 125 (1978), no. 5, 433–440. (B. D. Donevski) 80g:94010 94A11 (65G05, 65R10, 94Bxx)
- (with Truong, T. K.; Miller, Robert L.) Decoding of B.C.H. and R.S. codes with errors and erasures using continued fractions. *Electron. Lett.* 15 (1979), no. 17, 542–544. (Authors' introduction) 80c:94032 94B15
- (with Truong, T. K.) A new hybrid algorithm for computing a fast discrete Fourier transform. *IEEE Trans. Comput.* 28 (1979), no. 7, 487–492. (Authors' summary) 80c:68078 68C05 (94A05)
- Reed, J. R. (with Mullineux, N.) Uses of integral transforms with nonstandard kernels. *Internat. J. Math. Ed. Sci. Tech.* 10 (1979), no. 4, 509–515. (Y. L. Luke) 80m:44001 44-01 (35A22)
- Reed, Michael C. Unsolved problems in the theory of nonlinear wave equations. *Many degrees of freedom in field theory* (Proc. Eighth Internat. Summer Inst. Theoret. Phys., Univ. Bielefeld, Bielefeld, 1976), pp. 147–162, NATO Adv. Study Inst. Ser., Ser. B: Physics, 30, Plenum, New York, 1978. (Editors) 80b:35093 35L99 (35Q20)
- Propagation of singularities. *Many degrees of freedom in field theory* (Proc. Eighth Internat. Summer Inst. Theoret. Phys., Univ. Bielefeld, Bielefeld, 1976), pp. 163–166, NATO Adv. Study Inst. Ser., Ser. B: Physics, 30, Plenum, New York, 1978. (Paul L. Davis) 80b:35104 35L67
- Singularities in non-linear waves of Klein-Gordon type. *Nonlinear partial differential equations and applications* (Proc. Special Sem., Indiana Univ., Bloomington, Ind., 1976–1977), pp. 145–161, *Lecture Notes in Math.*, 648, Springer, Berlin, 1978. (A. S. Wightman) 80b:35105 35L70 (35Q20)
- Propagation of singularities for non-linear wave equations in one dimension. *Comm. Partial Differential Equations* 3 (1978), no. 2, 153–159. (Alan Jeffrey) 80d:35092 35L67
- (with Simon, Barry) ★Methods of modern mathematical physics. III. Scattering theory. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xv + 463 pp. ISBN 0-12-58004-2 (P. R. Chernoff) 80m:81005 81F99
- Reed, William J. The steady state of a stochastic harvesting model. *Math. Biosci.* 41 (1978), no. 3–4, 273–307. (K. Dietz) 80a:92055 92A15
- Reeder, John (with Shinbrot, Marvin) The initial value problem for surface waves under gravity. III. Uniformly analytic initial domains. *J. Math. Anal. Appl.* 67 (1979), no. 2, 340–391. (A. S. Alekseev) 80f:76004 76B15 (35Q20)
- Reeds, James Cracking a multiplicative congruential encryption algorithm. *Information linkage between applied mathematics and industry* (Proc. First Annual Workshop, Naval Postgraduate School, Monterey, Calif., 1978), pp. 467–472, Academic Press, New York, 1979. (Author's summary) 80b:94040 94B99 (65C10)
- Reeken, Michael Classical solutions of the chain equation. I. *Math. Z.* 165 (1979), no. 2, 143–169. (Gottfried Anger) 80f:35115a 35Q20 (58C15, 58F05)
- Classical solutions of the chain equation. II. *Math. Z.* 166 (1979), no. 1, 67–82. (Gottfried Anger) 80f:35115b 35Q20 (58C15, 58F05)
- Rees, C. S. (with Garrett, J. W.; Stanojević, Č. V.) On  $L^1$  convergence of Fourier series with quasi-monotone coefficients. *Proc. Amer. Math. Soc.* 72 (1978), no. 3, 535–538. (Masako Izumi) 80c:42005 42A20
- Rees, D. (with Sharp, Rodney Y.) On a theorem of B. Teissier on multiplicities of ideals in local rings. *J. London Math. Soc.* (2) 18 (1978), no. 3, 449–463. (D. Kirby) 80c:13009 13B15 (14B05)
- Rees, Elmer (with Thomas, Emery) Smoothings of isolated singularities. *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 2, pp. 111–117, Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I., 1978. (John W. Wood) 80c:57021 57R10 (14B07, 57R90)
- (with Jones, John D. S.) Kervaire's invariant for framed manifolds. *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 1, pp. 141–147, Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I., 1978. (P. J. Kahn) 80g:57048 57R65
- Some rank two bundles on  $P_n^C$ , whose Chern classes vanish. *Variétés analytiques compactes* (Colloq., Nice, 1977), pp. 25–28, *Lecture Notes in Math.*, 683, Springer, Berlin, 1978. (I. Dolgachev) 80f:55016 55R15 (14F05, 32L05)
- (with Thomas, Emery) Complex cobordism and intersections of projective varieties. *Variétés analytiques compactes* (Colloq., Nice, 1977), pp. 168–178, *Lecture Notes in Math.*, 683, Springer, Berlin, 1978. (John W. Wood) 80c:57044 57R90 (14M10)
- On submanifolds of projective space. *J. London Math. Soc.* (2) 19 (1979), no. 1, 159–162. (John W. Wood) 80f:57022 57R40 (14M10, 32C10)
- van Rees, G. H. J. See Van Rees, G. H. J.
- Rees, G. R. (with Binns, K. J.; Kahan, P.) The evaluation of improper integrals encountered in the use of conformal transformation. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 4, 567–580. (Authors' summary) 80c:65044 65D30 (65E05)
- Reetz, Axel See Differential geometrical methods in mathematical physics, 80b:81056
- Reetz, Dieter Prices of production and labour values in input-output substitution systems. *Operations Research Verfahren, XXIV*, pp. 155–175, Hain, Königstein, 1977. (Author's summary) 80b:90014 90A12
- Regazzini, Eugenio Some observations on a theoretical indicator of association between components of a random vector with special emphasis on the convergence in probability of random numbers. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 36 (1977/78), 279–291 (1979). (Author's summary) 80c:60026a 60F05
- Errata corrigé: "Some observations on a theoretical indicator of association between components of a random vector with special emphasis on the convergence in probability of random numbers" (Italian) [Rend. Sem. Mat. Univ. Politec. Torino 36 (1977/78), 279–291]. *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 2, 177 (1980). (Editors) 80c:60026b 60F05
- Regenda, Jan Oscillatory and nonoscillatory properties of solutions of the differential equation  $y^{(4)} + P(y)y'' + Q(y)y = 0$ . (Russian summary) *Math. Slovaca* 28 (1978), no. 4, 329–342. (W. E. Taylor, Jr.) 80c:34016 34C10
- Regener, Eric Programming the Penrose pattern. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1978), pp. 593–606, Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978. (N. G. de Bruijn) 80c:05019 05B45 (05-04)
- Regev, Amital  $T$ -ideals of degree 3 are finitely generated. *Bull. London Math. Soc.* 10 (1978), no. 3, 261–266. (E. Formanek) 80a:16033 16A38
- Regev, Uri (with Schwartz, Aba) Estimation of production functions free of specification bias due to aggregation. *Metroeconomica* 30 (1978), no. 1–3, 1–11. (From the introduction) 80j:90069 90B30 (90A20)
- Regge, T. (with Ne'eman, Yuval) Gauge theory of gravity and supergravity on a group manifold. *Riv. Nuovo Cimento* (3) 1 (1978), no. 5, 1–43. (Hans Türling) 80c:17005 17A70 (53C80, 83E05)
- (with d'Auria, R.; Sciuto, S.) A general scheme for bidimensional models with associated linear set. *Phys. Lett. B* 89 (1980), no. 3–4, 363–366. (Stanly L. Steinberg) 80m:81061 81E99
- Reghiş, M. (with Megan, Mihail) On controllability and stabilizability in Hilbert spaces. (Romanian summary) *An. Univ. Timişoara Ser. Ştiinţ. Mat.* 15 (1977), no. 1, 37–54 (1978). (From the introduction) 80a:93043 93B05 (93D05)
- respi-Reghiş, S. See Crespi-Reghiş, S.
- Reginska, Teresa Approximation of eigenvalues for a class of differential problems on an infinite interval. (Polish) *Mat. Stos.* (3) 13 (1978), 127–134. (M. Ráb) 80b:34028 34B25 (65L15)
- Approximation of eigenvalues of nonselfadjoint problems on an infinite interval. (Polish) *Mat. Stos.* (3) 14 (1979), 71–77. (M. Ráb) 80b:34021 34B05 (34G10, 65L15)
- Rego, C. J. A note on one-dimensional Gorenstein rings. *J. Pure Appl. Algebra* 12 (1978), no. 2, 111–115. (Paolo Maroscia) 80c:14009 14E15 (13H10, 14D20)
- Regoli, Giuliana (with Coletti, Giulianella) Criteria for the existence and limitation of solutions of nonlinear differential equations. (Italian. English summary) *Rend. Mat.* (6) 11 (1978), no. 3, 393–403 (1979). (Wadi Mahfoud) 80c:34001 34A10
- Reh, Wolfgang First-passage percolation under weak moment conditions. *J. Appl. Probab.* 16 (1979), no. 4, 750–763. (John C. Wierman) 80j:60122 60K35
- Rehbein, Johann-Heinrich See Pont, Jean-Claude, 80a:01016
- Rehbock, Fritz ★Geometrische Perspektive. Springer-Verlag, Berlin-New York, 1979. ix + 154 pp. (1 plate). ISBN 3-540-09053-3 (H. S. M. Coxeter) 80g:51015 51N05 (01A40)
- Rehm, Hans Peter Galois groups and elementary solutions of some linear differential



- equations. *J. Reine Angew. Math.* **307/308** (1979), 1-7. (Michael F. Singer) **80d:12023** 12H05 (34A30)
- Rehmann, Fazal Notes on generating sets of integers. *Islamabad J. Sci.* **4** (1977), no. 1-2, 50-51 (1978). (From the text) **80h:10012** 10A30
- On Euler's  $q$ -function. *Islamabad J. Sci.* **4** (1977), no. 1-2, 52 (1978). (From the text) **80g:10005** 10A20
- Rehmann, Ulf (with Stuhler, Ulrich) On  $K_2$  of finite-dimensional division algebras over arithmetical fields. *Invent. Math.* **50** (1978/79), no. 1, 75-90. (Alan Candiotti) **80g:12012** 12A80 (12A57, 16A40)
- Zentrale Erweiterungen der speziellen linearen Gruppe eines Schiefkörpers. *J. Reine Angew. Math.* **301** (1978), 77-104. (Keith Dennis) **80h:18009** 18F25 (12A80, 20G99)
- Die Kommutatorfaktorguppe der Normengruppe einer  $p$ -adischen Divisionsalgebra. *Arch. Math. (Basel)* **32** (1979), no. 4, 318-322. (Jean-Luc Chabert) **80j:16015** 16A39 (16A49)
- (with Bak, Anthony) Le problème des sous-groupes de congruence dans  $SL_{n+2}$  sur un corps gauche. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 3, A151. (Authors' summary) **80i:12010** 12A80 (20G30)
- Reibiger, Albrecht (with Straube, Bernd) Über die axiomatische Begründung einer allgemeinen Netzwerktheorie. *Wiss. Z. Tech. Univ. Dresden* **28** (1979), no. 2, 399-407. (Authors' summary) **80h:94037** 94C05
- Reich, Daniel On certain polynomials of Gaussian type. *Canad. J. Math.* **31** (1979), no. 2, 274-281. (Don Zagier) **80g:10049** 10J20 (57S25)
- Reich, Edgar Uniqueness of Hahn-Banach extensions from certain spaces of analytic functions. *Math. Z.* **167** (1979), no. 1, 81-89. (Manfred Stoll) **80j:30074** 30H05 (30C60, 46E15)
- Reich, L. (with Schwaiger, Jens) Über die Funktionalgleichung  $N \circ T = T \circ M$  für formale Potenzreihen. *Aequationes Math.* **19** (1979), no. 1, 66-78. (I. Fenyő) **80i:39011** 39B50 (22E05, 39B60, 58F99)
- Reich, Simon A random fixed-point theorem for set-valued mappings. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **64** (1978), no. 1, 65-66. (A. T. Bharucha-Reid) **80h:60084** 60H25 (47Hxx)
- Almost convergence and nonlinear ergodic theorems. *J. Approx. Theory* **24** (1978), no. 4, 269-272. (Bernard Beauzamy) **80h:47079** 47H10
- Constructive techniques for accretive and monotone operators. *Applied nonlinear analysis* (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978), pp. 335-345. Academic Press, New York, 1979. (D. Pascali) **80g:47059** 47H05 (47H10)
- (with Nevanlinna, Olavi) Strong convergence of contraction semigroups and of iterative methods for accretive operators in Banach spaces. *Israel J. Math.* **32** (1979), no. 1, 44-58. (A. Pazy) **80e:47057** 47H20 (47H06)
- Weak convergence theorems for nonexpansive mappings in Banach spaces. *J. Math. Anal. Appl.* **67** (1979), no. 2, 274-276. (O. P. Kapoor) **80d:47090** 47H10
- The range of sums of accretive and monotone operators. *J. Math. Anal. Appl.* **68** (1979), no. 1, 310-317. (D. Pascali) **80g:47060** 47H05 (47H06)
- Fixed point theorems for set-valued mappings. *J. Math. Anal. Appl.* **69** (1979), no. 2, 353-358. (K. Goebel) **80k:47068** 47H10 (54H25)
- Reichard, Klaus Algebraische Beschreibung der Ableitung bei  $n$ -mal stetig-differenzierbaren Funktionen. *Compositio Math.* **38** (1979), no. 3, 369-379. (K. Lamotte) **80j:58004** 58C05 (26B05)
- Reichel, Hans-Christian (with Cigler, Johann)  $\star$ Topologie. Eine Grundvorlesung. B.I. Hochschultaschenbücher, 121. Bibliographisches Institut, Mannheim, 1978. xiii + 244 pp. ISBN 3-411-00121-6 (L. Janos) **80d:54001** 54-01
- Some results on uniform spaces with linearly ordered bases. *Fund. Math.* **98** (1978), no. 1, 25-39. (H. L. Bentley) **80j:54019** 54E15
- Reichel, Paul G. (with Edelstein, Warren S.) A sequence of lower bound approximate solutions for the problem of secondary creep in pressure vessels. (German summary) *Z. Angew. Math. Phys.* **29** (1978), no. 3, 365-379. (F. A. Cozzarelli) **80h:73041** 73F99 (00A89)
- Reichert, Marianne Über die Gesamtheit der Lösungen beim semilinearen I. parabolischen Anfangswertproblem. *Arch. Math. (Basel)* **31** (1978/79), no. 5, 464-473. (J. W. Bebernes) **80k:35094** 35K20 (35K55)
- Reichl, L. E. Microscopic theory of superfluid Fermi systems. I. Binary expansion. *J. Math. Phys.* **20** (1979), no. 3, 352-360. (A. Rouet) **80e:8107a** 81J05 (47A40, 82A05)
- Microscopic theory of superfluid Fermi systems. II. Application to low density hard sphere system. *J. Math. Phys.* **20** (1979), no. 3, 361-366. (A. Rouet) **80e:8107b** 81J05 (47A40, 82A05)
- Reichmann, Karl Ein hinreichendes Kriterium für die Durchführbarkeit des Intervall-Gauss-Algorithmus bei Intervall-Hessenberg-Matrizen ohne Pivotsuche. (English and Russian summaries) *Z. Angew. Math. Mech.* **59** (1979), no. 8, 373-379. (Authors' summary) **80i:65049** 65G10
- Bharucha-Reid, Albert T. See Bharucha-Reid, Albert T.
- Reid, D. W. (with Teo, K. L.; Boyd, I. E.) Stochastic optimal control theory and its computational methods. *Internat. J. Systems Sci.* **11** (1980), no. 1, 77-95. (Authors' summary) **80j:93143** 93E20 (93E25)
- Reid, J. Gary See Vajda, Sándor, **80f:93031**
- Reid, J. K. (with Duff, I. S.; Munksgaard, Niels; Nielsen, Hans Bruun) Direct solution of sets of linear equations whose matrix is sparse, symmetric and indefinite. *J. Inst. Math. Appl.* **23** (1979), no. 2, 235-250. (Authors' summary) **80e:65070** 65F05
- Reid, James L. (with Ray, John R.) Noether's theorem, time-dependent invariants and nonlinear equations of motion. *J. Math. Phys.* **20** (1979), no. 10, 2054-2057. (L. G. Chambers) **80i:49002** 49A05 (70H35)
- Reid, K. B. (with Alspach, Brian) Degree frequencies in digraphs and tournaments. *J. Graph Theory* **2** (1978), no. 3, 241-249. (D. R. Lick) **80a:05100** 05C20
- Reid, M. F. (with Butler, P. H.)  $j$  symbols and  $jm$  factors for all dihedral and cyclic groups. *J. Phys. A* **12** (1979), no. 10, 1655-1666. (Authors' summary) **80g:20060** 20C45 (20C35)
- Reid, Miles Surfaces with  $p_g = 0$ ,  $K^2 = 1$ . *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* **25** (1978), no. 1, 75-92. (C. A. M. Peters) **80h:14018** 14J25
- Reid, Nancy (with Koziol, James A.) On multiple comparisons among  $k$  populations differing by scale parameters. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* **9** (1978), no. 2, 179-184. (K. M. Lal Saxena)
- 80e:62058** 62G10 (62J15)
- Reid, R. L. (with Goldstein, M. E.) Effect of fluid flow on freezing and thawing of saturated porous media. *Proc. Roy. Soc. London Ser. A* **364** (1978), no. 1716, 45-73. (E. Ungureanu-David) **80c:76051** 76S05
- Reid, Thomas F. (with Edwards, William R.) Reduction of predicate/function schemas. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1978), pp. 619-638. Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978. (John Cherniavsky) **80e:68037** 68B10
- Reid, W. H. (with Ng, B. S.) An initial value method for eigenvalue problems using compound matrices. *J. Comput. Phys.* **30** (1979), no. 1, 125-136. (Authors' summary) **80c:65176** 65L15
- (with Ng, B. S.) A numerical method for linear two-point boundary value problems using compound matrices. *J. Comput. Phys.* **33** (1979), no. 1, 70-85. (Authors' summary) **80h:65062** 65L10
- An exact solution of the Orr-Sommerfeld equation for plane Couette flow. *Stud. Appl. Math.* **61** (1979), no. 1, 83-91. (W. Michael Lai) **80m:76030** 76C99 (35Q99)
- Reid, William T. Related oscillation criteria for higher order self-adjoint differential and integro-differential equations. *Proc. Roy. Soc. Edinburgh Sect. A* **80** (1978), no. 3-4, 333-345. (W. J. Kim) **80g:34030** 34C10 (45J05)
- Some aspects of oscillation and boundary problem theory for Hamiltonian systems in a  $B^*$ -algebra. *SIAM J. Math. Anal.* **10** (1979), no. 4, 667-681. (G. J. Eigen) **80h:34073** 34G10 (46K05)
- Reif, Nicolaus (with Wiesmeth, Hans) Pareto ordering of distributions. *J. Math. Econom.* **5** (1978), no. 2, 185-204. (Hildegard Dierker) **80c:90037** 90A16 (90A06)
- Reiffarth, Arthur On finite simple groups with large extraspecial subgroups. I. *J. Algebra* **53** (1978), no. 2, 452-470. (David R. Mason) **80j:20019a** 20D05 (20D06)
- On finite simple groups with large extraspecial subgroups. II. *J. Algebra* **54** (1978), no. 1, 273-289. (David R. Mason) **80j:20019b** 20D05 (20D06)
- Reiffen, Hans-Jörg (with Trapp, Heinz Wilhelm) Ein Beitrag zur Whitney-Regularität im unendlichdimensionalen Fall. *Comment. Math. Helv.* **54** (1979), no. 1, 159-172. (K. Lamotte) **80g:58008** 58A35 (32K05, 58C27)
- Reilly, Ivan L. (with Fox, Ralph) Topological spaces and Abian structures. *Bull. Austral. Math. Soc.* **18** (1978), no. 3, 429-437. (S. A. Naimpally) **80e:54023** 54E15 (54D10)
- On  $T_0$  spaces. *Kyungpook Math. J.* **18** (1978), no. 2, 149. (E. Michael) **80d:54019** 54D15
- Reilly, N. R. (with Petrich, Mario) A representation of  $E$ -unitary inverse semigroups. *Quart. J. Math. Oxford Ser. (2)* **30** (1979), no. 119, 339-350. (I. S. Ponizovskii) **80j:20067** 20M10
- Reiman, A. (with Kaup, David J.; Bers, A.) Space-time evolution of nonlinear three-wave interactions. I. Interaction in a homogeneous medium. *Rev. Modern Phys.* **51** (1979), no. 2, 275-309. (Authors' summary) **80c:35006** 35Q20
- Space-time evolution of nonlinear three-wave interactions. II. Interaction in an inhomogeneous medium. *Rev. Modern Phys.* **51** (1979), no. 2, 311-330. (Authors' summary) **80j:35116** 35Q20
- Reiman, A. G. (with Kulik, P. P.) The hierarchy of symplectic forms for the Schrödinger equation and for the Dirac equation. (Russian) Questions in quantum field theory and statistical physics. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **77** (1978), 134-147, 231. (Authors' summary) **80c:81036** 81C99 (58F07)
- Reimer, Manfred (with Kusterer, Roland) Stable evaluation of polynomials in time log  $n$ . *Math. Comp.* **33** (1979), no. 147, 1019-1031. (C. W. Clenshaw) **80d:65050** 65C05 (68C25)
- (with Pittnauer, Franz) Intervallfunktionale vom Gauss-Legendre-Typ. *Math. Nachr.* **87** (1979), 239-248. (K. Jetter) **80e:65030** 65D30
- Reimers, N. A. (with Hodžav, K. S.) Averaging of quasilinear systems with several fast variables. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 8, 1388-1399, 1530. (N. A. Sidorov) **80b:34067** 34E05 (34C29)
- Reina, Cesare Internal symmetries of the axisymmetric gravitational fields. *J. Math. Phys.* **20** (1979), no. 7, 1303-1305. (Helmuth K. Urbantke) **80g:83036** 83D05
- (with Benza, V.; Morisetti, S.) Weyl and Papapetrou axisymmetric space-times as geodesics of the hyperbolic complex plane. (Italian and Russian summaries) *Nuovo Cimento B* (11) **50** (1979), no. 1, 1-6. (Michael P. Ryan, Jr.) **80g:83025** 83C99 (53B50)
- Reineke, Joachim (with Podewski, K.-P.) Algebraically closed commutative local rings. *J. Symbolic Logic* **44** (1979), no. 1, 89-94. (Paul C. Eklof) **80c:03039** 03C60 (13H99)
- Reineker, P. (with Kühne, R.) Exact derivation and solution of the Nakajima-Zwanzig generalized master equation and discussion of approximate treatments for the coupled coherent and incoherent exciton motion. *Phys. Rev. B* (3) **21** (1980), no. 6, 2448-2461. (Authors' summary) **80m:82050** 82A60
- Reiner, Irving Integral representations: genus,  $K$ -theory and class groups. *Topics in algebra* (Proc. 18th Summer Res. Inst., Austral. Math. Soc., Austral. Nat. Univ., Canberra, 1978), pp. 52-69. *Lecture Notes in Math.*, 697, Springer, Berlin, 1978. (Ju. A. Drozd) **80b:16008** 16A18 (16A54, 20C10)
- Integral representations of cyclic  $p$ -groups. *Topics in algebra* (Proc. 18th Summer Res. Inst., Austral. Math. Soc., Austral. Nat. Univ., Canberra, 1978), pp. 70-87. *Lecture Notes in Math.*, 697, Springer, Berlin, 1978. (Ken-ichi Tahara) **80b:20006** 20C10
- (with Green, Edward L.) Integral representations and diagrams. *Michigan Math. J.* **25** (1978), no. 1, 53-84. (Ju. A. Drozd) **80g:16032** 16A64 (13C05, 15A21)
- Invariants of integral representations. *Pacific J. Math.* **78** (1978), no. 2, 467-501. (D. A. R. Wallace) **80b:20016** 20C10
- (with Roggenkamp, Klaus W.)  $\star$ Integral representations. *Lecture Notes in Mathematics*, 744, Springer-Verlag, Berlin-New York, 1979. vi + 275 pp. ISBN 3-540-09546-2 (Ken-ichi Tahara) **80g:20010** 20C10
- Lifting isomorphisms of modules. *Canad. J. Math.* **31** (1979), no. 4, 808-811. (J. Ohm) **80j:16023** 16A64 (16A72)
- On Diederichsen's formula for extensions of lattices. *J. Algebra* **58** (1979), no. 1, 238-246. (Ju. A. Drozd) **80j:20008** 20C10
- Reinermann, Jochen (with Abts, Dietmar) A fixed point theorem for holomorphic mappings in locally convex spaces. *Nonlinear Anal.* **3** (1979), no. 3, 353-359. (I. A. Rus) **80g:47062** 47H10

- (with Seifert, G. H.; Stallbohm, Volker) Two further applications of the Edelstein fixed point theorem to initial value problems of functional equations. *Numer. Funct. Anal. Optim.* 1 (1979), no. 3, 233–254. (Seppo Heikkilä) **80g:47067** 47H10 (34K05)
- Reingold, Edward M.** A note on 3-2 trees. *Fibonacci Quart.* 17 (1979), no. 2, 151–157. (Author's summary) **80g:68171** 68E10 (05C05)
- Reinhardt, P.-G.** (with Goetze, K.) Collective subspaces for large amplitude motion and the generator coordinate method. *Phys. Rev. C* (3) 20 (1979), no. 4, 1546–1559. (M. J. Goovaerts) **80g:81022** 81C12
- (with Pfeiffer, H.; Drechsel, D.) A model study of Hartree-Fock and linear response in coordinate space. *Z. Phys. A* 292 (1979), no. 4, 375–383. (Authors' summary) **80g:81071** 81G35
- Reinhardt, H.** (with Kleinert, H.) Semiclassical approach to large-amplitude collective nuclear excitations. *Nuclear Phys. A* 332 (1979), no. 3-4, 331–348. (Authors' summary) **80g:81181** 81G35
- Reinhardt, H.-J.** Stability and convergence for singular perturbations and boundary layer problems. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T393–T395. (From the text) **80a:34081** 34E15 (34B15)
- Reinhardt, William N.** (with Solovay, Robert M.; Kanamori, Akihiro) Strong axioms of infinity and elementary embeddings. *Ann. Math. Logic* 13 (1978), no. 1, 73–116. (Douglas Cenzer) **80g:03072** 03E55
- Reinhardt, William P.** (with Cerjan, Charles) Critical point analysis of instabilities in Hamiltonian systems: classical mechanics of stochastic intramolecular energy transfer. *J. Chem. Phys.* 71 (1979), no. 4, 1819–1831. (T. K. Caughey) **80g:70013** 70G35
- Reinhardt, Bruce L.** The second fundamental form of a plane field. *J. Differential Geom.* 12 (1977), no. 4, 619–627 (1978). (Ph. Tondeur) **80a:57013** 57R30
- Reinisch, Gilbert** (with Fernandez, Jean-Claude; Froeschlé, Claude) Adiabatic perturbations of solitons and shock waves. Special issue on solitons in physics. *Phys. Scripta* 20 (1979), no. 3-4, 545–551. (V. Z. Enol'skii) **80g:76022** 76B25 (35Qxx, 81C99)
- Reinor, O. I.** Some classes of sets in Banach spaces and the topological characterization of operators of type RN. (Russian. English summary) Investigations on linear operators and the theory of functions, VIII. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 73 (1977), 224–228, 237 (1978). (Author's summary) **80d:46031** 46B20 (47B10)
- Operators of RN type in Banach spaces. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 4, 857–865, 955. (A. V. Dzūkariani) **80g:47028** 47B10
- Reinsel, Greg** Maximum likelihood estimation of stochastic linear difference equations with autoregressive moving average errors. *Econometrica* 47 (1979), no. 1, 129–151. (Peter M. Robinson) **80g:62089** 62M10
- A note on the estimation of the adaptive regression model. *Internat. Econom. Rev.* 20 (1979), no. 1, 193–202. (Jerry A. Hausman) **80g:62050** 62J05 (62P20)
- Reis, C. M.** (with Shih, Hui Jan) Some properties of disjunctive languages on a free monoid. *Inform. and Control* 37 (1978), no. 3, 334–344. (H. Jürgensen) **80d:20064** 20M35 (68F05)
- A note on homomorphisms of a free monoid. *Semigroup Forum* 16 (1978), no. 3, 389–391. (D. R. LaTorre) **80a:20069** 20M05
- Reis, Genésio Lima** Structural stability of equivariant vector fields. *An. Acad. Brasil. Ciênc.* 50 (1978), no. 3, 273–276. (Michael J. Field) **80g:58012** 58F09 (58F10)
- Reis, J. G.** (with Izé, Antonio Fernandes) Stability of perturbed neutral functional differential equations. *Nonlinear Anal.* 2 (1978), no. 5, 563–571. (M. M. Konstantinov) **80g:34081** 34K20
- Reischer, Corina** (with Martin, Louise) On the modular nets. *Discrete Math.* 22 (1978), no. 2, 195–196. (From the text) **80c:68159** 68D90 (92A09)
- (with Guaiqu, Silvio) Some remarks on entropic distance, entropic measure of connexion and Hamming distance. (French summary) *RAIRO Inform. Théor.* 13 (1979), no. 4, 395–407. (Authors' summary) **80m:94026** 94A17
- Reiser, Martin** A queueing network analysis of computer communication networks with window flow control. *IEEE Trans. Comm.* 27 (1979), no. 8, 1199–1209. (Author's summary) **80g:68036** 68C15 (90B10, 90B22)
- See also Computer performance, **80d:68002**
- Reiser, P.** (with Hässig, Kurt; Stierlin, C.) A note on primal network flow algorithms. (German summary) *Z. Oper. Res. Ser. A-B* 22 (1978), no. 5, A195–A198. (James R. Evans) **80a:90062** 90B10
- Reisig, Wolfgang** A note on the representation of finite tree automata. *Inform. Process. Lett.* 8 (1979), no. 5, 239–240. (Author's introduction) **80c:68154** 68D35
- Reisman, H.** (with Pawlik, P. S.) Dynamics of initially stressed hyperelastic solids. (German and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 4, 145–155. (J. Ignaczak) **80g:73012** 73B99
- Reiss, Edward L.** (with Sapiro, Marilyn Hirschhorn) Dynamic buckling of a nonlinear Timoshenko beam. *SIAM J. Appl. Math.* 37 (1979), no. 2, 290–301. (Authors' summary) **80f:73051a** 73H05
- (with Sapiro, Marilyn Hirschhorn) Erratum: "Dynamic buckling of a nonlinear Timoshenko beam" (SIAM J. Appl. Math. 37 (1979), no. 2, 290–301). *SIAM J. Appl. Math.* 37 (1979), no. 3, 713. (Authors' summary) **80f:73051b** 73H05
- (with Tavantzis, John) A boundary value problem of thermal convection. *J. Differential Equations* 35 (1980), no. 1, 45–54. (C. R. Illingworth) **80g:76070** 76R10
- Reiss, Howard** Structures produced by rapid quench: a solvable model. *Chem. Phys.* 47 (1980), no. 1, 15–24. (Author's summary) **80m:82037** 82A42
- Reiss, R.-D.** Approximate distribution of the maximum deviation of histograms. *Metrika* 25 (1978), no. 1, 9–26. (Wolfgang Wertz) **80c:62052** 62G05 (62E20)
- Consistency of minimum contrast estimators in nonstandard cases. *Metrika* 25 (1978), no. 3, 129–142. (Lionel Weiss) **80g:62025** 62F12
- Reiss, Steven P.** (with Dobkin, David P.; Lipton, Richard J.) Aspects of the database security problem. *Proceedings of a Conference on Theoretical Computer Science (Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 262–274. Univ. Waterloo, Waterloo, Ont., 1978. (Clement T. Yu) **80b:68027** 68B15 (68H05)
- Rational search. *Inform. Process. Lett.* 8 (1979), no. 2, 89–90. (Eitan Zemel) **80g:68062** 68C25 (90C05)
- (with Dobkin, David P.; Lipton, Richard J.) Linear programming is log-space hard for P. *Inform. Process. Lett.* 8 (1979), no. 2, 96–97. (Steven S. Muchnick) **80g:68039** 68C25 (90C05)
- Security in databases: a combinatorial study. *J. Assoc. Comput. Mach.* 26 (1979), no. 1, 45–57. (Armin Cremers) **80f:68112** 68H05 (68B15)
- Reinig, Rolf** Periodic solutions of certain higher order differential equations. *Nonlinear Anal.* 2 (1978), no. 5, 635–642. (Gianfranco Bottaro) **80g:34044** 34C25
- Periodic solutions of a second-order differential equation including a one-sided restoring term. *Arch. Math. (Basel)* 33 (1979/80), no. 1, 85–90. (Noel G. Lloyd) **80j:34043** 34C25
- Reinher, E.** A note on finite deflections of circular ring plates. (German summary) *Z. Angew. Math. Phys.* 29 (1978), no. 4, 698–703. (Z. Kaczowski) **80c:73051** 73K10
- Some considerations on the problem of torsion and flexure of prismatic beams. *Internat. J. Solids and Structures* 15 (1979), no. 1, 41–53. (K. B. Ranger) **80c:73044** 73K05
- Note on a nontrivial simple example of higher-order one-dimensional beam theory. *Trans. ASME Ser. E J. Appl. Mech.* 46 (1979), no. 2, 337–340. (H. M. Cekirge) **80c:73043** 73K05
- On lateral buckling of end-loaded cantilever beams. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 1, 31–40. (R. M. Gundersen) **80d:73074** 73H05
- Reiten, Idun** A note on stable equivalence and Nakayama algebras. *Proc. Amer. Math. Soc.* 71 (1978), no. 2, 157–163. (Edward L. Green) **80k:16031** 16A46 (16A35, 16A64)
- (with Auslander, Maurice; Bautista Ramos, Raymundo; Platzeck, Maria Inés; Smale, S. O.) Almost split sequences whose middle term has at most two indecomposable summands. *Canad. J. Math.* 31 (1979), no. 5, 942–960. (Manabu Harada) **80j:16021** 16A64
- (with Auslander, Maurice; Platzeck, Maria Inés) Coxeter functors without diagrams. *Trans. Amer. Math. Soc.* 250 (1979), 1–46. (P. Donovan) **80c:16027** 16A64 (16A35)
- Reiter, H.** Über den Satz von Weil-Cartier. (English summary) *Monatsh. Math. 86* (1978/79), no. 1, 13–62. (T. Ono) **80f:43015** 43A25 (12A80, 22D12)
- Reitterman, Jan** (with Adámek, Jiří; Koubek, Václav) ★Základy obecné topologie. (Czech) [Lectures in general topology] Matematický Seminář SNTL [Mathematical Seminar SNTL], 11. SNTL—Nakladatelství Technické Literatury, Prague, 1977. 280 pp. (loose errata). (Editors) **80f:54001** 54-01
- Large algebraic theories with small algebras. *Bull. Austral. Math. Soc.* 19 (1978), no. 3, 371–380. (E. G. Manes) **80i:08006** 08C10 (08B05)
- (with Koubek, Václav) Categorical constructions of free algebras, colimits, and completions of partial algebras. *J. Pure Appl. Algebra* 14 (1979), no. 2, 195–231. (Thomas F. Fox) **80g:18003** 18A35 (18C99)
- Reitman, M. I.** (with Šapiro, G. S.) Optimal design of solid deformable bodies. (Russian) *Mechanics of solid deformable bodies, Vol. 12 (Russian)*, pp. 5–90 (loose summary), VINITI, Moscow, 1978. (Vadim Komkov) **80g:73004** 73-02 (49H05, 73K99)
- Reitman, V.** (with Korjakin, Ju. A.; Leonov, G. A.) Konvergenz im Mittel von Phasensystemen. (English and Russian summaries) *Z. Angew. Math. Mech.* 58 (1978), no. 10, 435–441. (Authors' summary) **80a:93136** 93D15
- Reizer, M. Ju.** (with Lutovinov, V. S.) Relaxation processes in ferromagnetic metals. *Ž. Éksp. Teoret. Fiz.* 77 (1979), no. 2, 707–716 (Russian); translated as *Soviet Phys. JETP* 50 (1979), no. 2, 355–360. (From the summary) **80g:82067** 82A65
- Reizig, L.** (with Kanevskis, A.; Riekstīgs, E.) Works of mathematicians of Soviet Latvia for the years 1967–1975. (Russian) *Late. Mat. Ežegodnik* No. 22 (1978), 192–271, 284. (Editors) **80d:01019** 01A65 (00A15, 01A75)
- (with Riekstīgs, E.; Heniga, I.) I. M. Rabinovič. (Russian) *Late. Mat. Ežegodnik* No. 22 (1978), 272–275. (Editors) **80a:01042** 01A70
- Rejtő, L.** (with Winter, B. B.; Földes, A.) Glivenko-Cantelli theorem for the product limit estimate. (Russian summary) *Problems Control Inform. Theory/Problém Upravlen. Teor. Inform.* 7 (1978), no. 3, 213–225. (Z. W. Birnbaum) **80d:62034** 62G05 (60F15, 62E20)
- Rekha, Suman** (with Prabhakar, T. R.) On the set of polynomials  $G_n^k(x)$ . *Indian J. Pure Appl. Math.* 7 (1976), no. 12, 1367–1370. (Authors' summary) **80m:33021** 33A65
- (with Prabhakar, T. R.) Some results on the polynomials  $L_n^{(p)}(x)$ . *Rocky Mountain J. Math.* 8 (1978), no. 4, 751–754. (W. A. Al-Salam) **80f:33019** 33A70
- Reklaitis, G. V.** (with Sarma, P. V. L. N.; Martens, X. M.; Rijckaert, M. J.) A comparison of computational strategies for geometric programs. *J. Optim. Theory Appl.* 26 (1978), no. 2, 185–203. (Authors' summary) **80c:90139** 90C30
- Rektorys, Karel** The method of least squares on the boundary and very weak solutions of the first biharmonic problem. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977)*, pp. 348–355. *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (I. N. Molčanov) **80h:73022** 73C99 (31B30, 65P05)
- (with Ludvíková, Marie) A note on nonhomogeneous initial and boundary conditions in parabolic problems solved by the Rothe method. (Czech summary) *Appl. Mat.* 25 (1980), no. 1, 56–72. (Authors' summary) **80m:65083** 65N99
- Rembieliński, J.** Quaternionic Hilbert space and colour confinement. I. *J. Phys. A* 13 (1980), no. 1, 15–22. (Author's summary) **80i:81062a** 81G20
- Quaternionic Hilbert space and colour confinement. II. The admissible symmetry groups. *J. Phys. A* 13 (1980), no. 1, 23–30. (Author's summary) **80i:81062b** 81G20
- Remke, Klaus** ★Gegenwärtige Entwicklungstendenzen in der Mechanik der Mehrphasenströmungen. With English and Russian summaries. Report 1979, 8. Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin, 1979. 27 pp. (From the summary) **80m:76077** 76V05
- Remmel, J. B.** Recursively enumerable Boolean algebras. *Ann. Math. Logic* 15 (1978), no. 1, 75–107. (E. Herrmann) **80c:03052** 03D45
- (with Garsia, Adriano M.) On the raising operators of Alfred Young. *Relations between combinatorics and other parts of mathematics (Proc. Sympos. Pure Math., Ohio State Univ., Columbus, Ohio, 1978)*, pp. 181–198. *Proc. Sympos. Pure Math.*, XXXIV, Amer. Math. Soc., Providence, R.I., 1979. (H. K. Farahat) **80c:20018** 20C30
- (with Metakides, G.) Recursion theory on orderings. I. A model-theoretic setting. *J. Symbolic Logic* 44 (1979), no. 3, 383–402. (Gabriel Lolli) **80m:03080** 03D45 (03C15, 03D75)
- Remmert, R.** (with Grauert, Hans) ★Theorie der Steinischen Räume. Grundlehren der Mathematischen Wissenschaften, 227. Springer-Verlag, Berlin-New York, 1977. xx + 249 pp. ISBN 3-540-08231-X (H. Kerner) **80j:32001** 32-01 (30F10, 32-02, 32E10)



- Rempel, Stephan** On pseudodifferential operators smooth on manifolds with boundary. *Contributions to the School on Global Analysis (Ludwigsfelde, 1976), Part 2*, pp. 14-32. *Akad. Wiss. DDR, Berlin, 1977*. (V. S. Rabinović) **80a:35189** 35S15 (58G20)  
(with Schulze, B.-W.) ★ Elliptische Operatoren auf berandeten Mannigfaltigkeiten. With English and Russian summaries. Report No. R-02/78. *Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin, 1978*. 111 pp. (R. D. Moyer) **80a:58037** 58G99 (35J99, 47G05)
- Rempulka, Lucyna** On some means of double Fourier series of continuous functions. *Demonstratio Math.* 11 (1978), no. 3, 591-601. (R. L. Cooke) **80k:42018** 42B05  
Theorems of Tauber type for some methods of summability. *Demonstratio Math.* 12 (1979), no. 1, 155-162. (Amnon Jakimovski) **80k:40003** 40E05
- Rémy, Jean-Luc** (with Broy, M.; Wirsing, Martin; Finance, Jean-Pierre; Quéré, Alain) Methodical solution of the problem of ascending subsequences of maximum length within a given sequence. *Inform. Process. Lett.* 8 (1979), no. 5, 224-229. (From the introduction) **80c:68013** 68B05 (68E99)  
See also Livery, C., **80k:68004**
- Renard, Jacqueline** (with Henrard, Jacques) Note on the paper: "Sur de nouvelles séries pour le problème de masses critiques de Routh dans le problème restreint plan des trois corps" (Celestial Mech. 12 (1975), no. 3, 327-336) by J. Roels. *Celestial Mech.* 17 (1978), no. 4, 325-329. (D. Schmidt) **80a:70015** 70F10 (34C35)
- Renardy, M.** Hopf-Bifurcation bei Lasern. (English summary) *Math. Methods Appl. Sci.* 1 (1979), no. 2, 194-213. (Ian Lerche) **80k:78032** 78A55 (58F12, 58F14)
- Renard, J. C.** The characters and structure of a class of modular representation algebras of cyclic  $p$ -groups. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 4, 410-418. (Karin Erdmann) **80c:20017** 20C20  
The decomposition of products in the modular representation ring of a cyclic group of prime power order. *J. Algebra* 58 (1979), no. 1, 1-11. (Michael Klemm) **80c:20018** 20C20
- Renault, G.** Anneaux de polynômes de Ore sur des anneaux artiniens. *Comm. Algebra* 7 (1979), no. 7, 753-761. (J. W. Brewer) **80f:16024** 16A46 (16A72)
- Rendi, B.** (with Rendi, Dorina) SO(n)-structures on differentiable manifolds. (Romanian. French summary) *Bul. Ştiinţ. Tehn. Inst. Politehn. "Traian Vuia" Timişoara* 22(36) (1977), no. 2, 359-361. (V. Oproiu) **80c:53049** 53C20 (53C10)
- Rendi, Dorina** (with Rendi, B.) SO(n)-structures on differentiable manifolds. (Romanian. French summary) *Bul. Ştiinţ. Tehn. Inst. Politehn. "Traian Vuia" Timişoara* 22(36) (1977), no. 2, 359-361. (V. Oproiu) **80c:53049** 53C20 (53C10)
- pérez-Rendón, Antonio** See Pérez-Rendón, Antonio
- Rendón, Jean-Michel M.** Normal and lognormal estimation. *J. Internat. Assoc. Math. Geol.* 11 (1979), no. 4, 407-422. (Author's summary) **80k:62022** 62F10 (86A99)
- Reselt, Heinrich** Über Extremalprobleme für schlichte Lösungen elliptischer Differentialgleichungssysteme. *Comment. Math. Helv.* 54 (1979), no. 1, 17-41. (S. Rucheweyh) **80d:30017** 30C70 (35J45)  
Über einige Extremalprobleme der konformen Abbildung. *Math. Nachr.* 88 (1979), 219-226. (L. A. Aksent'ev) **80j:30028** 30C70
- Renger, A.** Eine Dichtegleichung für Schwingungssysteme bei gleichzeitigen kontinuierlichen und diskreten stochastischen Erregungen. (English and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 2, 1-13. (W. Wedig) **80f:70025** 70L05
- Renka, R.** (with Carey, G. F.; Pan, T. T.) Two problems in nonlinear finite element analysis. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 467-477. Academic Press, New York, 1979. (Stephen W. Brady) **80c:65110** 65N30 (73K15, 76N10)
- Renna, L.** (with Anni, R.; Taffara, L.) Unphysical reflection phenomena involved in the numerical calculation of heavy-ion scattering cross-sections. (Italian and Russian summaries) *Nuovo Cimento A* (11) 53 (1979), no. 4, 383-395. (Authors' summary) **80k:81155** 81F99
- Rennert, P.** ★ Einführung in die Quantenphysik. Mathematisch-Naturwissenschaftliche Bibliothek, 65. *BSB B. G. Teubner Verlagsgesellschaft, Leipzig, 1978*. 195 pp. (Editors) **80a:81001** 81-01 (00A89)
- Renno, Pasquale** (with de Socio, Luciano) On the boundary layer function in M.H.D. flows over a flat plate. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 3-4, 253-257 (1978). (Giulio Mattei) **80d:76103** 76W05  
(with Lauro, Giuliana) Asymptotic behavior of the electromagnetic field in an ionized gas. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 1, 314-329. (Authors' summary) **80c:78013** 78A40 (45K05)
- Rennolet, Charles** Existence and boundedness of solutions of abstract nonlinear integro-differential equations of nonconvolution type. *J. Math. Anal. Appl.* 70 (1979), no. 1, 42-60. (J. Kolomý) **80d:45013** 45J05 (47H15)
- Reschuch, Bodo** Zur Abhängigkeit der Perfektheit von der Charakteristik. *Math. Nachr.* 83 (1978), 301-303. (J. S. Joel) **80a:14024** 14M05 (13H10)
- Reshav, Eric** Waveforms and velocities for non-nearest-neighbour contact distributions. *J. Appl. Probab.* 16 (1979), no. 1, 1-11. (Andris Abakus) **80c:92036** 92A15
- Resnick, M. E.** (with Cordey, J. G.; Marx, K. D.; McCoy, M. G.; Mirin, A. A.) A new expansion method for computing  $\sigma$  for reactant distribution functions. *J. Comput. Phys.* 28 (1978), no. 1, 115-121. (From the introduction) **80a:65032** 65D15
- von Resteln, M.** Topologische Nullteiler und endlich erzeugte Ideale in gewissen Algebren holomorpher Funktionen. *Acta Math. Acad. Sci. Hungar.* 32 (1978), no. 3-4, 229-233. (Klaus-Dieter Bierstedt) **80d:46100** 46J15 (30H05)
- Restrop, Peter A.** Taylor series method for the numerical solution of two-point boundary value problems. *Numer. Math.* 31 (1978/79), no. 4, 359-375. (Author's summary) **80c:65171** 65L10  
(with Kaps, Peter) Generalized Runge-Kutta methods of order four with stepsize control for stiff ordinary differential equations. *Numer. Math.* 33 (1979), no. 1, 55-68. (Authors' summary) **80c:65084** 65L05
- Reusio, C.** (with Morel, E.) Global optimization by suppression of partial redundancies. *Comm. ACM* 22 (1979), no. 2, 96-103. (Authors' summary) **80b:68016** 68B05
- Repin, V. B.** Heat exchange of a cylinder in a complex sonic field. (Russian) *Ž. Prikl. Meh. i Tehn. Fiz.* 1979, no. 5, 91-99, 158. (Author's summary) **80k:80007** 80A20 (76Q05)
- Repka, Joe** Tensor products of unitary representations of  $SL_2(\mathbb{R})$ . *Amer. J. Math.* 100 (1978), no. 4, 747-774. (J. Szmidt) **80g:22014** 22E46
- Repicki, V. B.** Arithmetic modules. (Russian) *Mat. Sb. (N.S.)* 110(152) (1979), no. 1, 150-157, 160. (N. Popescu) **80m:13002** 13C13 (06D99)
- Repinok, A. D.** (with Brikman, M. S.) Some properties of regularity classes in optimal control problems. (Russian) *Avtomat. Sistemy Upravleniya i Prirody Avtomat.* No. 49 (1979), 16-18, 1. (M. Junusov) **80i:93037** 93C40
- Repperger, D. W.** On covariance propagation using matrix continued fractions. *Internat. J. Systems Sci.* 10 (1979), no. 8, 913-925. (Andrew P. Sage) **80c:93075** 93E10
- Rescigno, T. N.** (with Watson, D. K.; Lucchese, Robert R.; McKay, Vincent) Schwinger variational principle for electron-molecule scattering: application to electron-hydrogen scattering. *Phys. Rev. A* (3) 21 (1980), no. 3, 738-744. (Authors' summary) **80m:81081** 81F20
- Resco, Richard** Transcendental division algebras and simple Noetherian rings. *Israel J. Math.* 32 (1979), no. 2-3, 236-256. (S. Elliger) **80k:16027** 16A39 (16A19, 16A20)  
(with Lanski, Charles; Small, Lance W.) On the primitivity of prime rings. *J. Algebra* 59 (1979), no. 2, 395-398. (Afzal Beg) **80k:16009** 16A12 (16A20)  
(with Small, Lance W.; Wadsworth, Adrian R.) Tensor products of division rings and finite generation of subfields. *Proc. Amer. Math. Soc.* 77 (1979), no. 1, 7-10. (H. J. Weirnt) **80j:16020** 16A39 (16A08, 16A33, 16A45)
- Resetsnjak, Ju. G.** ★ Введение в теорию интеграла Лебега. (Russian) [Introduction to the theory of the Lebesgue integral] *Necosibirsk. Gos. Univ., Novosibirsk, 1975*. 203 pp. (From the publisher's description) **80j:26001** 26-01 (28-01)  
Differential properties of quasiconformal mappings and conformal mappings of Riemannian spaces. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 5, 1166-1183, 1216. (Valentin Boju) **80j:53023** 53B20 (30C60)
- Resibois, P.** (with Mareschal, M.) Kinetic equations, initial conditions and time-reversal: a solvable one-dimensional model revisited. *Phys. A* 94 (1978), no. 2, 211-253. (Authors' summary) **80k:82041** 82A40 (45K05)
- Resnick, Sidney I.** (with Durrett, Richard) Functional limit theorems for dependent variables. *Ann. Probab.* 6 (1978), no. 5, 829-846. (Holger Rootzén) **80b:60048** 60F17 (60F05, 60G42, 60G55, 60J30)  
(with Harrison, J. Michael) The recurrence classification of risk and storage processes. *Math. Oper. Res.* 3 (1978), no. 1, 57-66. (C. Mohan) **80a:60109** 60J99 (90B05)  
(with de Haan, Laurens) Derivatives of regularly varying functions in  $\mathbb{R}^d$  and domains of attraction of stable distributions. *Stochastic Process. Appl.* 8 (1978/79), no. 3, 349-355. (J. Galambos) **80g:26020** 26B35 (26A12, 60F05)  
(with de Haan, Laurens) Conjugate  $\sigma$ -variation and process inversion. *Ann. Probab.* 7 (1979), no. 6, 1028-1035. (N. R. Mohan) **80k:60043** 60F17
- Resnikoff, H. L.** (with Tai, Y.-S.) On the structure of a graded ring of automorphic forms on the 2-dimensional complex ball. *Math. Ann.* 238 (1978), no. 2, 97-117. (Hiroshi Saito) **80k:10037** 10D20 (32N10)  
(with Cohen, David Mordecai) Hermitian quadratic forms and Hermitian modular forms. *Pacific J. Math.* 76 (1978), no. 2, 329-337. (O. M. Fomenko) **80k:10039** 10D20 (10C05)
- Ressel, Paul** A continuity theorem for weakly stationary stochastic processes on an arbitrary l.c.a. group. *Probability measures on groups (Proc. Fifth Conf., Oberwolfach, 1978)*, pp. 325-335. *Lecture Notes in Math.*, 706. Springer, Berlin, 1979. (S. A. Cobanjan) **80i:60049** 60G10  
Positive definite functions on abelian semigroups without zero. *Studies in analysis*, pp. 291-310. *Advances in Math., Suppl. Studies*, 4. Academic Press, New York, 1979. (Christian Berg) **80a:43006** 43A35
- Ressouche, A.** (with Ermine, F.) Une méthode de vérification statique de types. Application au langage PASCAL. *Transformations de programmes (Proc. Third Internat. Symposium, Programming, Paris, 1978)*, pp. 293-314. Dunod, Paris, 1978. (G. Berry) **80d:68017** 68B10
- Restivo, Antonio** Some decision results for recognizable sets in arbitrary monoids. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978)*, pp. 363-371. *Lecture Notes in Comput. Sci.*, 62. Springer, Berlin, 1978. (István Babcsányi) **80f:20072** 20M35  
Sur les sous-monoides très purs. *Groupe d'Étude d'Algèbre (Marie-Paule Malliarin), 1<sup>re</sup> année (1975/76), Exp. No. 18, 7 pp., Secrétariat Math., Paris, 1978*. (From the introduction) **80d:20065** 20M35 (20M05)  
(with De Luca, A.; Perrin, Dominique; Termini, S.) Synchronization and simplification. *Discrete Math.* 27 (1979), no. 3, 297-308. (Henry Beker) **80k:94030** 94B50
- Restrepo, Rodrigo** (with Cooter, Robert) A closed model of careers in a simple hierarchy. *Bell J. Econom.* 10 (1979), no. 2, 526-548. (Authors' summary) **80g:90027** 90A16
- Restuccia, Gaetano** (with Aragone, C.) A gravitating  $SO(3, 1)$  gauge field. *Ann. Physics* 113 (1978), no. 2, 387-399. (From the summary) **80a:83028** 83C40 (22E70)
- Restuccia, Gaetano** On the rank of the module of derivations of a ring with unequal characteristic. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 36 (1977/78), 449-462 (1979). (Author's summary) **80d:13009** 13N05 (13F30, 13H99)
- Rét, Mária** On the use of diffusion approximations for the cyclic queue model. *Selected Papers on Operating Systems: Theory and Practice (Lectures, Visegrád Winter School, Visegrád, 1978)*, pp. 35-39. Számító. Kutató Int., Budapest, 1978. (G. Louchard) **80m:68035** 68C15 (60K25)
- Retak, V. S.** Massey operations in Lie superalgebras and differentials of the Quillen spectral sequence. (Russian) *Funkcional. Anal. i Prilozhen.* 12 (1978), no. 4, 91-92. (A. Verona) **80d:55025** 55T20 (55Q15, 55S30)  
(with Berezin, F. A.) Construction of Lie superalgebras with a semisimple even part. (Russian. English summary) *Vestnik Moshkov. Univ. Ser. I Mat. Meh.* 1978, no. 5, 63-67. (Juri A. Baturin) **80k:17015** 17B70 (17B10, 81E99)
- Retherford, J. R.** (with Johnson, W. B.; König, Hermann; Maurey, Bernard) Eigenvalues of  $p$ -summing and  $l_q$ -type operators in Banach spaces. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics (Leipzig, 1977)*, pp. 100-105. Teubner, Leipzig, 1978. (From the text) **80k:47028** 47B10 (47A70)  
(with Johnson, W. B.; König, Hermann; Maurey, Bernard) Eigenvalues of  $p$ -summing and  $l_q$ -type operators in Banach spaces. *J. Funct. Anal.* 32 (1979), no. 3,

- 353-380. (A. Pietsch) **80f:47033** 47B10 (47A70, 47G05)
- Réti, János** (with Mihályffy, László; Póloskei, Pál) On the determination of weights in preference functions. (Hungarian. English and Russian summaries) *Szigma—Mat.-Közgazdasági Folyóirat* 11 (1978), no. 3-4, 211-218. (Authors' summary) **80c:90010** 90A06
- Retkin, Harry** (with Mogi, Sasako) Some combinatorial identities on matroids. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 343-344. *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Jeremy Dawson) **80j:05048** 05B35 (05B25)
- Rettiev, N. S.** (with Alekseev, N. K.) The dependence of the control set on the parameter. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 9, 1687-1688, 1725. (B. I. Anan'ev) **80a:93022** 93B05 (34H05)
- Some properties of minimal invariant sets of control systems. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 10, 1796-1805, 1916-1917. (V. V. Obuhovskii) **80a:49033** 49E15 (57R27, 58E25, 93C15)
- Rettiev, N. V.** Continuity and discontinuity of the Bellman function. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 12, 2178-2184, 2300. (Tadeusz Dłotko) **80c:93055** 93C15
- Reusch, Bernd** Realization of finite automata with linear parts. *J. Comput. System Sci.* 17 (1978), no. 2, 194-206. (R. G. Bharaev) **80a:68053** 68D15
- Reuschel, Arnulf** Vielecke, die einen Umkreis und einen Inkreis besitzen. *Praxis Math.* 21 (1979), no. 3, 69-74. (O. Bottema) **80g:51016** 51N20
- Remse, F.** On classical and quantum relativistic dynamics. *Found. Phys.* 9 (1979), no. 11-12, 865-882. (V. V. Sokolov) **80m:81131** 81M05
- Restenauer, Christophe** Sur les séries rationnelles en variables non commutatives. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978)*, pp. 372-381. *Lecture Notes in Comput. Sci.*, 62, Springer, Berlin, 1978. (H. Jürgensen) **80c:68196** 68F05 (20Mxx)
- Propriétés "à la Fatou" des séries rationnelles. *Séries formelles en variables non commutatives et applications (Proc. 5e École de Printemps Informat. Théorique, Vieux-Boucaux les Bains, 1977)*, pp. 243-247. *École Nat. Sup. Tech. Avancées, Paris*, 1978. (From the text) **80a:13022** 13F25
- Une topologie du monoïde libre. *Semigroup Forum* 18 (1979), no. 1, 33-49. (Dominique Perrin) **80j:20075** 20M35 (54H13)
- Sur les séries associées à certains systèmes de Lindenmayer. *Theoret. Comput. Sci.* 9 (1979), no. 3, 363-375. (A. Ja. Dikovskii) **80c:68069** 68F05
- Reval, J.** (with Gyarmati, B.; Kruppa, A. T.) A rigorous foundation of an easy-to-apply approximation method for bound state problems. *Nuclear Phys. A* 326 (1979), no. 1, 119-128. (Chindhu S. Warke) **80g:81031** 81C99 (65N25)
- Reventós, A.** On the Gauss-Bonnet formula on odd-dimensional manifolds. *Tôhoku Math. J. (2)* 31 (1979), no. 2, 165-178. (F. Hirzebruch) **80j:53046** 53C20
- Reverdy, Jacques** Sur une méthode de Runge-Kutta pour des équations différentielles à retard. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 9, A417-A420. (Author's summary) **80a:65154** 65L05
- Reversat, Marc** Approximations diophantiennes asymptotiques. *Séminaire de Théorie des Nombres (1976-1977)*, Exp. No. 1, 14 pp. CNRS, Talence, 1977. (W. W. Adams) **80g:10029** 10F10
- Sur les approximations diophantiennes simultanées asymptotiques. *Acta Arith.* 34, no. 4, 329-348 (1979). (Charles Pisto) **80j:10047** 10F40
- Révész, Pál** (with Csörgő, Miklós) A strong approximation of the multivariate empirical process. *Studia Sci. Math. Hungar.* 10 (1975), no. 3-4, 427-434 (1978). (Jon A. Wellner) **80c:60049** 60F15 (62G30)
- (with Csörgő, Miklós; Komlós, János; Major, Péter; Tusnády, Gábor) On the empirical process when parameters are estimated. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 87-97. *Academia, Prague*, 1978. (P. K. Sen) **80c:60033** 60F05 (62G99)
- A strong law of the empirical density function. *Period. Math. Hungar.* 9 (1978), no. 4, 317-324. (M. D. Burke) **80c:60047** 60F15 (62G99)
- (with Csörgő, Miklós) How small are the increments of a Wiener process? *Stochastic Process. Appl.* 8 (1978), no. 2, 119-129. (S. J. Taylor) **80a:60031** 60F15 (60G17, 60J65)
- (with Csörgő, Miklós) On the standardized quantile process. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977)*, pp. 125-140. *Academic Press, New York*, 1979. (Jon A. Wellner) **80a:62013** 62E20 (60F15, 62G30)
- (with Csáki, E.) How big must be the increments of a Wiener process? Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 1-2, 37-49. (N. C. Jain) **80d:60102** 60J65
- (with Csörgő, Miklós) How big are the increments of a Wiener process? *Ann. Probab.* 7 (1979), no. 4, 731-737. (S. J. Taylor) **80g:60025** 60F10 (60G17, 60J65)
- Revuz, Philippe** ★ Autour des formes quadratiques. *Cahiers Mathématiques Montpellier*, 13. Université des Sciences et Techniques du Languedoc, U.E.R. de Mathématiques, Montpellier, 1978. ii + 138 pp. (E. Hornix) **80a:15018** 15A66
- Une note sur les formes quadratiques en caractéristique 2. Colloque sur les Formes Quadratiques, 2 (Montpellier, 1977). *Bull. Soc. Math. France Mém. No. 59* (1979), 137-140. (Joel Cunningham) **80k:10016** 10C01
- Trivecteurs de rang 6. Colloque sur les Formes Quadratiques, 2 (Montpellier, 1977). *Bull. Soc. Math. France Mém. No. 59* (1979), 141-155. (J. Dieudonné) **80k:15041** 15A75 (15A72)
- Revuz, Daniel** Remarks on the filling scheme for recurrent Markov chains. *Duke Math. J.* 45 (1978), no. 3, 681-689. (Yoichi Ōshima) **80a:60096** 60J27 (60J45)
- Lois zéro-deux pour les processus de Markov. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 8, A475-A477. (Author's summary) **80i:60099** 60J25 (60F20)
- Revalenko, A. F.** (with Šemjakin, E. I.) Some formulations of boundary value problems of L-plasticity. (Russian) *Ž. Prikl. Meh. i Tehn. Fiz.* 1979, no. 2, 128-137, 183. (Authors' summary) **80c:73029** 73E99
- Richardson, R. E.** See Lachère-Rey, M.
- Rey, William J. J.** ★ Robust statistical methods. *Lecture Notes in Mathematics*, 690. Springer-Verlag, Berlin-New York, 1978. vi + 128 pp. ISBN 3-540-09091-6 (Martin A.
- Hamilton) **80f:62041** 62F35
- Reyes, G. E.** (with Wraith, G. C.) A note on tangent bundles in a category with a ring object. *Math. Scand.* 42 (1978), no. 1, 53-63. (Thomas F. Fox) **80f:18011** 18F15 (14A99, 58A05)
- du Bois-Reymond, Paul** See Du Bois-Reymond, Paul
- Reyn, J. W.** A stability criterion for separatrix polygons in the phase plane. *Nieuw Arch. Wisk.* (3) 27 (1979), no. 2, 238-254. (James A. Murdock) **80j:34041** 34C35 (34D30, 58F14)
- Reynaerts, Huguette** The linear functional equation  $\sum_{i=1}^n x_i \times \varphi \circ g_i = h$ . *Demonstratio Math.* 12 (1979), no. 1, 131-139. (M. Kuczma) **80j:39014** 39B50 (39B10)
- Reynolds, David W.** (with Gurtin, Morton E.; Spector, Scott J.) On uniqueness and bifurcation in nonlinear viscoelasticity. *Arch. Rational Mech. Anal.* 72 (1979/80), no. 4, 303-313. (R. R. Huilgol) **80k:73038** 73F99 (35B32)
- Reynolds, George D.** (with Rice, Michael D.) Completeness and covering properties of uniform spaces. *Quart. J. Math. Oxford Ser. (2)* 29 (1978), no. 115, 367-374. (G. C. L. Brümmer) **80i:54035** 54E15 (18A40, 54B30, 54D60)
- Reynolds, John C.** Reasoning about arrays. *Comm. ACM* 22 (1979), no. 5, 290-299. (Author's summary) **80j:68018** 68B10 (68E05)
- Reysat, Éric** Mesures de transcendance de nombres liés aux fonctions elliptiques. *Séminaire Delange-Pisot-Poitou, 18e année: 1976/77, Théorie des nombres, Fasc. 2, Exp. No. G22, 3 pp.* Secrétariat Math., Paris, 1977. (Michel Waldschmidt) **80m:10024** 10F35 (23A25)
- Travaux récents de G. V. Čudnovskij. *Séminaire Delange-Pisot-Poitou, 18e année: 1976/77, Théorie des nombres, Fasc. 2, Exp. No. 29, 7 pp.* Secrétariat Math., Paris, 1977. (Michel Waldschmidt) **80m:10025** 10F35 (30D30, 32A20)
- Reza, F.** Concavity and sensitivity of electrical resistance functions. *Electron. Lett.* 15 (1979), no. 11, 305-306. (Author's summary) **80g:94077** 94C05
- de Rezende, N. S.** (with Raupp, Marco A.) Computation of longitudinal motions of a viscoelastic bar. *Bol. Soc. Brasil. Mat.* 8 (1977), no. 2, 131-147. (Peter J. Chen) **80d:73060** 73F15 (65N30)
- Reznick, Bruce** When is the iterate of a formal power series odd? *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 1, 62-66. (W. A. Al-Salam) **80g:39005** 39B10
- Reznickaja, K. G.** (with Lavrent'ev, M. M.) An inverse problem with unknown source. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 6, 1302-1304. (V. G. Romanov) **80m:35076** 35R30
- Rezunov, A. V.** Analysis of the convergence of a heuristic iteration method in application to problems of antipolar deformation of a viscoplastic medium. (Russian) *Dinamika Splain. Sredy No. 34 Nekotorye Problemy Uprugosti i Plastičnosti* (1978), 74-79, 142-143. (Author's summary) **80d:73064** 73F99 (65P05)
- Rhai, Tong-Shieng** See Lai, Tung Sheng
- Rhee, H.** (with Walter, Wolfgang) Entire solutions of  $\Delta^2 u = f(r, u)$ . *Proc. Roy. Soc. Edinburgh Sect. A* 82 (1978/79), no. 3-4, 189-192. (C. Bardos) **80i:35074** 35J40 (35B60)
- Rhees, R.** See Wittgenstein, Ludwig. **80f:00009**
- Rheinboldt, Werner C.** (with Babuška, I.) Adaptive procedures and reliability of the finite element method. *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis (Rome, 1978)*, pp. 521-532. *Pitagora, Bologna*, 1979. (Rolf Rannacher) **80i:65113** 65N30 (65J05)
- (with Zave, Pamela) Design of an adaptive, parallel finite-element system. *ACM Trans. Math. Software* 5 (1979), no. 1, 1-17. (Authors' summary) **80c:65213** 65N30 (65-04)
- (with Babuška, I.) Adaptive approaches and reliability estimations in finite element analysis. *Comput. Methods Appl. Mech. Engrg.* 17/18 (1979), part 3, 519-540. (Reinhard Scholz) **80c:65097** 65N30
- (with Babuška, I.) Analysis of optimal finite-element meshes in  $R^1$ . *Math. Comp.* 33 (1979), no. 146, 435-463. (Georges A. Lebaud) **80c:65134** 65N30
- Rho, Jae Chul** (with Hong, Sung Sa; Nel, Louis D.) Nearness structure of  $C(X)$ . *Kyungpook Math. J.* 18 (1978), no. 2, 175-182. (H. Herrlich) **80c:54031** 54E17
- A duality of global M-spectral maximal spaces for a two-decomposable operator. *J. Korean Math. Soc.* 16 (1979/80), no. 1, 9-16. (F.-H. Vasilescu) **80c:47040** 47B40
- Rhoades, B. E.** (with Kasahara, Shouro) Common fixed point theorems in compact metric spaces. *Math. Japon.* 23 (1978/79), no. 2, 227-229. (S. T. Lin) **80g:54054** 54H25
- A generalization of a fixed point theorem of Bogin. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 1, 1-7. (Gilles Fournier) **80f:54046** 54H25
- A collection of contractive definitions. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 2, 229-235. (A. T. Bharucha-Reid) **80a:54090** 54H25
- (with Ray, Barada K.) Corrections to: "Fixed-point theorems for mappings with a contractive iterate" [Pacific J. Math. 71 (1977), no. 2, 517-520; MR 57 #1467]. *Pacific J. Math.* 79 (1978), no. 2, 563. (Editors) **80k:54087** 54H25
- (with Hicks, Troy L.) A Banach type fixed-point theorem. *Math. Japon.* 24 (1979/80), no. 3, 327-330. (L. Janos) **80i:54055** 54H25
- (with Liu, Matthew) Some properties of the Chebyshev method. *Pacific J. Math.* 80 (1979), no. 1, 213-225. (L. Lorch) **80i:40006** 40G99
- Fixed point theorems in a uniform space. *Publ. Inst. Math. (Beograd) (N.S.)* 25(39) (1979), 153-156. (Silvio Massa) **80g:54056** 54H25
- The convergence of matrix transforms for certain Markov chains. *Stochastic Process. Appl.* 9 (1979), no. 1, 85-93. (Dean Isaacson) **80c:60088** 60J10
- Rhoades, D. A.** Nonanticipative representations of Banach-space-valued Gaussian processes with respect to Brownian motion. *Stochastic Process. Appl.* 8 (1978/79), no. 1, 11-32. (Author's summary) **80c:60051** 60G15 (60G30, 60G35)
- Rhodius, Adolf** Über zu Halbnormen gehörende numerische Wertebereiche linearer Operatoren. *Math. Nachr.* 86 (1978), 181-185. (T. Ja. Azizov) **80i:47004** 47A12
- Riazantsev, Ju. S.** See Rjazancev, Ju. S.
- Riazuddin** (with Fayyazuddin) Model based on gauge symmetry group  $G = G_{24} \times SU(3) \times SU(3)$ . *Phys. Rev. D* (3) 21 (1980), no. 1, 249-258. (From the summary) **80k:81162** 81G15
- Ribeiro de Faria, M.** (with Albeverio, Sergio; Heegh-Krohn, Raphael) Stationary measures for the periodic Euler flow in two dimensions. *J. Statist. Phys.* 20 (1979), no. 6, 585-595. (S. V. Temko) **80f:76008** 76C99 (58F11, 82A15)
- Ribenboim, Paulo** (with van den Dries, Lou) Application de la théorie des modèles aux



- groupes de Galois de corps de fonctions. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 17, A789-A792. (Authors' introduction) **80b:12013** 12A90 (03C60)
- Ribera Pascual, J. (with Camarena Badia, V.; Petriz Calvo, F.) Problems of convergence in the theory of perturbations of canonical systems. (Spanish. English summary) *Rev. Mat. Hisp.-Amer.* (4) 38 (1978), no. 4-5, 208-228. (Mauro Francaviglia) **80f:70017** 70H15 (58F05)
- Ribes, Luis (with Olitkar, B. C.) On prosupersolvable groups. *Pacific J. Math.* 77 (1978), no. 1, 183-188. (B. Hartley) **80e:20039** 20E18  
(with Olitkar, B. C.) On the Frattini subgroup of free products of profinite groups. *Comm. Algebra* 7 (1979), no. 3, 313-325. (A. H. M. Hoare) **80b:20037** 20E18 (20F26)
- Ribet, Kenneth A. Sur la recherche des  $p$ -extensions non ramifiées de  $\mathbb{Q}(\mu_p)$ . (English summary) *Groupe d'Étude d'Algèbre (Marie-Paule Malliauin)*, 1re année (1975/76), Exp. No. 2, 3 pp., *Secrétariat Math.*, Paris, 1978. (T. Metsänkylä) **80f:12005** 12A35 (10D05)  
 $p$ -adic  $L$ -functions attached to characters of  $p$ -power order. (French summary) *Séminaire Delange-Pisot-Poitou*, 19e année (1977/78), *Théorie des nombres*, Fasc. 1, Exp. No. 9, 8 pp., *Secrétariat Math.*, Paris, 1978. (Lawrence Washington) **80b:12012** 12A70 (10D30)
- Ricci, Fulvio (with Weiss, Guido) A characterization of  $H^1(\Sigma_{g,n})$ . *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 1, pp. 289-294. *Proc. Sympos. Pure Math.*, XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (Charles Horowitz) **80m:30043** 30D55
- Ricci, M. (with Miglietta, F.) Infinite conservation laws for the electromagnetic and the asymptotic gravitational fields. (Italian and Russian summaries) *Nuovo Cimento A* (11) 49 (1979), no. 1, 93-100. (Authors' summary) **80d:78015** 78A25 (49A99, 53B50)
- Ricci, Paolo Emilio Pseudo-hyperbolic and pseudo-trigonometric functions. (Italian. English summary) *Pubbli. Istit. Mat. Appl. Fac. Ingeg. Univ. Stud. Roma Quaderno No. 12* (1978), 37-49. (R. G. Buschman) **80j:33025** 33A70
- Rice, S. J. Mean-value theorems for primes in short intervals. *Proc. London Math. Soc.* (3) 37 (1978), no. 2, 230-242. (Matti Jutila) **80e:10060** 10H15
- Rice, Bassetti, Antonietta Generalization of a uniqueness theorem that is valid for a particular non-Stokes fluid. (Italian) *Atti Accad. Sci. Istit. Bologna Cl. Sci. Fis. Rend.* (13) 5 (1977/78), no. 2, 177-181. (Salvatore Rionero) **80c:76003** 76A05 (35Q10)
- Riccioli, Barbara Velt Forcing as a logical principle for the construction of sheaves. I. (Italian. French summary) *Rend. Mat.* (6) 11 (1978), no. 3, 329-353 (1979). (Author's summary) **80b:03109a** 03G30 (18F20)  
Forcing as a logical principle for the construction of sheaves. II. (Italian) *Rend. Mat.* (6) 11 (1978), no. 4, 601-625 (1979). (Author's summary) **80b:03109b** 03G30 (18F20)
- Rice, Bart Some good fields and rings for computing number-theoretic transforms. *IEEE Trans. Acoust. Speech Signal Process.* 27 (1979), no. 4, 432-433. (Author's summary) **80a:40005** 94A11 (68C05)
- Rice, John On the estimation of the parameters of a power spectrum. *J. Multivariate Anal.* 9 (1979), no. 3, 378-392. (E. J. Hannan) **80k:62101** 62M15
- Rice, John R. (with Casaletto, J. J.) Smoothing and estimating derivatives of equispaced data. *Applicable Anal.* 8 (1978/79), no. 2, 143-152. (Authors' summary) **80c:65031** 65D10 (65-04)
- (with Houstis, E. N.; Lynch, Robert E.) Evaluation of numerical methods for elliptic partial differential equations. *J. Comput. Phys.* 27 (1978), no. 3, 323-350. (L. Hageman) **80g:65119** 65N35 (65N05)  
(with Lynch, Robert E.) High accuracy finite difference approximation to solutions of elliptic partial differential equations. *Proc. Nat. Acad. Sci. U.S.A.* 75 (1978), no. 6, 2541-2544. (V. Thomée) **80a:65204** 65N05  
(with Lemme, James M.) Speedup in parallel algorithms for adaptive quadrature. *J. Assoc. Comput. Mach.* 26 (1979), no. 1, 65-71. (Authors' summary) **80b:68055** 68C25 (65D30, 68C05)
- Rice, M. J. Charge density wave systems: the  $q$ -particle model. *Solitons and condensed matter physics (Proc. Sympos. Nonlinear (Soliton) Structure and Dynamics in Condensed Matter, Oxford, 1978)*, pp. 246-253. *Springer Ser. in Solid-State Sci.*, 8, Springer, Berlin, 1978. (From the introduction) **80d:82060** 82A65
- Rice, Michael D. Uniformities in the descriptive theory of sets. II. Measurable functions. *Amer. J. Math.* 100 (1978), no. 4, 717-725. (J. G. Ceder) **80g:54043** 54H05 (28A20, 54C50)  
(with Hušek, Miroslav) Productivity of coreflective subcategories of uniform spaces. *General Topology Appl.* 9 (1978), no. 3, 295-306. (S. J. R. Vorster) **80e:54008** 54B10 (54E15)  
(with Reynolds, George D.) Completeness and covering properties of uniform spaces. *Quart. J. Math. Oxford Ser. (2)* 29 (1978), no. 115, 367-374. (G. C. L. Brümmer) **80i:54035** 54E15 (18A40, 54B30, 54D60)
- Rice, Peter Optimal search behaviour in a model with increasing costs. *Econom. Lett.* 1 (1978), no. 3, 211-215. (Jacob Paroush) **80j:90050** 90A16 (90A12)
- Rice, R. E. Iterative square roots of Chebyshev polynomials. *Stochastica* 3 (1979), no. 2, 1-14. (R. P. Boas, Jr.) **80m:39005** 39B10 (33A65)
- Rich, Michael On alternate rings and their attached Jordan rings. *Pacific J. Math.* 75 (1978), no. 2, 511-518. (I. P. Sestakov) **80b:17012** 17D05 (17C50)  
Some radical properties of Jordan matrix rings. *Canad. J. Math.* 31 (1979), no. 1, 189-196. (Jerome M. Katz) **80b:17018** 17C10
- Richard, Denis On external properties of nonstandard models of arithmetic. (French summary) *Publ. Dép. Math. (Lyon)* 14 (1977), no. 4, 57-75. (Author's summary) **80b:03111** 03H15  
(with Bouvier, Alain)  $\star$ Groupes. Observation, théorie pratique. Second revised and corrected edition. *Actualités Scientifiques et Industrielles*, 1383. Hermann, Paris, 1979. xiii + 311 pp. ISBN 2-7056-1383-8 (Editors) **80g:20001** 20-01
- Richard, J. L. (with Madore, J.; Stora, R.) An introduction to the twistor programme. *Phys. Rep.* 49 (1979), no. 2, 113-130. (B. N. Frolov) **80f:83047** 83D05 (32L05, 58A99)
- Richards, D. (with Dickinson, A. S.) Classical small-angle anisotropic potential scattering. *J. Phys. B* 12 (1979), no. 18, 3005-3026. (Authors' summary) **80f:81092** 81F05
- Richards, Dana S. (with Zaks, S.) Generating trees and other combinatorial objects lexicographically. *SIAM J. Comput.* 8 (1979), no. 1, 73-81. (Fabrizio Luccio) **80f:68078** 68E10 (05C05)
- Richards, Donald (with Gupta, Rameshwar D.) Calculation of zonal polynomials of  $3 \times 3$  positive definite symmetric matrices. *Ann. Inst. Statist. Math.* 31 (1979), no. 2, 207-213. (Nariaki Sugjura) **80m:62047** 62H10 (33A70)  
(with Gupta, Rameshwar D.) The exact distribution of Wilks' criterion. *South African Statist. J.* 13 (1979), no. 1, 7-14. (A. M. Mathai) **80m:62049** 62H10  
(with Gupta, Rameshwar D.) Exact distributions of Wilks'  $A$  under the null and nonnull (linear) hypotheses. (Italian and French summaries) *Statistica (Bologna)* 39 (1979), no. 2, 333-342. (D. G. Kabe) **80i:62042** 62H10
- Richards, Ian (with Pouriel, M. B.) Differentiability properties of computable functions—a summary. *Acta Cybernet.* 4 (1978/79), no. 1, 123-125. (John P. Helm) **80d:03059** 03F60 (26A24, 68C30)  
(with Newman, Donald J.) Finite measures designed for accuracy on arithmetic progressions. *J. Number Theory* 10 (1978), no. 4, 385-394. (J. W. Porter) **80e:10049** 10K10 (10L20)
- Richards, Ron Noetherian prime rings of Krull dimension one. *Comm. Algebra* 7 (1979), no. 8, 845-873. (Maureen H. Fenrick) **80c:16004** 16A12 (16A33, 16A63)
- Richardson, G. D. (with Kent, D. C.) Compactifications of convergence spaces. *Internat. J. Math. Math. Sci.* 2 (1979), no. 3, 345-368. (J. van der Slot) **80c:54004** 54A20 (54D35)  
(with Kent, D. C.) Some product theorems for convergence spaces. *Math. Nachr.* 87 (1979), 43-51. (John A. Narvarde) **80b:54033** 54D99
- Richardson, John L. (with Blankenbecler, Richard) Moment recursions and the Schrödinger problem. *Phys. Rev. D* (3) 19 (1979), no. 2, 496-502. (Georges Bessis) **80d:81015** 81C05 (65L15)
- Richardson, John M. (with Murthy, Vrudhula K.; Haywood, L. Julian) Effect of simultaneous random amplitude and frequency modulation on ECG power spectra. *Inform. Sci.* 12 (1977), no. 2, 105-110. (Authors' summary) **80d:92007** 92A07  
(with Murthy, Vrudhula K.; Haywood, L. Julian) Recognition of generalized Markoff processes and application to electrocardiography. *Inform. Sci.* 14 (1978), no. 1, 51-56. (Authors' summary) **80d:92008** 92A07  
Target seeking in the presence of nonstationary Gaussian fluctuations. *Inform. Sci.* 16 (1978), no. 1, 47-59. (Author's summary) **80c:68224** 68G10 (94A05)
- Richardson, R. W. Commuting varieties of semisimple Lie algebras and algebraic groups. *Compositio Math.* 38 (1979), no. 3, 311-327. (Wim H. Hesselink) **80c:17009** 17B20 (14L30, 22E47)  
(with Luna, D.) A generalization of the Chevalley restriction theorem. *Duke Math. J.* 46 (1979), no. 3, 487-496. (Wim H. Hesselink) **80c:14049** 14L30 (15A72)
- Richelson, Jeffrey Some further results on consistency, rationality and collective choice. *Rev. Econom. Stud.* 45 (1978), no. 2, 343-346. (Author's summary) **80i:90016** 90A08
- Richert, H.-E. (with Halberstam, H.) On a result of R. R. Hall. *J. Number Theory* 11 (1979), no. 1, 76-89. (J. W. Porter) **80c:10050** 10H30
- Richier, J. L. (with Culik, Karel, II) Homomorphism equivalence on ETOL languages. *Internat. J. Comput. Math.* 7 (1979), no. 1, 43-51. (Jürgen Dassow) **80c:68004** 68F05
- Richman, Fred (with Walker, Elbert A.) Valuated groups. *J. Algebra* 56 (1979), no. 1, 145-167. (Donald Cook) **80a:20053** 20K40 (20K35)
- Richmond, L. Bruce (with Ferch, H.) A numerical study of chromatic polynomials. *Proceedings of the Sixth Manitoba Conference on Numerical Mathematics (Univ. Manitoba, Winnipeg, Man., 1976)*, pp. 367-379. *Congress. Numer.*, XVIII, Utilitas Math., Winnipeg, Man., 1977. (Ruth Bari) **80c:05062** 05C15  
(with Erdős, Paul) Partitions into summands of the form  $\{m_n\}$ . *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1977)*, pp. 371-377. *Congress. Numer.*, XX, Utilitas Math., Winnipeg, Man., 1978. (K. Thanigasalam) **80c:10048** 10J20  
(with Szekeres, George) The Taylor coefficients of certain infinite products. *Acta Sci. Math. (Szeged)* 40 (1978), no. 3-4, 347-369. (E. Grosswald) **80g:10046** 10J10 (10A45)
- Richoux, Anthony N. On a commutativity theorem of Luh. *Acta Math. Acad. Sci. Hungar.* 34 (1979), no. 1-2, 23-25. (From the text) **80b:16030** 16A70  
(with Chung, Lung O.; Luh, Jiang) Derivations and commutativity of rings. *Pacific J. Math.* 80 (1979), no. 1, 77-89. (Howard E. Bell) **80f:16036** 16A72 (16A70)  
A theorem for prime rings. *Proc. Amer. Math. Soc.* 77 (1979), no. 1, 27-31. (J. F. Watters) **80f:16009** 16A12
- Richter, Gerald R. Superconvergence of piecewise polynomial Galerkin approximations, for Fredholm integral equations of the second kind. *Numer. Math.* 31 (1978/79), no. 1, 63-70. (P. M. Anselone) **80a:65273** 65R20
- Richter, Gerhard Verbesserung einer aus der Carlemanschen Ungleichung abgeleiteten Normabschätzung für die Inverse einer Matrix. *Wiss. Z. Hochsch. Verkehrrswesen "Friedrich List" Dresden* 24 (1977), no. 4, 703-707. (Author's introduction) **80b:65039** 65F05  
Zur Verteilung der Norm des Lösungsvektors linearer Gleichungssysteme mit zufälligen Koeffizienten. *Wiss. Z. Hochsch. Verkehrrswesen "Friedrich List" Dresden* 26 (1979), no. 1, 79-84. (Ludwig Arnold) **80j:60097** 60H25
- Richter, Günther  $\star$ Kategorielle Algebra. Studien zur Algebra und ihre Anwendungen, 3. Akademie-Verlag, Berlin, 1979. iii + 299 pp. (Editors) **80f:18001** 18-01
- Richter, K. Lösung einiger deterministischer dynamischer Lagerhaltungsaufgaben. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* 20 (1978), no. 6, 781-787. (A. Prékopa) **80d:90032** 90B05  
The use of generalized Lagrange multipliers in combinatorial methods of discrete programming. (Russian. German and English summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 1, 79-83. (Author's summary) **80c:90068** 90C10  
(with Beer, K.; Kischel, J.) Ein Produktionsplanungsmodell bei horizontaler und vertikaler Verflechtung. (Russian and English summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 1, 85-92. (Ronald W. Shephard) **80j:90068** 90B30
- Richter, Linda Jean On automorphisms of the degrees that preserve jumps. *Israel J. Math.* 32 (1979), no. 1, 27-31. (Barry Cooper) **80b:03065** 03D30
- Richter, Marcel K. (with Shapiro, Leonard) Revelations of a gambler. *J. Math. Econom.* 5 (1978), no. 3, 229-244. (R. E. Stearns) **80c:90011** 90A06 (90D05)

- Duality and rationality. *J. Econom. Theory* 20 (1979), no. 2, 131–181. (Jean-Pierre Crouzeix) **80a:50004** 90A06 (90A10)
- Richter, Michael M. ★Logikkalküle. Teubner Studienbücher: Informatik. Leitfäden der Angewandten Mathematik und Mechanik, 43. B. G. Teubner, Stuttgart, 1978. 232 pp. ISBN 3-519-02345-8 (Wilfried Sieg) **80g:03002** 03-01 (03B35)
- Richter, Peter H. Pattern formation in the immune system. *Some mathematical questions in biology, X* (Proc. 12th Symp. Math. Biol., Washington, D.C., 1978), pp. 89–107. *Lectures on Math. in the Life Sciences*, 11, Amer. Math. Soc., Providence, R.I., 1979. (Editors) **80f:92010** 92A09
- (with Schraner, R.; Grossmann, S.) Dynamic correlation functions in the Brusselator. *Z. Phys. B* 35 (1979), no. 4, 363–381. (G. A. Skorobogatov) **80m:80014** 80A30 (82A35)
- Richter, Reed (with Hunter, Daniel) Counterfactuals and Newcomb's paradox. *Synthese* 39 (1978), no. 2, 249–261. (Douglas Walton) **80m:03037** 03B45 (03A05)
- Richter, Wolf-Dieter Über Wahrscheinlichkeiten grosser Abweichungen standardisierter Summen unabhängiger Zufallsvektoren. *Math. Nachr.* 84 (1978), 345–358. (S. A. Boker) **80c:60047** 60F10
- Richter-Dya, Nira (with Kimchi, E.) Convergence properties of sequences of functions with application to restricted derivative approximation. *J. Approx. Theory* 22 (1978), no. 4, 289–303. (J. R. Rice) **80a:41015** 41A30 (40A05)
- (with Kimchi, E.) Restricted range approximation of  $k$ -convex functions in monotone norms. *SIAM J. Numer. Anal.* 15 (1978), no. 5, 1030–1038. (David R. Hill) **80a:41012** 41A29 (41A10, 41A50)
- (with Kimchi, E.) A necessary condition for best approximation in monotone and sign-monotone norms. *J. Approx. Theory* 25 (1979), no. 2, 169–175. (David R. Hill) **80g:41008** 41A10
- On best nonlinear approximation in sign-monotone norms and in norms induced by inner products. *SIAM J. Numer. Anal.* 16 (1979), no. 4, 612–622. (C. Dierckx) **80j:41031** 41A29 (41A50, 41A65)
- Rick, C. C. (with Evans, David J.) The numerical calculation of the eigenvalues and eigenvectors of a symmetric sparse quindagonal matrix. *Internat. J. Comput. Math.* 7 (1979), no. 2, 141–156. (Authors' summary) **80c:65087** 65F15
- Rickard, John A. (with Holton, D. A.) Brick packing. *Combinatorial mathematics* (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977), pp. 174–183. *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (Thomas H. Foregger) **80c:05058** 05B40
- (with Hathaway, Neville J.; Howroyd, Terence D.) Dynamic Stackelberg stability. *Econom. Lett.* 2 (1979), no. 3, 209–213. (Authors' summary) **80e:90031** 90A16
- (with Hathaway, Neville J.) Equilibria of price-setting and quantity-setting duopolies. *Econom. Lett.* 3 (1979), no. 2, 133–137. (Authors' summary) **80j:90032** 90A14
- Rickard, John T. The zero-crossing interval statistics of the smoothed random telegraph signal. *Inform. Sci.* 13 (1977), no. 3, 253–268. (Author's summary) **80g:94017** 94A12
- High fidelity criteria for discrete-time source encoding. *IEEE Trans. Inform. Theory* 25 (1979), no. 3, 275–282. (Giuseppe Longo) **80g:94046** 94A34
- Rickert, Udo Über Summen in abelschen Gruppen. *J. Number Theory* 11 (1979), no. 1, 16–19. (S. Stein) **80f:10059** 10J99
- Rickey, V. Frederick A survey of Łeśniewski's logic. On Łeśniewski's systems (Proc. XXII Conf. Hist. Logic, Kraków, 1976). *Studia Logica* 36 (1977/78), no. 4, 407–426. (J. F. A. K. van Benthem) **80c:03031** 03B60 (01A60, 03-03, 03A05)
- Rickman, Benjamin Groups which admit a fixed-point-free automorphism of order  $p^2$ . *J. Algebra* 59 (1979), no. 1, 77–171. (H. Kurzweil) **80j:20030** 20D45
- Rickman, Sharon M. (with Kandel, Abraham) Column table approach for the minimization of fuzzy functions. *Inform. Sci.* 12 (1977), no. 2, 111–128. (Authors' summary) **80g:94118** 94D05 (03E72)
- Riddell, R. C. Eigenvalue problems for nonlinear elliptic variational inequalities. *Nonlinear Anal.* 3 (1979), no. 1, 1–33 (1978). (John M. Ball) **80d:49013** 49A29 (35J65, 73H05)
- Riddell, Robert J., Jr. Boundary-distribution solution of the Helmholtz equation for a region with corners. *J. Comput. Phys.* 31 (1979), no. 1, 21–41. (Author's summary) **80d:76080** 76Q05 (65R10)
- Numerical solution of the Helmholtz equation for two-dimensional polygonal regions. *J. Comput. Phys.* 31 (1979), no. 1, 42–59. (Author's summary) **80c:65148** 65P05 (70K99)
- Ridder, Geert (with de Haan, Laurens) Stochastic compactness of sample extremes. *Ann. Probab.* 7 (1979), no. 2, 290–303. (J. Galambos) **80f:60026** 60F05 (62G30)
- Rideau, G. Quantization of the Maxwell field and extensions of zero mass representations of Poincaré group. *Lett. Math. Phys.* 2 (1977/78), no. 6, 529–536. (Sotirios Persides) **80c:81045** 81C99 (78A99)
- Quantization of the Maxwell field in linear conformal invariant gauges. *Lett. Math. Phys.* 3 (1979), no. 3, 229–235. (Brian DeFazio) **80f:78003** 78A25 (81E15)
- Erratum and addendum: "Quantization of the Maxwell field in linear conformal invariant gauges" [Lett. Math. Phys. 3 (1979), no. 3, 229–235; MR 80f:78003]. *Lett. Math. Phys.* 3 (1979), no. 4, 343–344. (Brian DeFazio) **80k:81213** 81L05 (58G15)
- See also Feynman path integrals, **80i:81014**
- Ridley, J. N. (with Sears, D. B.) Asymptotic and exact analytic formulae for enumerating modules. *Arch. Math. (Basel)* 32 (1979), no. 2, 149–154. (W. Narkiewicz) **80g:10045** 10H26
- Riečan, Beloslav On the Carathéodory method of the extension of measures and integrals. (Russian summary) *Math. Slovaca* 27 (1977), no. 4, 365–374. (Author's summary) **80f:28020** 28C20
- A note on Lebesgue spaces. *Comment. Math. Univ. Carolin.* 19 (1978), no. 4, 783–788. (Ulrich Oppel) **80f:46028** 46E30
- Riecke, Carol V.  $H$ -closure for bi-topological spaces. *Kyungpook Math. J.* 18 (1978), no. 2, 159–165. (M. G. Murdeshwar) **80f:54024** 54E55
- Rieckers, A. Composite system approach to thermodynamic stability. *Z. Naturforsch. A* 33 (1978), no. 11, 1406–1421. (Author's summary) **80b:80002** 80A10
- Complete diagonalization of thermodynamic stability conditions. *Phys. A* 99 (1979), no. 1–2, 317–329. (Author's summary) **80i:82022** 82A35
- Riedel, E. K. (with Nienhuis, B.; Schick, M.) Variational renormalisation-group approach to the  $q$ -state Potts model in two dimensions. *J. Phys. A* 13 (1980), no. 2, L31–L34. (Authors' summary) **80k:82034** 82A25 (81E15)
- Riedel, M. (with Seiffert, I.) Uniqueness of two factorization problems. (Russian summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 1, 207–211. (H. Bergström) **80c:60016** 60E05 (60E10)
- Riedel, Norbert Über die Zerlegung von Operatoren in topologischen direkten Integralen von Hilberträumen. *Manuscripta Math.* 23 (1977/78), no. 2, 185–211. (R. G. Bartle) **80c:46031** 46K15 (47B38)
- Riedel, Roland Asymptotische Darstellung verallgemeinerter Fourierintegrale. I. *Beiträge Anal.* No. 12 (1978), 171–175. (L. Berg) **80a:41032** 41A60 (42A38)
- Rieder, Georg On Kupradze's generalized stress, its physical meaning and its application to certain integral operators of plane elasticity. (Russian summary) *Complex analysis and its applications* (Russian), pp. 514–530, 671. "Nauka", Moscow, 1978. (Author's summary) **80a:73010** 73B99 (00A89)
- Rieder, Helmut A robust asymptotic testing model. *Ann. Statist.* 6 (1978), no. 5, 1080–1094. (P. J. Huber) **80c:62050** 62F35
- Riedewald, Günter Attribute grammars. *Rostock. Math. Kolloq.* No. 9 (1978), 105–125. (Author's summary) **80f:68019** 68B10 (68F05)
- Riedrich, Thomas Nonlinear operator equations in topological vector spaces. *Proceedings of the Conference Topology and Measure, I* (Zinnowitz, 1974), Part 2, pp. 299–314. Ernst-Moritz-Arndt Univ., Greifswald, 1978. (Author's introduction) **80c:47048** 47H12 (55M25)
- Riedtmann, Ch. (with Gabriel, Peter) Group representations without groups. *Comment. Math. Helv.* 54 (1979), no. 2, 240–287. (Idun Reiten) **80k:16040** 16A64 (16A90)
- Rieffel, Marc A. Regularly related lattices in Lie groups. *Duke Math. J.* 45 (1978), no. 3, 691–699. (S. G. Dani) **80d:22014** 22E40
- The type of group measure space von Neumann algebras. *Monatsh. Math. Phys.* 118 (1978), no. 2, 149–162. (M. Nakamura) **80g:46053** 46L10 (22D25, 28D10)
- Normal subgroups and induced representations. *J. Algebra* 59 (1979), no. 2, 364–386. (P. Donovan) **80b:16029** 16A64
- Rieger, G. J. Ein Gauss-Kusmin-Lévy-Satz für die singulären Kettenbrüche im Sinn von Hurwitz. *Abh. Braunschweig. Wiss. Ges.* 28 (1977), 81–88. (J. Galambos) **80b:10060** 10K10 (10A32)
- Über Ford-Kugeln. *J. Reine Angew. Math.* 303/304 (1978), 1–20. (F. Schweigert) **80b:10047** 10F30
- Remark on a paper of Stux concerning squarefree numbers in non-linear sequences. *Pacific J. Math.* 78 (1978), no. 1, 241–242. (D. Suryanarayana) **80a:10061** 10H20
- Riekstis, E. Asymptotic expansion of a class of entire functions that are determined by Hadamard's logarithmic composition. (Russian) *Lato. Mat. Ežegodnik* No. 22 (1978), 155–166, 283. (A. I. Helfic) **80b:30031** 30E15
- (with Kanevskis, A.; Reizis, L.) Works of mathematicians of Soviet Latvia for the years 1967–1975. (Russian) *Lato. Mat. Ežegodnik* No. 22 (1978), 192–271, 284. (Editors) **80d:01019** 01A65 (00A15, 01A75)
- (with Reizis, L.; Heniga, I.) I. M. Rabinovič. (Russian) *Lato. Mat. Ežegodnik* No. 22 (1978), 272–275. (Editors) **80a:01042** 01A70
- te Riele, H. J. J. ★Tables of the first 15000 zeros of the Riemann zeta function to 28 significant digits, and related quantities. *Afdeling Numerieke Wiskunde* [Department of Numerical Mathematics], 67. *Mathematisch Centrum, Amsterdam*, 1979. 155 pp. (not consecutively pagged). (Author's summary) **80f:10050** 10H05 (65A05)
- Riemenschneider, Oswald (with Behnke, Kurt) Diederingsingularitäten. Special issue dedicated to the seventieth birthday of Erich Kähler. *Abh. Math. Sem. Univ. Hamburg* 47 (1978), 210–227. (Henry C. Pinkham) **80a:14001** 14B05 (14B07, 32C40, 32G11)
- Riemenschneider, S. D. The  $L^p$ -saturation of the Bernstein-Kantorovich polynomials. *J. Approx. Theory* 23 (1978), no. 2, 158–162. (Manfred v. Golitschek) **80g:41018** 41A40
- (with Lorentz, G. G.) Probabilistic approach to Schoenberg's problem in Birkhoff interpolation. Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 1–2, 127–135. (J. Prasad) **80c:41002** 41A05
- Riemer, Dieter (with Küpper, Tassilo) Necessary and sufficient conditions for bifurcation from the continuous spectrum. *Nonlinear Anal.* 3 (1979), no. 4, 555–561. (B. V. Logvinov) **80k:58038** 58E07 (47H15)
- Riemer, Rolf-Ingraban Über eine Klasse von Garben mit isolierter Singularität. *Arch. Math. (Basel)* 30 (1978), no. 6, 580–590. (G. Trautmann) **80c:32011** 32C36 (32G11, 32G13, 32L10)
- Riera, T. (with Trillas Ruiz, Enrique) Entropies in finite fuzzy sets. *Inform. Sci.* 15 (1978), no. 2, 159–168. (Abraham Kandel) **80k:94065** 94D05 (03E72, 94A17)
- Riesel, Hans (with Bohman, Jan; Fröberg, Carl-Erik) Partitions in squares. *BIT* 19 (1979), no. 3, 297–301. (H. Gupta) **80k:10043** 10J05 (10B35)
- Riess, R. D. (with Johnson, L. W.) Gauss harmonic interpolation formulas for circular regions. *J. Inst. Math. Appl.* 23 (1979), no. 2, 215–222. (David R. Hill) **80d:65020** 65D05
- Riffelmacher, Dave Sweedler's two-cocycles and generalizations of theorems on Amitsur cohomology. *Trans. Amer. Math. Soc.* 251 (1979), 255–265. (Lindsay N. Childs) **80b:16025** 16A62
- Rigal, Alain Convergence and optimization of successive overrelaxation for linear systems of equations with complex eigenvalues. *J. Comput. Phys.* 32 (1979), no. 1, 10–23. (K. Najzar) **80c:65071** 65L99
- Riganti, Riccardo Subharmonic solutions of the Duffing equation with large non-linearity. (French and German summaries) *Internat. J. Non-Linear Mech.* 13 (1978), no. 1, 21–31. (P. Ungar) **80d:34050** 34C25 (65L99)
- Rigas, A. Some bundles of nonnegative sectional curvature. *Proceedings of the Eleventh Brazilian Mathematical Colloquium* (Poços de Caldas, 1977), Vol. 1 (Portuguese), pp. 423–432. *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (John Bolton) **80c:53044** 53C20
- Rigby, J. F. Adventitious quadrangles: a geometrical approach. *Math. Gaz.* 62 (1978), no. 421, 183–191. (H. T. Croft) **80c:51015** 51M15
- Rigby, L. (with Levan, Nhan) On the reduction of a contraction semigroup to a completely nonunitary semigroup. *J. Math. Anal. Appl.* 67 (1979), no. 1, 1–11. (Donald W. Hadwin) **80m:47037** 47D05
- (with Levan, Nhan) Strong stabilizability of linear contractive control systems on Hilbert space. *SIAM J. Control Optim.* 17 (1979), no. 1, 23–35. (K. W. Han) **80f:93061** 93D15



- Richt, R.** (with Venturi, G.; Zamiralov, V.) A nonabelian gauge theory in a nonlinear gauge. (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 4, 518-528. (Authors' summary) 80d:81092 81E15 (22E70)
- (with Venturi, G.)  $g=2$  in a nonlinear approach to quantum electrodynamics. (Italian and Russian summaries) *Nuovo Cimento A* (11) 54 (1979), no. 4, 495-501. (Authors' summary) 80m:81128 81L05
- Rigby, David R.** Stochastic model of constitutive protein levels in growing and dividing bacterial cells. *J. Theoret. Biol.* 76 (1979), no. 4, 453-480. (Author's summary) 80b:92020 92A10
- Rigot, Alain** Analyse asymptotique des poutres-voiles à section rectangulaire. (English summary) *J. Mécanique* 18 (1979), no. 2, 243-275. (B. A. Boley) 80c:73044 73K05
- Rigot, Christiane** Potentiel élastique sur une surface non régulière. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 21, A1019-A1022. (Author's summary) 80a:73021 73C99 (45E99)
- Riha, Pavel** Theory of mixtures for microfluids. *Acta Tech. ČSAV* 24 (1979), no. 3, 389-396. (Ph. Mathieu) 80i:76005 76A05
- Richter, K. See Richter, K.**
- Richtman, Juhani** Removable singularities of analytic functions of several complex variables. *Math. Z.* 158 (1978), no. 1, 45-54. (Herbert Alexander) 80b:32030 32D20
- An extension theorem for meromorphic functions of several variables. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 1, 145-149. (Pierre Lelong) 80c:32007 32D15 (32D20)
- Riles, K.** Homogeneous quotient-spaces of the group of motions in the Euclidean space  $R^3$ . (Russian, Estonian and English summaries) *Tartu Riikl. Ü. Toimetised No. 464 Trudy Mat. i Meh.* no. 22 (1978), 75-97. (Valentin Boju) 80b:53000 53C30
- A determination of the vertices of transport polytopes. (Russian, English summary) *Tartu Riikl. Ü. Toimetised No. 500 Trudy Mat. i Meh.* no. 25 (1979), 105-118. (E. Jucović) 80m:52004 52A25 (90C30)
- Rijckaert, M. J.** (with Sarma, P. V. L. N.; Martens, X. M.; Reklaitis, G. V.) A comparison of computational strategies for geometric programs. *J. Optim. Theory Appl.* 26 (1978), no. 2, 185-203. (Authors' summary) 80b:90139 90C30
- (with Martens, X. M.) Bibliographical note on geometric programming. *J. Optim. Theory Appl.* 26 (1978), no. 2, 325-337. (Authors' summary) 80b:90113 90C25 (00A15)
- Riks, E.** An incremental approach to the solution of snapping and buckling problems. *Internat. J. Solids and Structures* 15 (1979), no. 7, 529-551. (Author's summary) 80c:73035 73H05
- Riley, John G.** (with Phelps, E. S.) Rawlsian growth: dynamic programming of capital and wealth for intergenerational "maximin" justice. *Rev. Econom. Stud.* 45 (1978), no. 1, 103-120. (From the conclusion) 80j:90048 90A16 (90A10)
- Informational equilibrium. *Econometrica* 47 (1979), no. 2, 331-359. (Hildegard Dierker) 80d:90021 90A14
- Evolutionary equilibrium strategies. *J. Theoret. Biol.* 76 (1979), no. 2, 109-123. (A. C. Williams) 80d:92033 92A15 (90D45)
- Strong evolutionary equilibrium and the war of attrition. *J. Theoret. Biol.* 82 (1980), no. 3, 383-400. (Author's summary) 80b:92011 92A15
- Riley, N.** Separation from a smooth surface in a slender conical flow. *J. Engrg. Math.* 13 (1979), no. 1, 75-91. (Tommaso Ruggeri) 80b:76023 76N05
- Rim, Dock S.** Equivalent G-structure on versal deformations. *Trans. Amer. Math. Soc.* 257 (1980), no. 1, 217-226. (Henry C. Pinkham) 80a:14021 14D15
- Rimarenko, V. V.** Einige Aspekte der Anwendung der Störungstheorie auf Probleme der Theorie nichtlinearer Schwingungen. *Untersuchungen zur asymptotischen Theorie nichtlinearer Differentialgleichungen*, pp. 33-40. *Schriftenreihe Zentralinst. Math. Mech.*, 26, Akademie-Verlag, Berlin, 1978. (G. V. Hmelevskaja-Plotnikova) 80a:70023 70K99 (34C15)
- Rimmer, Russell** Symmetry and bifurcation of fixed points of area preserving maps. *J. Differential Equations* 29 (1978), no. 3, 329-344. (J. N. Mather) 80g:58039 58F14 (58F20)
- Rinaldi, S.** (with Fronza, G.) An introduction to prediction and filtering problems. *Confer. Sem. Mat. Univ. Bari* No. 150 (1978), 18. (A. B. Schwarzopf) 80a:93153 93E10
- Rincon-Gallardo, S.** (with Quesenberry, C. P.; O'Reilly, Federico J.) Conditional probability integral transformations and goodness-of-fit tests for multivariate normal distributions. *Ann. Statist.* 7 (1979), no. 5, 1052-1057. (N. Giri) 80b:62079 62H15
- Rindler, Harald** (with Maxones, Walter) Asymptotisch gleichverteilte Massfolgen in Gruppen vom Heisenberg-Typ. *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* 185 (1976), no. 8-10, 485-504 (1977). (L. Corwin) 80a:43006 22D05 (10K05)
- (with Maxones, Walter) Bemerkungen zu: "Gleichverteilung auf lokalkompakten Gruppen" [Math. Nachr. 71 (1976), 249-260; MR 53 #6231] von P. Gerl. *Math. Nachr.* 79 (1977), 193-199. (Harald Niederreiter) 80g:22005 22D99 (10K99)
- (with Kotzmann, E.) Isometrien auf Segal-Algebren. *Anz. Österreich. Akad. Wiss. Math.-Natur. Kl.* 1978, no. 1, 1-4. (Harald E. Krogstad) 80a:43006 43A20
- (with Maxones, Walter) Asymptotisch gleichverteilte Netze von Wahrscheinlichkeitsmassen auf lokalkompakten Gruppen. *Colloq. Math.* 40 (1978/79), no. 1, 131-145. (Harald Niederreiter) 80m:43001 43A05 (10K05)
- (with Losert, Viktor) Uniform distribution and the mean ergodic theorem. *Invent. Math.* 50 (1978/79), no. 1, 65-74. (Paul Milnes) 80f:22001 22A20 (10K05)
- (with Losert, Viktor) Teilfolgen gleichverteilter Folgen. *J. Reine Angew. Math.* 302 (1978), 51-58. (Charles Pisot) 80a:10071 10K05
- Eine Charakterisierung gleichverteilter Folgen. *Arch. Math. (Basel)* 32 (1979), no. 2, 185-188. (L. Kuipers) 80b:10067 10K05 (45E99)
- (with Kotzmann, E.; Losert, Viktor) Dense ideals of group algebras. *Math. Ann.* 246 (1979/80), no. 1, 1-14. (Pierre Eymard) 80m:22007 22D15 (43A20)
- Ringelsen, Richard D.** (with Lipman, Marc J.) Switching connectivity in graphs. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 471-478. *Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978.* (J. J. Seidel) 80b:05073 05C40
- On graphs of embedding range one. *Theory and applications of graphs (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976)*, pp. 454-464. *Lecture Notes in Math.*, 642, Springer, Berlin, 1978. (E. A. Nordhaus) 80a:05061 05C10
- (with Little, Charles H. C.) An additivity theorem for maximum genus of a graph. *Discrete Math.* 21 (1978), no. 1, 69-74. (Derek Smith) 80d:05022 05C10
- (with Beineke, Lowell W.) The crossing number of  $C_3 \times C_n$ . *J. Combin. Theory Ser. B* 24 (1978), no. 2, 134-136. (O. D'Antona) 80d:05027 05C20
- Survey of results on the maximum genus of a graph. *J. Graph Theory* 3 (1979), no. 1, 1-13. (E. A. Nordhaus) 80a:05082 05C10
- Ringel, Claus Michael** (with Jendrup, Søren) Remarks on a paper by Skornjakov concerning rings for which every module is a direct sum of left ideals. *Arch. Math. (Basel)* 31 (1978/79), no. 4, 329-331. (K. R. Fuller) 80b:16016 16A35
- (with Roggenkamp, Klaus W.) Indecomposable representations of orders and Dynkin diagrams. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 2, 91-94. (Sheila Brenner) 80c:16019 16A64
- (with Dlab, Vlastimil) Real subspaces of a quaternion vector space. *Canad. J. Math.* 30 (1978), no. 6, 1228-1242. (S. Lajos) 80a:15033 15A78 (15A03, 16A64)
- Finite dimensional hereditary algebras of wild representation type. *Math. Z.* 161 (1978), no. 3, 235-255. (Marie-Paule Malliavin) 80c:16017 16A45 (16A64)
- Ringel, Gerhard** Nonexistence of graph embeddings. *Theory and applications of graphs (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976)*, pp. 465-476. *Lecture Notes in Math.*, 642, Springer, Berlin, 1978. (F. Harary) 80b:05031 05C10
- Ringhofer, Klaus** Koornwinder's polynomials and representations of the conformal group. *J. Math. Phys.* 20 (1979), no. 5, 966-971. (J. F. Cornwell) 80g:81028 81C40 (22E70, 33A65)
- Ringo, N. I.** The general linear problem of observation for linear discrete systems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 5, 212-214, 224 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 5, 162-164. (Author's summary) 80g:93024 93B07
- Ringwood, G. A.** Biconjugate directions. *J. Optim. Theory Appl.* 28 (1979), no. 2, 259-261. (Author's summary) 80f:90103 90C20
- The fermion-boson correspondence is a Klein transformation. (Italian and Russian summaries) *Nuovo Cimento A* (11) 54 (1979), no. 4, 483-494. (Author's summary) 80m:81066 81E99 (82A15, 83E99)
- Rimooy, Kan, A. H. G.** (with Lageweg, B. J.; Lenstra, J. K.) Job-shop scheduling by implicit enumeration. *Management Sci.* 24 (1977/78), no. 4, 441-450. (Roman Słowiński) 80c:90086 90B35 (90C50)
- (with Graham, R. L.; Lawler, Eugene L.; Lenstra, J. K.) Optimization and approximation in deterministic sequencing and scheduling: a survey. *Interfaces between computer science and operations research (Proc. Sympos. Math. Centrum, Amsterdam, 1976)*, pp. 169-214. *Math. Centre Tracts*, 99, Math. Centrum, Amsterdam, 1978. (Michael S. Martin) 80j:90072 90B35
- (with Johnson, David S.; Lenstra, J. K.) The complexity of the network design problem. *Networks* 8 (1978), no. 4, 279-285. (Walter Stromquist) 80b:68053 68C25 (90B10, 94C30)
- (with Lenstra, J. K.) A characterization of linear admissible transformations for the  $m$ -travelling salesman problem: a result of Berenguer. *European J. Oper. Res.* 3 (1979), no. 3, 250-252. (M. M. Syslo) 80b:90106 90C10
- Rinott, Yosef** On two-stage selection procedures and related probability inequalities. *Comm. Statist. A—Theory Methods* 7 (1978), no. 8, 799-811. (Jan C. Geertsema) 80b:62035 62F07 (62L10)
- Rios del Rio, José** See Luis del Rio, José
- Rionero, Salvatore** (with Galdi, Giovanni P.) The weight function approach to uniqueness of viscous flows in unbounded domains. *Arch. Rational Mech. Anal.* 69 (1979), no. 1, 37-52. (From the introduction) 80b:76021 76D99 (35Q10)
- (with Galdi, Giovanni P.) Continuous dependence theorems for Navier-Stokes equations in unbounded domains by the weight-function method. *Quart. J. Mech. Appl. Math.* 32 (1979), no. 2, 149-161. (D. E. Edmunds) 80f:35106 35Q10 (76D05)
- Riordan, John** ★Combinatorial identities. Reprint of the 1968 original. *Robert E. Krieger Publishing Co., Huntington, N.Y.*, 1979. xii + 256 pp. ISBN 0-88275-829-2 (Editors) 80k:05001 05-02 (05A19)
- Forests of label-increasing trees. *J. Graph Theory* 3 (1979), no. 2, 127-133. (J. W. Moon) 80g:05030 05C05
- Rios, Hélène** Étude de certains problèmes paraboliques: existence et approximation des solutions. *Travaux Sémin. Anal. Convexe* 8 (1978), no. 1, Exp. No. 1, 96 pp. (G. W. Hedstrom) 80d:49031 49C10 (35K99, 65K10)
- Rios Montes, José** (with Colavita, Luis R.) Stable Gabriel filters. VI. Noetherian filters. (Spanish) *An. Inst. Mat. Univ. Nac. Autónoma México* 18 (1978), no. 1, 13-23 (1979). (P. Abellanas) 80b:16026 16A63
- perrin-Rios, Bernadette** See Perrin-Rios, Bernadette
- Ripa, K. K.** (with Rastrigin, L. A.; Tarasenko, G. S.) ★Адаптация случайного поиска. (Russian) [Adaptation of random search] "Zinatne", Riga, 1978. 242 pp. (D. M. Sudakov) 80a:93059 93E99 (90B40)
- (with Rastrigin, L. A.) Optimal automata search algorithms in nonstationary random environments. (Russian) *Problemy Shucha. Poiska No. 6 Zadaci Optimizatsii* (1978), 44-61, 331. (R. G. Buharaev) 80a:68058 68D27 (68C05)
- Synthesis of an optimal automaton acting in a nonstationary random environment. (Russian) *Problemy Shucha. Poiska No. 6 Zadaci Optimizatsii* (1978), 62-70, 331. (R. G. Buharaev) 80a:68059 68D27
- A generalized algorithm of coordinate-wise adaptation of random search for the extremum. (Russian) Adaptation problems in technical systems. *Problemy Shucha. Poiska No. 7* (1978), 135-148, 318. (Author's summary) 80c:90114 90C15 (65C99, 90B40)
- A two-level algorithm of the adaptation of a random search for the extremum. (Russian) Adaptation problems in technical systems. *Problemy Shucha. Poiska No. 7* (1978), 159-183, 319. (Author's summary) 80c:90115 90C15 (65C99, 90B40)
- Ripha, W.** (with Mrose, Arnulf) Die Intervalleigenschaft der Ober- und Untersummengrenzen einer beschränkten Funktion. *Elem. Math.* 34 (1979), no. 2, 34-37. (H. Burkili) 80d:26012 26A42
- Rippon, P. J.** On a growth condition related to the MacLane class. *J. London Math. Soc.* (2) 18 (1978), no. 1, 94-100. (D. J. Eustice) 80g:31001 31A05
- A generalisation of Widman's theorem on comparison domains for harmonic measures. *Ark. Mat.* 17 (1979), no. 1, 39-50. (N. V. Rao) 80m:31007 31B15
- On the boundary behaviour of Green potentials. *Proc. London Math. Soc.* (3) 38 (1979), no. 3, 461-480. (Z. Schuss) 80c:31003 31B25 (35J67)

- Rips, I. B.** Motion of a quantum particle in a medium with diagonal and off-diagonal dynamic disorder. (Russian. English summary) *Teoret. Mat. Fiz.* **40** (1979), no. 2, 275–280. (Author's summary) **80a:82026** 82A42
- Rishbud, A. A.** (with Takwale, R. G.) Boundary effects on Čerenkov radiation in an alternating electric field. *J. Phys. A* **13** (1980), no. 2, 535–555. (From the summary) **80a:78017** 78A35
- Risler, R.** See **Risler, R. W.**
- Riser, John** A simplification procedure for alternational normal schemata. *Notre Dame J. Formal Logic* **20** (1979), no. 4, 765–767. (M. Stojaković) **80a:03014** 03B05 (03G05)
- Risler, R. W.** (with Fleming, U.) ★Оптимальное управление детерминированными и стохастическими системами. (Russian) [Deterministic and stochastic optimal control] Translated from the English by M. G. Butrim and P. K. Katičev. Edited by A. N. Širjaev. "Mir", Moscow, 1978. 316 pp. (Editors) **80a:93003** 93–02
- Risler, Raymond** The minimum principle, separation principle, and dynamic programming for partially observed jump processes. *IEEE Trans. Automat. Control* **23** (1978), no. 6, 1009–1014. (Stanley R. Pliska) **80a:49056** 49C20
- State estimation for partially observed jump processes. *J. Math. Anal. Appl.* **65** (1978), no. 3, 731–743. (W. Greblicki) **80a:93019** 93B07 (93E11)
- Optimal conditions and sufficient statistics for controlled jump processes. *Stochastic control theory and stochastic differential systems (Proc. Workshop, Deutsch. Forschungsgemeinschaft, Univ. Bonn, Bad Honnef, 1979)*, pp. 194–208. *Lecture Notes in Control and Information Sci.*, **16**, Springer, Berlin, 1979. (Emmanuel Nicholas Barron) **80j:93139** 93E20
- Risito, Corrado** (with Campanini, Rita) Existence theorem for almost periodic solutions of periodic systems with time lag. *Riv. Mat. Univ. Parma* (4) **4** (1978), 443–447 (1979). (Yiannis Sficas) **80a:34089** 34K15 (34C27)
- Risken, H.** (with Vollmer, H. D.) Brownian motion in periodic potentials in the low-friction limit; nonlinear response to an external force. *Z. Phys. B* **35** (1979), no. 2, 177–184. (G. Della Riccia) **80a:82007** 82A05 (60J65)
- Risman, Lawrence J.** Group rings and series. *Ring theory (Proc. Conf., Univ. Antwerp, Antwerp, 1977)*, pp. 113–128. *Lecture Notes in Pure and Appl. Math.*, **40**, Dekker, New York, 1978. (Kenneth A. Brown) **80a:16003** 16A05 (16A39)
- Rissanen, Jorma** (with Ljung, Lennart) On canonical forms, parameter identifiability and the concept of complexity. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976)*, Part 3, pp. 1415–1426. North-Holland, Amsterdam, 1978. (T. Prasad) **80j:93041** 93B30
- Theory of relations for databases—a tutorial survey. *Mathematical foundations of computer science, 1978 (Proc. Seventh Sympos., Zakopane, 1978)*, pp. 537–551. *Lecture Notes in Comput. Sci.*, **64**, Springer, Berlin, 1978. (W. W. Armstrong) **80a:68027** 68B15
- (with Caines, Peter E.) The strong consistency of maximum likelihood estimators for ARMA processes. *Ann. Statist.* **7** (1979), no. 2, 297–315. (E. J. Hannan) **80g:62071** 62M09 (62F12)
- Ristić, Olli** See **Topics in systems theory**, **80j:93005**
- Ristow, Allan W.** The existence of certain partitions on Cartesian products. *Z. Math. Logik Grundlag. Math.* **24** (1978), no. 4, 325–333. (James D. Halpern) **80i:04007** 04A20
- de Ritis, R.** (with Finkelstein, David; Pisello, Daniel M.; Weil, D.) Local conserved currents in unified field theory. (Italian summary) *Nuovo Cimento A* (11) **48** (1978), no. 2, 184–188. (Authors' summary) **80a:83052** 83C99 (58D30)
- (with Pisello, Daniel M.; Platania, G.; Scudellaro, P.) A variational formulation for the Newtonian cosmology. (Italian summary) *Nuovo Cimento B* (11) **54** (1979), no. 2, 446–454. (Authors' summary) **80a:83052** 83F05
- Rittenberg, V.** A guide to Lie superalgebras. *Group theoretical methods in physics (Sixth Internat. Colloq., Tübingen, 1977)*, pp. 3–21. *Lecture Notes in Phys.*, **79**, Springer, Berlin, 1978. (Bernard Kolman) **80d:17012** 17B70 (17A70)
- (with Wyler, D.) Some remarks on Adler's classical algebraic chromodynamics. *Phys. Rev. D* (3) **18** (1978), no. 12, 4806–4811. (Authors' summary) **80b:81113** 81G35 (17A70)
- Ritter, Gerhard X.** A characterization of almost periodic homeomorphisms on the 2-sphere and the annulus. *General Topology Appl.* **9** (1978), no. 3, 185–191. (M.-E. Hamstrom) **80a:54072** 54F62 (57N05)
- Ritter, Grant** A continuous-time analogue of random walk in a random environment. *J. Appl. Probab.* **17** (1980), no. 1, 259–264. (Torgny Lindvall) **80a:60081** 60J27
- Ritter, Gunter** Unendliche Produkte unkorrelierter Funktionen auf kompakten, abelschen Gruppen. *Math. Scand.* **42** (1978), no. 2, 251–270. (Colin C. Graham) **80a:43001** 43A05 (42A55)
- On Kakutani's dichotomy theorem for infinite products of not necessarily independent functions. *Math. Ann.* **239** (1979), no. 1, 35–53. (V. S. Mandrekar) **80g:60042** 60G30
- On dichotomy of Riesz products. *Math. Proc. Cambridge Philos. Soc.* **85** (1979), no. 1, 79–89. (Colin C. Graham) **80a:43001** 43A05 (42A55)
- Ritter, Jim** See **Cartan, Élie; et al.**, **80a:01030**
- Ritter, Jürgen**  $\mathbb{P}$ -adic fields having the same type of algebraic extensions. *Math. Ann.* **238** (1978), no. 3, 281–288. (Helmut Koch) **80a:12013** 12B15
- (with Jarden, Moshe) On the characterization of local fields by their absolute Galois groups. *J. Number Theory* **11** (1979), no. 1, 1–13. (Helmut Koch) **80a:12012** 12B15
- Ritter, Klaus** A product version of a variable metric method and its convergence properties. *Quantitative Wirtschaftsforschung*, pp. 551–567, Mohr, Tübingen, 1977. (Marco Gaviano) **80a:65141** 65K10
- Ritter, M.** (with Darvey, I. G.; Klotz, A. H.) On the kinetics of enzyme reactions. *Bull. Math. Biol.* **40** (1978), no. 6, 727–734. (J. Myron Hood) **80c:92008** 92A09
- Ritzman, Larry** (with Bradford, John; Jacobs, Robert) A multiple objective approach to space planning for academic facilities. *Management Sci.* **25** (1979), no. 9, 895–906 (1980). (Authors' summary) **80a:90044** 90B05 (90C05)
- Rival, Ivan** (with Duffus, Dwight) Crowns in dismantlable partially ordered sets. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. I, pp. 271–292. *Colloq. Math. Soc. János Bolyai*, **18**, North-Holland, Amsterdam, 1978. (Werner Poguntke) **80a:06002** 06A10
- (with Duffus, Dwight) Separable subsets of a finite lattice. *J. Combin. Theory Ser.*
- A 25** (1978), no. 2, 188–192. (Editors) **80a:06001** 06A10 (06B05)
- (with Nowakowski, Richard) Distributive cover-preserving sublattices of modular lattices. *Nanta Math.* **11** (1978), no. 2, 110–123. (George Hutchinson) **80f:06015** 06D99
- (with Sands, Bill) A note on the congruence lattice of a finitely generated algebra. *Proc. Amer. Math. Soc.* **72** (1978), no. 3, 451–455. (P. Goralčik) **80d:08007** 08A30
- (with Rabinovitch, I.) The rank of a distributive lattice. *Discrete Math.* **25** (1979), no. 3, 275–279. (Evelyn Nelson) **80f:06010** 06D05 (06A10)
- (with Duffus, Dwight) Retracts of partially ordered sets. *J. Austral. Math. Soc. Ser. A* **27** (1979), no. 4, 495–506. (D. Kurepa) **80j:06003** 06A10 (54C15, 54H25)
- (with Nowakowski, Richard) Fixed-edge theorem for graphs with loops. *J. Graph Theory* **3** (1979), no. 4, 339–350. (C. St. J. A. Nash-Williams) **80j:05098** 05C9
- (with Wille, Rudolf) Lattices freely generated by partially ordered sets: which can be "drawn"? *J. Reine Angew. Math.* **310** (1979), 56–80. (R. P. Dilworth) **80j:06005** 06A10 (06B25)
- Rivaud, Juan M.** (with Emmons, Hamilton) Physical sorting of coded documents. *J. Oper. Res. Soc.* **30** (1979), no. 11, 1005–1011. (Authors' summary) **80i:68047** 68E05 (68H05)
- Rivera Rodas, Hernán** (with Langenhof, C. E.) A sufficient condition for function space controllability of a linear neural system. *SIAM J. Control Optim.* **16** (1978), no. 3, 429–435. (Ronald Hirschorn) **80j:93026** 93B05
- Rivero Mendoza, Jesús** (with Tineo, Antonio R.; Manasevich, Raul F.) Asymptotic and oscillatory behavior of third-order differential equations of a certain type. *J. Math. Anal. Appl.* **65** (1978), no. 3, 607–615. (John R. Graef) **80f:34031** 34C10
- Rivest, Ronald L.** (with LaPaugh, Andrea S.) The subgraph homeomorphism problem. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 40–50. ACM, New York, 1978. (Shoji Shinoda) **80j:68054** 68E10 (05C38)
- Critical remarks on: "Critical remarks on some public-key cryptosystems" [BIT **18** (1978), no. 4, 493–496; MR **80b:94033**] by T. Herliem. *BIT* **19** (1979), no. 2, 274–275. (M. C. Cheng) **80a:94070** 94B99 (68B99)
- (with Van de Wiele, Jean-Paul) An  $\Omega((n/\lg n)^{1/2})$  lower bound on the number of additions necessary to compute 0-1 polynomials over the ring of integer polynomials. *Inform. Process. Lett.* **8** (1979), no. 4, 178–180. (R. G. Larson) **80b:68058** 68C25
- Rivière, Nestor M.** (with Fabes, E. B.; Jodeit, M., Jr.) Potential techniques for boundary value problems on  $C^1$ -domains. *Acta Math.* **141** (1978), no. 3–4, 165–186. (G. Wildenhain) **80b:31006** 31B20 (35J99)
- (with Caffarelli, Luis A.) The Lipschitz character of the stress tensor, when twisting an elastic plastic bar. *Arch. Rational Mech. Anal.* **69** (1979), no. 1, 31–36. (J. Ignaczak) **80d:73027** 73C05 (49A29)
- See also **Harmonic analysis in Euclidean spaces**, **80f:42001a** and **Harmonic analysis in Euclidean spaces**, **80f:42001b**
- Rivkind, V. Ja.** (with Gorovaja, E. N.) A simplified scheme for the finite-element method for the Navier-Stokes equations. (Russian) *Metody Vychisl.* No. 11 (1978), 142–159, 191. (N. N. Janenko) **80a:65204** 65N30
- Rivlin, R. S.** (with Sawyers, K. N.) A note on the Hadamard criterion for an incompressible isotropic elastic material. *Mech. Res. Comm.* **5** (1978), no. 4, 211–214. (G. Eason) **80b:73023** 73D99 (73G05)
- Rivlin, T. J.** Some aspects of optimal recovery. *Multivariate approximation (Sympos., Univ. Durham, Durham, 1977)*, pp. 1–11. Academic Press, London, 1978. (Werner Haussmann) **80i:41001** 41–02 (41A65, 65J05)
- A survey of recent results on optimal recovery. *Polynomial and spline approximation (Proc. NATO Adv. Study Inst., Univ. Calgary, Calgary, Alta., 1978)*, pp. 225–245. NATO Adv. Study Inst. Ser., Ser. C: Math. and Phys. Sci., **49**, Reidel, Dordrecht, 1979. (Avraham A. Melkman) **80i:41002** 41–02 (65–02)
- Rix, Hervé** (with Malengé, Jean-Pierre) Detecting small variations in shape. *IEEE Trans. Systems Man Cybernet.* **10** (1980), no. 2, 90–96. (Authors' summary) **80a:94018** 94A12 (68G10)
- Rizvi, M. Huseeb** (with Shorrock, R. W.) On operator inequalities and projections. *Studies in probability and ergodic theory*, pp. 113–118. *Advances in Math., Suppl. Studies*, **2**, Academic Press, New York, 1978. (D. J. H. Garling) **80d:60083** 60H25
- Rizvi, S. R. H.** (with Juneja, Om Prakash) On the Fourier expansions of entire functions. *Bull. Inst. Math. Acad. Sinica* **7** (1979), no. 2, 187–199. (A. Bailleite) **80a:30024** 30D20
- Rizza, L. Bassotti** (with Di Cola, G.) Defects and excesses of the eigenvalues of a problem of elasticity with respect to a cube. (Italian. English summary) *Riv. Mat. Univ. Parma* (4) **4** (1978), 413–432 (1979). (P. P. Teodorescu) **80g:73022** 73D20 (65N25)
- Rizzetta, D. P.** Asymptotic solutions of the energy equation for viscous supersonic flow past corners. *Phys. Fluids* **22** (1979), no. 2, 218–223. (Author's summary) **80b:76024** 76N05
- Rizzi, Bruno** (with Moriconi, Franco) Dystropy in the dichotomic trees. (Italian summary) *Boll. Un. Mat. Ital. A* (5) **15** (1978), no. 1, 180–186. (Authors' summary) **80a:94014** 94A17 (05C05)
- (with Eugeni, Franco) On some extensions of algebraic structures. (Italian) *Period. Mat.* (5) **54** (1978), no. 3–4, 71–91. (Franco Montagna) **80c:08006** 08A99
- Rizzitelli, Giuseppe** Giacinto Guareschi (1882–1976). (Italian) *Atti Accad. Ligure Sci. Lett.* **34** (1977), 40–42 (1978). (Editors) **80b:01025** 01A70
- Rizzo, Frank J.** (with Clements, D. L.) A method for the numerical solution of boundary value problems governed by second-order elliptic systems. *J. Inst. Math. Appl.* **22** (1978), no. 2, 197–202. (J. T. Oden) **80b:65142** 65N99
- (with Fairweather, Graeme; Shippy, David J.; Wu, Yensen S.) On the numerical solution of two-dimensional potential problems by an improved boundary integral equation method. *J. Comput. Phys.* **31** (1979), no. 1, 96–112. (Authors' summary) **80c:65221** 65N99 (65R10)
- Rizzoli, Irina** On some complex analytic structures on a class of nilpotent Lie groups. (Romanian. English summary) *Stud. Cerc. Mat.* **30** (1978), no. 6, 655–670. (A. Verona) **80c:22013** 22E10
- Rizzonelli, Pieranita Castellani** See **Castellani Rizzonelli, Pieranita**



- Rjabov, V. S. Lectures on difference schemes. (Russian) *The use of finite element method and finite difference method in geophysics (Proc. Summer School, Liblice, 1977)*, pp. 119-172. Česk. Akad. Věd, Prague, 1978. (Author's summary) **80g:65107** 65N20 (65-02, 65N30)
- Rjabov, A. A. (with Antonov, S. N.) Some properties of random series. (Russian) *Mat. Zametki* **25** (1979), no. 2, 311-316, 319. (Werner Wolf) **80g:60024** 60F10
- Rjabov, B. Ja. An analogue of Hoffman's method for the optimal summation of floating point numbers. (Russian) *Diskret. Analiz* No. 30 *Metody Diskret. Anal. o Resenii Kombinatornykh Zadach* (1977), 38-45, 77. (Vladimir Sleinkov) **80c:68023** 68C05 (68E99)
- Coding of a source with unknown but ordered probabilities. *Problemy Peredachi Informatsii* **15** (1979), no. 2, 71-77 (Russian); translated as *Problems Inform. Transmission* **15** (1979), no. 2, 134-138. (Author's summary) **80m:94036** 94A29
- Rjabov, Ju. A. ★Движения небесных тел. (Russian) [Motion of celestial bodies] Third edition, revised. "Nauka", Moscow, 1977. 208 pp. (Vadim Komkov) **80c:70002** 70-01 (01A50)
- (with Grebenikov, E. A.) ★Резонансы и малые знаменатели в небесной механике. (Russian) [Resonances and small denominators in celestial mechanics] "Nauka", Moscow, 1978. 127 pp. (Publisher's description) **80c:70014** 70F15 (34C15, 58F40)
- Rjabov, V. M. Numerical inversion of the Laplace transform. (Russian) *Metody Vychisl.* No. 11 (1978), 48-57, 188. (V. B. Dybin) **80f:65140** 65R10
- Rjabov, Ju. M. (with Andrunakievich, V. A.; Krasilov, K. K.) Lattice-complemented torsion in algebras over a Noetherian integral domain. (Russian) *Dokl. Akad. Nauk SSSR* **242** (1978), no. 5, 985-988. (B. J. Gardner) **80k:16005** 16A21
- (with Čekanu, G. P.) Locally finite algebras. (Russian) Ring-theoretical constructions. *Mat. Issled.* No. 49 (1979), 122-127, 163. (V. N. Latyšev) **80k:08003** 08B99
- (with Andrunakievich, V. A.; Krasilov, K. K.) Lattice-complementary torsions in algebras over a Noetherian integral domain. (Russian) *Mat. Sb. (N.S.)* **109(151)** (1979), no. 1, 3-11, 165. (Robert L. Snider) **80i:16014** 16A21
- See also **Topological spaces and algebraic systems**, **80m:54002**
- Rjabov, A. P. ★Движение тела в общей теории относительности. (Russian) [Motion of bodies in the general theory of relativity] "Vyš. Škola", Minsk, 1979. 239 pp. (Kishore Marathe) **80k:83007** 83C10 (83C25)
- (with Baha'kov, A. A.) Stability in Ljapunov's sense of circular motions of revolving test bodies in the field of a charged center. (Russian. English summary) *Vest. Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 3, 65-71, 141-142. (Authors' summary) **80c:83030** 83D05
- Rjabov, L. B. Linear filter in the stabilization problem for linear stochastic systems with incomplete information. *Avtomat. i Telemekh.* **40** (1979), no. 7, 80-89 (Russian. English summary); translated as *Automat. Remote Control* **40** (1979), no. 7, part 1, 1010-1018. (Author's summary) **80k:93055** 93E11
- Rjazaev, Ju. S. (with Gupalo, Iu. P.; Novikov, V. A.) On the stabilization of unstable steady operation mode of a displacement reactor with allowance for heat release. *Prikl. Mat. Meh.* **41** (1977), no. 4, 678-687 (Russian); translated as *J. Appl. Math. Mech.* **41** (1977), no. 4, 692-701 (1978). (From the summary) **80m:93068** 93D99 (80A20)
- Rjazaeva, I. P. The Galerkin method for the solution of equations with discontinuous monotone operators. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 7(194), 68-72. (Milan Kučera) **80c:47054** 47H17 (47H05, 65J15)
- (with Al'ber, Ja. I.) The solution of nonlinear problems with monotone discontinuous mappings. (Russian) *Differentsial'nye Uravnenija* **15** (1979), no. 2, 331-342, 382. (S. Burýšek) **80j:47077** 47H15 (65J05)
- On the question of the solution of nonlinear equations with discontinuous monotone operators. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 1, 199-202, 208. (Ju. V. Trubnikov) **80c:47055** 47H17
- Rjazaev, B. V. Spectra of Gaussian g-cyclic random matrices. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **23** (1978), no. 3, 564-579. (V. L. Girko) **80g:60031** 60F99 (82A05)
- Roach, G. F. (with Sleeman, B. D.) Coupled operator systems and multiparameter spectral theory. *Proc. Roy. Soc. Edinburgh Sect. A* **80** (1978), no. 1-2, 23-34. (Patrick J. Browne) **80d:47027** 47A70
- (with Sleeman, B. D.) On the spectral theory of operator bundles. II. *Applicable Anal.* **9** (1979), no. 1, 29-36. (Patrick J. Browne) **80h:47024** 47A70 (34B25)
- On the commutative properties of boundary integral operators. *Proc. Amer. Math. Soc.* **73** (1979), no. 2, 219-227. (R. C. MacCamy) **80c:35010** 35C15 (35J05, 45E05)
- Roan, Shi Shyr See Yuan, Hsi Shih
- Robach, Ch. (with Caspi, P.; Mili, A.) An information measure on nets—application to the testability of digital systems. *Information and Systems (Proc. IFAC Workshop, Compiègne, 1977)*, pp. 35-39. Pergamon, Oxford, 1978. (Authors' summary) **80g:94026** 94A17 (94C15)
- Robaschik, D. (with Geyer, B.; Wiecek, E.) Theory of deep inelastic lepton-hadron scattering. *Fortschr. Phys.* **27** (1979), no. 2-3, 75-166. (F. R. Halpern) **80g:81074** 81G20 (47F05)
- (with Bartel, R.) Existence of the Deser-Hilbert-Sudarshan representation. (Russian. English summary) *Teoret. Mat. Fiz.* **39** (1979), no. 2, 180-184. (Authors' summary) **80c:81042** 81D15
- Robb, A. A. See Briginshaw, A. J. **80d:01015**
- Robb, Michael A. (with Hegarty, Dermot) Application of unitary group methods to configuration interaction calculations. *Molecular Phys.* **38** (1979), no. 6, 1795-1812. (Authors' summary) **80m:81108** 81G40 (22E70)
- Robba, Philippe Zéros de suites récurrentes linéaires. *Groupe d'Etude d'Analyse Ultramétrique, Se année (1977/78)*, Exp. No. 13, 5 pp., *Secrétariat Math.*, Paris, 1978. (David Lee Hilliker) **80b:10015** 10A35
- Lemmes de Schwarz et lemmes d'approximations p-adiques en plusieurs variables. *Invent. Math.* **48** (1978), no. 3, 245-277. (A. J. van der Poorten) **80c:32021** 32H99 (10F45)
- Robbiano, Lorenzo An algebraic property of  $P^1 \times P^N$ . *Comm. Algebra* **7** (1979), no. 6, 641-655. (Manfred Hermann) **80f:14027** 14M10 (13H99)
- Robbin, Joel W. Evaluation fields for power series. I. The nullstellensatz. *J. Algebra* **57** (1979), no. 1, 196-211. (G. A. Efroymson) **80m:13006a** 13J05 (03C60, 12D99, 13J25, 14A25)
- Evaluation fields for power series. II. The renaillensatz. *J. Algebra* **57** (1979), no. 1, 212-222. (G. A. Efroymson) **80m:13006b** 13J05 (03C60, 12D99, 13J25, 14A25)
- See also Luna, D., **80c:22026**
- Robbins, Herbert (with Courant, Richard) ★What is mathematics? An elementary approach to ideas and methods. *Oxford University Press, New York*, 1979. 522 pp. ISBN 0-19-502517-2 (Editors) **80k:00001** 00A05 (01A75)
- (with Whitehead, John) Sequential rank and the Pólya urn. *J. Appl. Probab.* **16** (1979), no. 1, 213-219. (G. I. Ivčenko) **80d:62066** 62L05
- (with Lai, Tze Leung; Wei, C. Z.) Strong consistency of least squares estimates in multiple regression. II. *J. Multivariate Anal.* **9** (1979), no. 3, 343-361. (C. W. Chen) **80j:62063** 62J05 (62H12)
- Robbins, Neville On Fibonacci numbers which are powers. *Fibonacci Quart.* **16** (1978), no. 6, 515-517. (H. London) **80i:10019** 10A40
- Roben, M. See Robin, Maurice
- Robert, Didier (with Pham The Lai) Valeurs propres d'une classe d'équations différentielles singulières sur une demi-droite. *Équations aux dérivées partielles (Proc. Conf., Saint-Jean-de-Monts, 1977)*, pp. 164-171. *Lecture Notes in Math.*, 660, Springer, Berlin, 1978. (Patrick J. Browne) **80j:34026** 34B25
- Propriétés spectrales d'opérateurs pseudo-différentiels. *Comm. Partial Differential Equations* **3** (1978), no. 9, 755-826. (Cesare Parenti) **80b:35112** 35P05 (47G05)
- Robert, Gilles Nombres de Hurwitz et unités elliptiques. Un critère de régularité pour les extensions abéliennes d'un corps quadratique imaginaire. *Ann. Sci. École Norm. Sup. (4)* **11** (1978), no. 3, 297-389. (Larry J. Goldstein) **80k:12010** 12A50 (12A45)
- Robert, Jacques See *Journées: Analyse Non Linéaire*, **80c:46002**
- Robert, K. Three-dimensional boundary layer theory using shell geometrical concepts. *Z. Angew. Math. Mech.* **58** (1978), no. 7, T304-T305. (From the introduction) **80c:76035** 76N05
- Roberto, Lucchetti (with Fioravante, Patrone) The  $\epsilon$ -method and convergence in the sense of Mosco. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* **57** (1977), 1-15 (1978). (J. E. Rubio) **80c:49029** 49D30
- Roberts, A. P. (with Irwin, G. W.) On the state/parameter estimation of linear discrete-time systems. *Recent theoretical developments in control (Proc. Conf., Univ. Leicester, Leicester, 1976)*, pp. 505-528. *Academic Press, London*, 1978. (T. Prasad) **80c:93111** 93E10
- (with Irwin, G. W.) An adaptive Kalman filter for the Luenberger canonical form. *Recent theoretical developments in control (Proc. Conf., Univ. Leicester, Leicester, 1976)*, pp. 529-542. *Academic Press, London*, 1978. (G. Banon) **80g:93079** 93E11
- (with Smith, M. W. A.) The analysis of a parameter identification algorithm which was derived from the continuous time Kalman filter. *Inform. Sci.* **15** (1978), no. 3, 187-210. (Hironao Kawashima) **80j:93119** 93E11
- (with Smith, M. W. A.) The identification of the parameters of time-invariant stochastic systems by a method derived from the continuous-time Kalman filter. *Inform. Sci.* **16** (1978), no. 1, 1-30. (Shinzo Kitamura) **80c:93058a** 93E10
- (with Smith, M. W. A.) The relationship between a continuous-time identification algorithm based on the deterministic filter and least-squares methods. *Inform. Sci.* **19** (1979), no. 2, 135-154. (Andor Dobó) **80j:93126** 93E12 (93E11)
- (with Irwin, G. W.) A note on: "The Luenberger canonical form in the state/parameter estimation of linear systems" [*Internat. J. Control* **23** (1976), no. 6, 851-864]. *Internat. J. Control* **29** (1979), no. 3, 537-540. (Authors' summary) **80d:93067** 93E10
- (with Smith, M. W. A.) A study of the Kalman filter as a state estimator of deterministic and stochastic systems. *Internat. J. Systems Sci.* **10** (1979), no. 8, 895-911. (Andrew P. Sage) **80g:93082** 93E11 (93E10)
- (with Smith, M. W. A.) Corrections to the paper: "The identification of the parameters of time-invariant stochastic systems by a method derived from the continuous-time Kalman filter" [*Inform. Sci.* **16** (1978), no. 1, 1-30; MR **80b:93058a**]. *Inform. Sci.* **20** (1980), no. 1, 89. (Editors) **80c:93058b** 93E10
- Roberts, Charles E., Jr. ★Ordinary differential equations. A computational approach. *Prentice-Hall, Inc., Englewood Cliffs, N.J.*, 1979. xiii + 400 pp. ISBN 0-13-639757-3 (D. Greenspan) **80j:65001** 65-01 (34-01, 65Lxx)
- (with Aló, Richard A.; de Korvin, André) p-integrable selectors of multimeasures. *Internat. J. Math. Math. Sci.* **2** (1979), no. 2, 209-221. (R. Anantharaman) **80i:28027** 28B20
- Roberts, D. E. (with Hopkins, T. R.) Kufarev's method for determining the Schwarz-Christoffel parameters. *Numer. Math.* **33** (1979), no. 4, 353-365. (D. Gaier) **80j:30012** 30C30
- Roberts, F. D. K. (with Lee, Cheng-Ming) Corrigenda: "A comparison of algorithms for rational  $L_\infty$  approximation" [*Math. Comp.* **27** (1973), 111-121]. *Math. Comp.* **33** (1979), no. 146, 847. (Editors) **80c:41009** 41A20
- Roberts, Fred S. ★Graph theory and its applications to problems of society. CBMS-NSF Regional Conference Series in Applied Mathematics, 29. *Society for Industrial and Applied Mathematics, Philadelphia, Pa.*, 1978. v + 122 pp. (H. Kramer) **80g:90036** 90A30 (05Cxx)
- Roberts, James (with Cima, Joseph A.) Densifying points in  $B^p$ . *Pacific J. Math.* **78** (1978), no. 1, 41-45. (H. E. Lacey) **80c:46033** 46E15
- Roberts, Jean E. A stronger Borsuk-Ulam type theorem for proper  $Z_p$ -actions on mod  $p$  homology  $n$ -spheres. *Proc. Amer. Math. Soc.* **72** (1978), no. 2, 381-386. (M.-C. Ku) **80a:55001** 55M20 (54H25, 55M35)
- Roberts, John (with Kalai, Ehud; Postlewaite, Andrew) Barriers to trade and disadvantageous middlemen: nonmonotonicity of the core. *J. Econom. Theory* **19** (1978), no. 1, 200-209. (J. Rosenmüller) **80c:90185** 90D45 (90B10, 90D12)
- Incentives in planning procedures for the provision of public goods. *Rev. Econom. Stud.* **46** (1979), no. 2, 283-292. (From the introduction) **80b:90177** 90D40 (90D45)
- Roberts, John E. A survey of local cohomology. *Mathematical problems in theoretical physics (Proc. Internat. Conf., Univ. Rome, Rome, 1977)*, pp. 81-93. *Lecture Notes in Phys.*, 80, Springer, Berlin, 1978. (C. T. J. Dodson) **80b:81066** 81E05 (57T10)
- Roberts, K. V. The solution of hyperbolic equations in magnetohydrodynamics. *Computing methods in applied sciences and engineering (Proc. Third Internat. Sympos., Versailles,*

- 1977), II, pp. 315–328, *Lecture Notes in Phys.*, 91, Springer, Berlin, 1979. (Christopher Caldwell) **80k:65099** 65P05 (76W05)
- Roberts, Leslie G.** (with Geller, Susan C.) The relationship between the Picard groups and  $SK_1$  of some algebraic curves. *J. Algebra* **55** (1978), no. 2, 213–230. (Ezio Stagnaro) **80a:14003** 14C35 (13D15, 14C22)
- $K_2$  of some truncated polynomial rings. With a section written jointly with S. Geller. *Ring theory (Proc. Conf., Univ. Waterloo, Waterloo, 1978)*, pp. 249–278, *Lecture Notes in Math.*, 734, Springer, Berlin, 1979. (G. Horrocks) **80k:13005** 13D15 (14C35, 14M20)
- (with Dayton, Barry H.)  $K_2$  of  $n$  lines in the plane. *J. Pure Appl. Algebra* **15** (1979), no. 1, 1–9. (Knud Lønsted) **80j:13008** 13D15 (14C35)
- (with Geller, Susan C.) Excision and  $K_1$  regularity for curves with normal crossings. *J. Pure Appl. Algebra* **15** (1979), no. 1, 11–21. (Mark Krusemeyer) **80k:14028** 14F15 (18F25)
- Roberts, M. J.** (with Hagston, W. E.) A density matrix approach to problems in time-dependent perturbation theory. *J. Phys. A* **12** (1979), no. 10, 1731–1738. (Authors' summary) **80c:81031** 81C12
- (with Catalan, Graciela) The form of electron-atom excitation amplitudes at high momentum transfers in the Faddeev-Watson approximation. *J. Phys. B* **12** (1979), no. 23, 3947–3966. (From the summary) **80m:81076** 81F20
- Roberts, P. D.** An algorithm for steady-state system optimization and parameter estimation. *Internat. J. Systems Sci.* **10** (1979), no. 7, 719–734. (G. Banon) **80h:93057** 93E10
- Roberts, P. H.** (with Loper, David E.) On the diffusive instability of some simple steady magnetohydrodynamic flows. *J. Fluid Mech.* **90** (1979), no. 4, 641–668. (From the summary) **80g:76052** 76W05 (78A25)
- Roberts, R. A.** (with Mullis, C. T.) On weak equivalence of linear systems and finite state systems. *SIAM J. Math. Anal.* **10** (1979), no. 3, 498–511. (Authors' summary) **80c:93010** 93A10 (68D05)
- Roberts, S. M.** Direct use of the fundamental matrix in two-point boundary value problems. *J. Math. Anal. Appl.* **71** (1979), no. 1, 147–160. (Tassilo Küpper) **80h:34017** 34B05
- (with Shipman, J. S.) Fundamental matrix and two-point boundary-value problems. *J. Optim. Theory Appl.* **28** (1979), no. 1, 77–88. (Authors' summary) **80d:65098** 65L10
- (with Shipman, J. S.) On the formulation of invariant imbedding problems. *J. Optim. Theory Appl.* **28** (1979), no. 4, 525–547. (Authors' summary) **80c:65082** 65L10
- A commentary on the method of successive starts. *J. Optim. Theory Appl.* **29** (1979), no. 1, 67–76. (Author's summary) **80h:65064** 65L10
- Robertson, A. Guyan** Averages of extreme points in complex function spaces. *J. London Math. Soc.* (2) **19** (1979), no. 2, 345–347. (J. van Mill) **80h:54018** 54C40 (54C45)
- (with Yost, David T.) Chebyshev subspaces of operator algebras. *J. London Math. Soc.* (2) **19** (1979), no. 3, 523–531. (Robert S. Doran) **80j:46097** 46L05
- Robertson, Baldwin** Application of maximum entropy to nonequilibrium statistical mechanics. *Maximum entropy formalism (Conf., Mass. Inst. Tech., Cambridge, Mass., 1978)*, pp. 289–320, MIT Press, Cambridge, Mass., 1979. (Koichiro Matsuno) **80c:82010** 82A05
- Robertson, E. F.** (with Campbell, C. M.) Deficiency zero groups involving Fibonacci and Lucas numbers. *Proc. Roy. Soc. Edinburgh Sect. A* **81** (1978), no. 3–4, 273–286. (K. Appel) **80h:20042** 20F05
- Robertson, Edward** (with Munro, J. Ian) NP-completeness, puzzles and games. *Utilitas Math.* **13** (1978), 99–116. (G. Duro) **80i:90123** 90D42 (05A05)
- Robertson, James B.** On the discrete part of a measure preserving transformation and a paper by D. Quiring and R. J. Turek: "A stacking method in ergodic theory" *Indiana Univ. Math. J.* **25** (1976), no. 6, 493–498; MR **54** #2916. *Indiana Univ. Math. J.* **28** (1979), no. 6, 1005–1006. (Nathaniel Friedman) **80k:28018** 28D05
- Robertson, Lewis C.** (with Hager, Anthony W.) Extremal units in an Archimedean Riesz space. *Rend. Sem. Mat. Univ. Padova* **59** (1978), 97–115 (1979). (S. A. Peregrudov) **80h:46011** 46A40 (06B30)
- (with Hager, Anthony W.) On the embedding into a ring of an Archimedean  $l$ -group. *Canad. J. Math.* **31** (1979), no. 1, 1–8. (Syed A. Huq) **80h:16031** 16A90
- Robertson, M. S.** A characterization of the class of starlike univalent functions. *Michigan Math. J.* **26** (1979), no. 1, 65–69. (Carl P. McCarthy) **80j:30010** 30C45
- Robins, Maurice** Contrôle impulsionnel avec retard pour les processus de diffusion. *Étude numérique des grands systèmes (Proc. Sympos., Novosibirsk, 1976)*, pp. 233–248, *Méthodes Math. de l'Informatique*, 7, Dunod, Paris, 1978. (Claudia Simionescu) **80f:93041** 93C20 (49A29)
- Pulse control with time lag for diffusion processes. (Russian) *Numerical methods in mathematical physics, geophysics and optimal control (Sympos., Novosibirsk, 1976)* (Russian), pp. 176–190, 237, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (A. Halanay) **80g:93090** 93E20 (49A29, 49A60)
- Impulsive control problems depending on a parameter. *Stochastic analysis (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1978)*, pp. 285–300, Academic Press, New York, 1978. (From the introduction) **80h:93080** 93E20
- (with Friedman, Avner) The free boundary for variational inequalities with nonlocal operators. *SIAM J. Control Optim.* **16** (1978), no. 2, 347–372. (Authors' summary) **80j:60065** 60G40 (49B60, 60J25, 93E20)
- Robinet, Bernard** Logique combinatoire et programmation: une autre approche de la théorie de la programmation. *Rend. Sem. Mat. Univ. Politec. Torino* **36** (1977/78), 35–37 (1979). (Editors) **80h:03017** 03B40 (68B05, 68C01)
- Robnett, Loris** Do tachyons travel more slowly than light? *Phys. Rev. D* (3) **18** (1978), no. 10, 3610–3616. (Editors) **80d:83089** 83E99 (58D30)
- Robinson, A. R.** (with Haidvogel, Dale B.; Schulman, E. E.) The accuracy, efficiency, and stability of three numerical models with application to open ocean problems. *J. Comput. Phys.* **34** (1980), no. 1, 1–53. (J. J. Mahony) **80m:86001** 86A05 (65N30)
- Robinson, Abraham** ★Selected papers of Abraham Robinson. Vol. I. Model theory and algebra. Edited and with an introduction by H. Jerome Keisler. With a biography by George B. Seligman. Yale University Press, New Haven, Conn., 1979. xxxvii + 694 pp. (1 plate). ISBN 0-300-02071-6 (E. G. Straus) **80h:01039a** 01A75 (03-03, 03C60)
- ★Selected papers of Abraham Robinson. Vol. II. Nonstandard analysis and philosophy. Edited and with introductions by W. A. J. Luxemburg and S. Körner. Yale University Press, New Haven, Conn., 1979. xlv + 582 pp. (1 plate). ISBN 0-300-02072-4 (E. G. Straus) **80h:01039b** 01A75 (03-03, 03A05, 03Hxx)
- ★Selected papers of Abraham Robinson. Vol. III. Aeronautics. Edited and with an introduction by A. D. Young. Yale University Press, New Haven, Conn., 1979. xxxii + 270 pp. (1 plate). ISBN 0-300-02073-2 (E. G. Straus) **80h:01039c** 01A75 (76B05, 76N15)
- Robinson, Clark** See **Robinson, R. Clark**
- Robinson, D.** A new treatment of soluble groups with finiteness conditions on their abelian subgroups. (Russian) Translated from the English by A. G. Korolev. Translation edited by Ju. I. Merzjakov. *Uspehi Mat. Nauk* **34** (1979), no. 1(205), 197–215. (Editor) **80b:20024** 20D10
- Robinson, D. A.** A loop-theoretic study of right-sided quasigroups. *Ann. Soc. Sci. Bruxelles Sér. I* **93** (1979), no. 1, 7–16. (Tomáš Kepka) **80k:20072** 20N05
- Robinson, Derek** Optimization of priority queues—a semi-Markov decision chain approach. *Management Sci.* **24** (1977/78), no. 5, 545–553. (Ralph L. Disney) **80c:60111** 60K25 (60K15)
- Robinson, Derek J. S.** On the homology of hypercentral groups. *Arch. Math. (Basel)* **31** (1979), no. 3, 223–226. (L. Ribes) **80g:20062** 20J05
- (with Gagen, Terence M.) Finite metabelian groups with no outer automorphisms. *Arch. Math. (Basel)* **32** (1979), no. 5, 417–423. (H. Kurzweil) **80j:20029** 20D45
- Homology of group extensions with divisible abelian kernel. *J. Pure Appl. Algebra* **14** (1979), no. 2, 145–165. (L. Ribes) **80g:20061** 20J05
- Robinson, Derek W.** Dynamics in quantum statistical mechanics. *Many degrees of freedom in field theory (Proc. Eighth Internat. Summer Inst. Theoret. Phys., Univ. Bielefeld, Bielefeld, 1976)*, pp. 167–195, NATO Adv. Study Inst. Ser., Ser. B: Physics, 30, Plenum, New York, 1978. (R. H. Herman) **80g:82022** 82A15
- (with Bratteli, Ola; Herman, Richard H.) Perturbations of flows on Banach space and operator algebras. *Comm. Math. Phys.* **59** (1978), no. 2, 167–196. (Dorte Ølesen) **80h:46038** 46L10 (47D10)
- (with Bratteli, Ola; Kishimoto, Akitaka) Stability properties and the KMS condition. *Comm. Math. Phys.* **61** (1979), no. 3, 209–238. (S. Sakai) **80c:46068** 46L55 (82A15)
- (with Bratteli, Ola; Kishimoto, Akitaka) Ground states of quantum spin systems. *Comm. Math. Phys.* **64** (1978/79), no. 1, 41–48. (Y. Kato) **80h:82038** 82A67 (46L60)
- Robinson, Enders A.** (with Treitel, Sven; Gutowski, Paul R.) Empirical spectral analysis revisited. *Topics in numerical analysis, III (Proc. Roy. Irish Acad. Conf., Trinity Coll. Dublin, 1976)*, pp. 429–446, Academic Press, London, 1977. (From the text) **80h:62109** 62M15
- See also **Gray, H. L.**; et al., **80c:62059**
- Robinson, Eric E.** A characterization of certain branched coverings as group actions. *Fund. Math.* **103** (1979), no. 1, 43–45. (Allan Edmonds) **80g:57056** 57S17
- Robinson, G. K.** See **Efron, Bradley**; et al., **80g:62021**
- Robinson, Herbert A.** (with Johnson, Charles R.; Leighton, Frank Thomson) Sign pattern of inverse-positive matrices. *Linear Algebra Appl.* **24** (1979), 75–83. (M. Pearl) **80h:15011** 15A48
- Robinson, I. J. W.** (with Brown, H. I.; Cass, F. P.) On isomorphisms between certain subalgebras of  $B(X)$ . *Studia Math.* **63** (1978), no. 2, 189–197. (Richard M. Crownover) **80a:47073** 47D30 (46B10)
- Robinson, J.** An asymptotic expansion for samples from a finite population. *Ann. Statist.* **6** (1978), no. 5, 1005–1011. (M. Raghavachari) **80h:62016** 62E20
- Robinson, John T.** Some analysis techniques for asynchronous multiprocessor algorithms. *IEEE Trans. Software Engrg.* **5** (1979), no. 1, 24–31. (Author's summary) **80h:68038** 68B20 (68C05, 68E05)
- Robinson, O. A.** A modal natural deduction system for  $\mathcal{N}_4$ . *Sot. Dame J. Formal Logic* **20** (1979), no. 3, 625–627. (Wiesław Dziobiak) **80i:03033** 03B45
- Robinson, P. J.** (with Seberry, Jennifer) A note on using sequences to construct orthogonal designs. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 911–932, *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (K. Vijayan) **80c:05038** 05B15
- Robinson, Peter D.** Bivariational bounds. *Transactions of the Twenty-Third Conference of Army Mathematicians (Langley Res. Center, Hampton, Va., 1977)*, pp. 183–189, *ARO Rep.* **78**, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1978. (Author's summary) **80c:49037** 49G20
- (with Barnsley, Michael F.) Pointwise bivariational bounds on solutions of Fredholm integral equations. *SIAM J. Numer. Anal.* **16** (1979), no. 1, 135–144. (Frank G. Hagin) **80h:65157** 65R20 (45L05)
- Robinson, Peter M.** Statistical inference for a random coefficient autoregressive model. *Scand. J. Statist.* **5** (1978), no. 3, 163–168. (Raúl Pedro Mentz) **80a:62150** 62M10
- Alternative models for stationary stochastic processes. *Stochastic Process. Appl.* **8** (1978), no. 2, 141–152. (P. A. Morettin) **80a:62154** 62M15
- See also **Zellmer, Arnold**, **80m:62108**
- Robinson, R. Clark** Introduction to the closing lemma. *The structure of attractors in dynamical systems (Proc. Conf., North Dakota State Univ., Fargo, N.D., 1977)*, pp. 225–230, *Lecture Notes in Math.*, 668, Springer, Berlin, 1978. (S. Ju. Piljugin) **80d:58061** 58F30 (34D30, 58F10)
- Robinson, Raphael M.** Multiple tilings of  $n$ -dimensional space by unit cubes. *Math. Z.* **166** (1979), no. 3, 225–264. (A. C. Woods) **80g:05027** 05B40 (10E30, 16A26, 52A45)
- Robinson, Robert W.** Asymptotic number of self-converse oriented graphs. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 255–266, *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (E. M. Palmer) **80m:05069** 05C35
- (with Harary, Frank; Wormald, Nicholas C.) Isomorphic factorisations. V. Directed graphs. *Mathematika* **25** (1978), no. 2, 279–285. (Jean-Claude Bermond) **80m:05050** 05C20 (05C99)
- (with Harary, Frank) Labeled bipartite blocks. *Canad. J. Math.* **31** (1979), no. 1, 60–68. (R. C. Read) **80h:05036** 05C30
- (with Harary, Frank) Generalized Ramsey theory. IX. Isomorphic factorizations. IV. Isomorphic Ramsey numbers. *Pacific J. Math.* **80** (1979), no. 2, 435–441. (Jean-Claude Bermond) **80i:05068** 05C55



- Rabinson, Stephen M.** Generalized equations and their solutions. I. Basic theory. Point-to-set maps and mathematical programming. *Math. Programming Stud.* No. 10 (1979), 128-141. (W. W. Breckner) **80:90101** 90C30
- Quadratic interpolation is risky. *SIAM J. Numer. Anal.* 16 (1979), no. 3, 377-379. (Marc Duc-Jacquet) **80:65012** 65D05
- Robinson, William** Some equivalent classes of Köthe spaces. *Comment. Math. Prace Mat.* 20 (1977/78), no. 2, 449-451. (M. S. Ramanujan) **80:46007** 46A45
- Robitzsch, H.** (with Schaback, Robert) Die numerische Berechnung von Startnäherungen bei der Exponentialapproximation. (English summary) *Numerische Methoden der Approximationstheorie, Band 4* (Meeting, Math. Forschungsinst., Oberwolfach, 1977), pp. 260-280. *Internat. Schriftenreihe Numer. Math.*, 42, Birkhäuser, Basel, 1978. (Authors' summary) **80:65041** 65D15
- Robledo, Alberto** (with Budgor, Aaron B.) Random walks, the Ornstein-Zernike equation, and the condensation of a one-dimensional lattice gas. *Amer. J. Phys.* 46 (1978), no. 10, 998-1003. (Reinhard Illner) **80:82040** 82A67 (60J15)
- (with Woodhouse, Luis) Multiple trapping of random walkers on periodic lattices. *J. Statist. Phys.* 19 (1978), no. 2, 129-147. (Authors' summary) **80:60131** 60K35 (82A67)
- Robnik, Marko** Wave propagation in a random stratified medium. *J. Phys. A* 13 (1980), no. 2, L11-L13. (Author's summary) **80:78020** 78A40
- Robson, Arthur J.** Sequential exploitation of uncertain deposits of a depletable natural resource. *J. Econom. Theory* 21 (1979), no. 1, 88-110. (Colin W. Clark) **80:90044** 90A30 (90B99, 90C50)
- Robson, J. C.** Quotient categories and Weyl algebras. *Séminaire d'Algèbre Paul Dubreil, 29ème année* (Paris, 1975-1976), pp. 101-109. *Lecture Notes in Math.*, 586, Springer, Berlin, 1977. (Philippe Revoy) **80:16039** 16A64
- (with Ratliff, Louis J., Jr.) Minimal bases for modules. *Houston J. Math.* 4 (1978), no. 4, 593-596. (G. Eisenreich) **80:16042** 16A64 (13H99)
- Polynomials satisfied by matrices. *J. Algebra* 55 (1978), no. 2, 509-520. (L. P. Bellue) **80:15012** 15A33 (16A42)
- A unified approach to unity. *Comm. Algebra* 7 (1979), no. 12, 1245-1255. (W. G. Leavitt) **80:16023** 16A45
- Rocca, Fabio** (with Bellini, Sandro; Piacentini, Maurizio; Cafforio, Ciro) Compensation of tissue absorption in emission tomography. *IEEE Trans. Acoust. Speech Signal Process.* 27 (1979), no. 3, 213-218. (Authors' summary) **80:94007** 94A12 (68G10)
- ronchi della Rocca, S.** See Ronchi Della Rocca, S.
- Rodek, Martin** (with Grisaru, M. T.; Siegel, Warren) Improved methods for supergraphs. *Nuclear Phys. B* 159 (1979), no. 3, 429-450. (J. G. Taylor) **80:81027** 81C12 (83C45)
- (with Lindström, Ulf) More components of superspace. *Phys. Lett. B* 83 (1979), no. 2, 179-184. (R. Rosca) **80:83029** 83C99 (53A55)
- Rocha, A. F.** (with Francozo, E.; Hadler, M. I.; Balduino, M. A.) Neural languages. *Fuzzy Sets and Systems* 3 (1980), no. 1, 11-35. (Authors' summary) **80:68048** 68D99 (68F99, 92A05, 94D05)
- da Rocha, Luiz Fernando** Characterization of Morse-Smale isotopy classes on two-manifolds. *An. Acad. Brasil. Ciênc.* 50 (1978), no. 4, 469-471. (S. Ju. Piljugin) **80:58035** 58F09 (57R25)
- de Rochambeau, H.** (with Vu Tien Khang, J.; Chevalet, Claude; Gillois, Michel) Analyse des pedigres et calcul des coefficients d'identité par les arbres géniques. (English summary) *Biometrical J.* 21 (1979), no. 4, 367-387. (Authors' summary) **80:92008** 92A10
- Rochberg, Richard** (with Coifman, Ronald) Representation theorems for holomorphic and harmonic functions. *Harmonic analysis in Euclidean spaces* (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 1, pp. 459-460. *Proc. Sympos. Pure Math.*, XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (Editors) **80:32006** 32A25 (30C40, 32H10)
- Deformation of uniform algebras. *Proc. London Math. Soc.* (3) 39 (1979), no. 1, 93-118. (E. L. Stout) **80:46058** 46J10
- The disk algebra is rigid. *Proc. London Math. Soc.* (3) 39 (1979), no. 1, 119-129. (E. L. Stout) **80:46057** 46J10
- Rochette, René** (with Lakshminarayan, Sankaran; Lakshmanan, Ram; Papineau, Robert L.) Optimal single-machine scheduling with earliness and tardiness penalties. *Oper. Res.* 26 (1978), no. 6, 1079-1082. (John C. Gittins) **80:90085** 90B35
- Rochus, Pierre** Upper bounds for the many-channel Marchenko transformation operator and its derivatives. *J. Math. Phys.* 20 (1979), no. 5, 781-792. (Marcel Coz) **80:81018** 81C12 (35P25, 81F99)
- Rock, D. A.** (with Browne, M. W.) The choice of additive constants in ridge regression. *South African Statist. J.* 12 (1978), no. 1, 65-74. (G. C. McDonald) **80:62067** 62J07
- Rockafellar, R. Tyrrell** Higher derivatives of conjugate convex functions. *IJAA Internat. J. Appl. Anal.* 1 (1977), no. 1, 41-43. (Luccio Boccardo) **80:49022** 49A50
- Duality in optimal control. *Mathematical control theory* (Proc. Conf., Australian Nat. Univ., Canberra, 1977), pp. 219-257. *Lecture Notes in Math.*, 680, Springer, Berlin, 1978. (S. Kutateladze) **80:49013** 49A50
- Monotone operators and augmented Lagrangian methods in nonlinear programming. *Nonlinear programming, 3* (Proc. Sympos., Special Interest Group Math. Programming, Univ. Wisconsin, Madison, Wis., 1977), pp. 1-25. Academic Press, New York, 1978. (Author's summary) **80:90114** 90C25 (90C30)
- ★ La théorie des sous-gradients et ses applications à l'optimisation. Fonctions convexes et non convexes. Translated from the English by Godelieve Vanderstraeten-Tilquin. Collection de la Chaire Aisenstadt. *Presses de l'Université de Montréal, Montréal, Que.*, 1979. 168 pp. ISBN 2-7606-0436-5 (Pierre Loridan) **80:49023** 49A50 (26B05, 46G99, 65K10)
- (with Spingarn, J. E.) The generic nature of optimality conditions in nonlinear programming. *Math. Oper. Res.* 4 (1979), no. 4, 425-430. (J. Parida) **80:90099** 90C30
- Clarke's tangent cones and the boundaries of closed sets in  $R^n$ . *Nonlinear Anal.* 3 (1979), no. 1, 145-154 (1978). (A. D. Ioffe) **80:49032** 49F99 (58C20)
- Directionally Lipschitzian functions and subdifferential calculus. *Proc. London Math. Soc.* (3) 39 (1979), no. 2, 331-355. (Vanna Zanelli) **80:46070** 46G05 (49A99, 58C20)
- Rocklin, S. M.** (with Oster, George F.) Optimization models in evolutionary biology. *Some mathematical questions in biology, X* (Proc. 12th Sympos. Math. Biol., Washington, D.C., 1978), pp. 21-88. *Lectures on Math. in the Life Sciences*, 11, Amer. Math. Soc., Providence, R.I., 1979. (S. Levin) **80:92005** 92A10 (92-02)
- Rockwell, Christina** (with Yellott, John I., Jr.) A note on equivalent Thurstone models. *J. Math. Psych.* 19 (1979), no. 1, 65-71. (James B. MacQueen) **80:92028** 92A25 (60E99)
- Rod, D. L.** (with Churchill, R. C.; Pecelli, G.) A survey of the Hénon-Heiles Hamiltonian with applications to related examples. *Stochastic behavior in classical and quantum Hamiltonian systems* (Volta Memorial Conf., Como, 1977), pp. 76-136. *Lecture Notes in Phys.*, 93, Springer, Berlin, 1979. (Zbigniew Nitecki) **80:58046** 58F05 (70F15)
- Rodabaugh, D. J.** (with Thompson, Skip) Adams-type methods with increased ranges of stability. *Comput. Math. Appl.* 4 (1978), no. 4, 349-357. (Authors' summary) **80:65155** 65L05 (65K05)
- (with Thompson, Skip) Optimally stable fifth-order integration methods: a numerical approach. *Internat. J. Math. Math. Sci.* 1 (1978), no. 3, 319-334. (Authors' summary) **80:65156** 65L05
- rivera Rodas, Hernán** See Rivera Rodas, Hernán
- Rodé, Gerd** Eine abstrakte Version des Satzes von Hahn-Banach. *Arch. Math. (Basel)* 31 (1978/79), no. 5, 474-481. (I. Namioka) **80:46009** 46A22
- Rodeh, Michael** (with Itai, Alon) Covering a graph by circuits. *Automata, languages and programming* (Fifth Internat. Colloq., Udine, 1978), pp. 289-299. *Lecture Notes in Comput. Sci.*, 62, Springer, Berlin, 1978. (D. Ja. Kosefman) **80:05055** 05C35 (68E10, 90B10)
- (with Itai, Alon; Tanimoto, Steven L.) Some matching problems for bipartite graphs. *J. Assoc. Comput. Mach.* 25 (1978), no. 4, 517-525. (Jaroslav Morávek) **80:68052** 68C25 (68E10)
- (with Itai, Alon) Finding a minimum circuit in a graph. *SIAM J. Comput.* 7 (1978), no. 4, 413-423. (L. E. Trotter, Jr.) **80:68088** 68E10 (68C25)
- Rödel, Egmar** (with Tautenburg, Helge) ★ Mathematisch-statistische Methoden in der Ökonomie. Modellwahl—Parameteridentifikation—Vorhersage. *Akademie-Verlag, Berlin*, 1978. 192 pp. (G. Tintner) **80:62073** 62P20
- Rodemich, E. R.** (with McElice, Robert J.; Rumsey, H. C., Jr.) The Lovász bound and some generalizations. *J. Combin. Inform. System Sci.* 3 (1978), no. 3, 134-152. (László Lovász) **80:05168** 05C99 (05B20, 94A24)
- Rodger, Christopher A.** A family of weakly self-dual codes. *Combinatorial mathematics, VI* (Proc. Sixth Austral. Conf., Univ. New England, Armidale, 1978), pp. 137-142. *Lecture Notes in Math.*, 748, Springer, Berlin, 1979. (From the summary) **80:94062** 94B25
- On the complete weight enumerator of certain linear codes over GF(3). *Ars Combin.* 7 (1979), 171-179. (F. J. MacWilliams) **80:94027** 94B05
- Rodla, Burton** (with Warschawski, Stefan E.) Estimates for conformal maps of strip domains without boundary regularity. *Proc. London Math. Soc.* (3) 39 (1979), no. 2, 356-384. (G. Opfer) **80:30013** 30C20 (30E15)
- Rodlin, Ervin Y.** See Energy methods in finite element analysis, **80:73100**
- Rodlin, V. A.** (with Semenov, E. M.) The complementability of a subspace that is generated by the Rademacher system in a symmetric space. (Russian) *Funkcional. Anal. i Prilozhen.* 13 (1979), no. 2, 91-92. (Aleksandr Mekler) **80:46048** 46E30
- Rodlino, Luigi** (with Parenti, Cesare) A pseudo differential operator which shifts the wave front set. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 251-257. (F. Cardoso) **80:35120** 35S05
- Systems of polysingular equations. *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 1, 139-146. (N. K. Karapetjan) **80:45011** 45E99 (45F05)
- Rodionov, A. F.** (with Finkel'stein, R. M.) The foundations of the relativistic theory of elasticity. (Russian) *Studies in elasticity and plasticity*, No. 12 (Russian), pp. 3-42, 216. *Leningrad. Univ., Leningrad*, 1978. (From the text) **80:73010** 73B99 (49B99, 83C55)
- (with Finkel'stein, R. M.) Deduction of the laws of conservation of momentum and energy of relativistic continua by means of the variational principle. (Russian) *Studies in elasticity and plasticity*, No. 12 (Russian), pp. 43-59, 216. *Leningrad. Univ., Leningrad*, 1978. (From the introduction) **80:73011** 73B99 (49B99, 83C55)
- Rodionov, V. I.** (with Borevič, Z. I.; Wipław, Witold; Dobrowolski, E.) The number of labeled topologies on nine points. (Russian) *Rings and linear groups. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 75 (1978), 35-42, 195. (V. Evstigneov (RZMat 78:8 V474)) **80:05012** 05A15
- (with Borevič, Z. I.; Bumagin, V. V.) The number of labeled topologies on ten points. (Russian) *Algebraic numbers and finite groups. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 86 (1979), 5-10, 188. (T. Zamfirescu) **80:05004** 05A15 (54A10)
- Rodionova, V. A.** Variational method for obtaining some necessary optimality conditions in the mechanics of deformable bodies. (Russian) *Control of dynamical systems* (Russian), pp. 190-195, 320. *Leningrad. Univ., Leningrad*, 1978. (Vadim Komkov) **80:73038** 73K05 (49B99)
- Rödl, Vojtěch** (with Nešetřil, Jaroslav) Partition (Ramsey) theory—a survey. *Combinatorics* (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II, pp. 759-792. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (Stefan A. Burr) **80:05003** 05-02 (05C55)
- (with Nešetřil, Jaroslav) A selective theorem for graphs and hypergraphs. (French summary) *Problèmes combinatoires et théorie des graphes* (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 309-311. *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Authors' summary) **80:05044** 05C15 (05C65)
- (with Nešetřil, Jaroslav) The structure of critical Ramsey graphs. *Acta Math. Acad. Sci. Hungar.* 32 (1978), no. 3-4, 295-300. (R. L. Graham) **80:05102** 05C55
- On systems of graphs intersecting in paths. *Comment. Math. Univ. Carolin.* 19 (1978), no. 1, 135-140. (Author's summary) **80:05172** 05C99
- (with Nešetřil, Jaroslav) A simple proof of the Galvin-Ramsey property of the class of all finite graphs and a dimension of a graph. *Discrete Math.* 23 (1978), no. 1, 49-55. (Charles M. Grinstead) **80:05091** 05C55
- (with Nešetřil, Jaroslav) On a probabilistic graph-theoretical method. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 417-421. (J. Spencer) **80:05158** 05C65
- (with Nešetřil, Jaroslav) Ramsey theorem for classes of hypergraphs with forbidden complete subhypergraphs. *Czechoslovak Math. J.* 29(104) (1979), no. 2, 202-218. (R. L. Graham) **80:05094** 05C65

- Rodman, Leiba (with Gohberg, Israel; Lancaster, Peter) Representations and divisibility of operator polynomials. *Canad. J. Math.* 30 (1978), no. 5, 1045-1069. (John P. Daughtry) 80a:47024 47A60
- (with Gohberg, Israel; Lerer, L.) On canonical factorization of operator polynomials, spectral divisors and Toeplitz matrices. *Integral Equations Operator Theory* 1 (1978), no. 2, 176-214. (E. R. Cekanov'skii) 80d:47042 47B35 (47A68)
- On existence of common multiples of monic operator polynomials. *Integral Equations Operator Theory* 1 (1978), no. 3, 400-414. (E. R. Cekanov'skii) 80a:47007 47A10 (47A60)
- (with Gohberg, Israel) On spectral analysis of non-monic matrix and operator polynomials. I. Reduction to monic polynomials. *Israel J. Math.* 30 (1978), no. 1-2, 133-151. (John P. Daughtry) 80a:15010 15A18 (15A24)
- On analytic equivalence of operator polynomials. *Integral Equations Operator Theory* 2 (1979), no. 1, 48-61. (P. A. Kůčment) 80g:47018 47A55
- (with Gohberg, Israel; Lancaster, Peter) On selfadjoint matrix polynomials. *Integral Equations Operator Theory* 2 (1979), no. 3, 434-439. (Andrzej W. Olbrot) 80k:15018 15A24 (15A45, 47A70)
- (with Gohberg, Israel) On the spectral structure of monic matrix polynomials and the extension problem. *Linear Algebra Appl.* 24 (1979), 157-172. (John P. Daughtry) 80d:15011 15A21
- Rodriguez, Garry H. (with Madsen, Niel K.; Karush, Jack I.) Odd-even reduction for banded linear equations. *J. Assoc. Comput. Mach.* 26 (1979), no. 1, 72-81. (Robert Todd Gregory) 80b:65040 65F05
- Rodriguez, A. J. On the accuracy of quadrature Laplace transform inversion and the solution of state space equations. *J. Inst. Math. Appl.* 22 (1978), no. 3, 283-296. (C. Dagnino) 80c:65042 65D32
- Rodriguez, Hildebrando M. (with Vanderbauwhede, André L.) Symmetric perturbations of nonlinear equations: symmetry of small solutions. *Nonlinear Anal.* 2 (1978), no. 1, 27-46. (J. K. Hale) 80a:47087 47H15 (34C25, 35B32)
- Rodriguez, F. Accepteurs vérificateurs. *Langages algébriques (Proc. First Meeting, Information Theory, Bonascre, 1973)*, pp. 247-263. *École Nat. Sup. Tech. Avancées, Paris*, 1978. (S. Ginsburg) 80b:68096 68F05
- Note sur la non-principauté de certaines FAL. (English summary) *RAIRO Inform. Théor.* 12 (1978), no. 3, 181-184. iv. (S. Ginsburg) 80a:68091 68F05
- Familles de langages fermées par crochet ouvert. (English summary) *Theoret. Comput. Sci.* 9 (1979), no. 3, 385-398. (J.-M. Autebert) 80m:68070 68F05
- Rodriguez, Germán (with Hochberg, Yosef) Acknowledgment of priority. Corrigendum to: "Intermediate simultaneous inference procedures" (*J. Amer. Statist. Assoc.* 72 (1977), no. 357, 220-225). *J. Amer. Statist. Assoc.* 73 (1978), no. 364, 900. (Editors) 80c:62090 62J15
- Rodriguez, Lucio L. Immersions with nonzero relative nullity into spaces of constant curvature. (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. II (Portuguese), pp. 477-487. *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Carlos E. Harle) 80k:53087 53C42
- Immersions of nonzero relative nullity in manifolds of constant positive curvature. *Arch. Math. (Basel)* 32 (1979), no. 2, 181-184. (Paul E. Ehrlich) 80f:53035 53C42
- Rodriguez, R. (with Combe, Ph.; Sirugue-Collin, M.; Sirugue, M.) A uniqueness theorem for anticommution relations and commutation relations of quantum spin systems. *Comm. Math. Phys.* 63 (1978), no. 3, 219-235. (Derek W. Robinson) 80f:82047 82A67 (20C35, 22D12)
- (with Combe, Ph.) On the cylindrical approximation of the Feynman path integral. *Rep. Math. Phys.* 13 (1978), no. 2, 279-294. (M. J. Goovaerts) 80b:81037 81C35 (58D20, 58D30)
- (with Combe, Ph.; Sirugue-Collin, M.; Sirugue, M.) On the quantization of spin systems and Fermi systems. *J. Math. Phys.* 20 (1979), no. 4, 611-616. (Derek W. Robinson) 80f:81026 81C10
- Rodriguez, René S. (with O'Hara, Patrick J.) Polynomials with zeros uniformly distributed on the unit circle. *Amer. Math. Monthly* 85 (1978), no. 10, 814-817. (M. Mendes France) 80b:10072 10K05 (10L10)
- Rodriguez Fernández, C. General theory of varieties. (Spanish) *Algebra*, 21 (Spanish), pp. 55-104. *Univ. Santiago de Compostela, Santiago de Compostela*, 1978. (M. L. Laplaza) 80b:18008 18C99 (08A40)
- Rodriguez González, N. (with Gómez Pardo, J. L.)  $c$ -preradicals and pre-interiors of a category. (Spanish) *Collect. Math.* 29 (1978), no. 1, 63-84. (J. R. Isbell) 80j:18005 18A99
- Lopez Rodriguez-Moldes, M.<sup>a</sup> E. See Lopez Rodriguez-Moldes, M.<sup>a</sup> E.
- Rodriguez, Gaetano Congruences on a (+)-inversive semiring. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 1, 330-347. (Author's summary) 80e:16025 16A78
- Rodway, Paul (with Cowling, Michael) Restrictions of certain function spaces to closed subgroups of locally compact groups. *Pacific J. Math.* 90 (1979), no. 1, 91-104. (C. Chou) 80i:43008 43A30 (43A60)
- Roebuck, Pamela A. (with Barnett, Stephen) A survey of Toeplitz and related matrices. *Internat. J. Systems Sci.* 9 (1978), no. 8, 921-934. (Elwyn L. Jones) 80a:15005 15A09 (15A57)
- Roetherath, M. Th. (with Dickmeis, W.) On stable limit laws with orders and their connection to numerical analysis. *Numer. Funct. Anal. Optim.* 1 (1979), no. 4, 383-397. (J. Peetre) 80i:65060 65J05 (41A65, 60F05)
- Roekaerts, D. (with Langouche, F.; Tirapegui, E.) Functional integral methods for random fields. *Stochastic processes in nonequilibrium systems (Lectures, Fifth Stiges Internat. School Statist. Mech., Stiges, 1978)*, pp. 316-329. *Lecture Notes in Phys.*, 84, Springer, Berlin, 1978. (G. Papanicolaou) 80g:82011 82A05 (60H10, 81C30)
- (with Langouche, F.; Tirapegui, E.) Higher-order corrections through functional integrals to the WKB expansion in curved spaces. *Lett. Nuovo Cimento* (2) 25 (1979), no. 10, 307-313. (M. J. Goovaerts) 80i:81021 81C12 (58D30, 58G25)
- (with Langouche, F.; Tirapegui, E.) Functional integral methods for stochastic fields. *Phys. A* 95 (1979), no. 2, 252-274. (Authors' summary) 80b:82006 82A05
- (with Langouche, F.; Tirapegui, E.) Discretization problems of functional integrals in phase space. *Phys. Rev. D* (3) 20 (1979), no. 2, 419-432. (L. L. Lee) 80k:81033 81C30 (28C20)
- (with Langouche, F.; Tirapegui, E.) Perturbation expansions through functional integrals for nonlinear systems. *Phys. Rev. D* (3) 20 (1979), no. 2, 433-438. (M. J. Goovaerts) 80g:81021 81C35
- (with Langouche, F.; Tirapegui, E.) On the perturbation expansion for the Fokker-Planck dynamics. *Progr. Theoret. Phys.* 61 (1979), no. 6, 1617-1628. (Koichiro Matsuno) 80h:82006 82A05
- (with Langouche, F.; Tirapegui, E.) Short derivation of Feynman Lagrangian for general diffusion processes. *J. Phys. A* 13 (1980), no. 2, 449-452. (Authors' summary) 80k:82015 82A05 (81C35)
- Roelcke, W. (with Asam, L.; Dierolf, Susanne; Dierolf, Peter) Discontinuous translation-invariant linear forms on  $\mathcal{K}(G)$ . *Math. Ann.* 239 (1979), no. 3, 219-222. (Gordon Woodward) 80c:43001 43A07
- Roels, J. See Henrard, Jacques; et al. 80a:70015
- Roemer, John E. Divide and conquer: microfoundations of a Marxian theory of wage discrimination. *Bell J. Econom.* 10 (1979), no. 2, 695-705. (Author's summary) 80h:92021 90A14 (90A05, 90A30)
- Roesler, Friedrich Über die Verteilung der Primzahlen in Folgen der Form  $\{f(n+x)\}$ . *Acta Arith.* 35 (1979), no. 2, 117-174. (W. Schwarz) 80i:10059 10H15 (10K20)
- Roesner, K. G. Numerical calculation of hydrodynamic stability problems with time-dependent boundary conditions. *Sixth International Conference on Numerical Methods in Fluid Dynamics (Proc. Conf., Tbilisi, 1978)*, pp. 1-25. *Lecture Notes in Phys.*, 90, Springer, Berlin, 1979. (From the introduction) 80h:76046 76U05
- de Roever, J. W. ★Complex Fourier transformation and analytic functionals with unbounded carriers. With a preface by E. M. de Jager. *Mathematical Centre Tracts*, 89, Mathematisch Centrum, Amsterdam, 1978. xvii + 200 pp. *ISBN 90-6196-155-6* (Carlos A. Berenstein) 80h:46058 46F15 (32A15, 32A40, 32D15, 42B10, 81E99)
- de Roever, Willem P. On backtracking and greatest fixpoints. *Formal description of programming concepts (Proc. IFIP Working Conf., St. Andrews, N.B., 1977)*, pp. 621-639. *North-Holland, Amsterdam*, 1978. (Author's summary) 80c:68020 68B05 (68C05)
- (with Francez, Nissim; Hoare, C. A. R.) Semantics of nondeterminism, concurrency and communication. *Mathematical foundations of computer science*, 1978 (*Proc. Seventh Sympos., Zakopane, 1978*), pp. 191-200. *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (David B. Benson) 80c:68028 68B10
- Rofman, Edmundo (with Ménaldi, José-Luis) Méthodes constructives en contrôle optimal. (English summary) *Math. Notae* 26 (1977/78), 81-98. (E. O. Roxin) 80j:93053 93C10
- (with Gonzalez, Roberto L.) Problems of "bang-bang" control with minimal time intervals between exchanges. (Spanish) *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis (Rome, 1978)*, pp. 549-555. *Pitagora, Bologna*, 1979. (E. O. Roxin) 80j:49004 49A10 (93B99)
- Rogachev, V. M. The stability of periodic oscillations of nonlinear systems. (Russian) *Prikl. Meh.* 14 (1978), no. 6, 113-116. (From the summary) 80c:70029 70K99 (34C25)
- Rogalski, Marc Que sont les facteurs directs des espaces de Banach classiques? I. Les espaces de Banach autres que les  $L^p(\mu)$ . *Séminaire Choquet, 17e année (1977/78)*, *Initiation à l'analyse*, Fasc. 1, Exp. No. 13, 40 pp., Secrétariat Math., Paris, 1978. (Y. Benyamini) 80i:46016 46B20 (46E30)
- Rogava, D. L. An application of Chebyshev polynomials in iteration processes. (Russian. Georgian and English summaries) *Sakharth. SSR Mecn. Akad. Moambe* 90 (1978), no. 2, 285-288. (A. Lupaş) 80b:65077 65J10
- Roger, A. (with Maystre, D.) The perfectly conducting grating from the point of view of inverse diffraction. *Optica Acta* 26 (1979), no. 4, 447-460. (Authors' summary) 80d:78031 78A45 (65R20)
- Rogers, C. (with Clements, D. L.) Bergman's integral operator method in inhomogeneous elasticity. *Quart. Appl. Math.* 36 (1978/79), no. 3, 315-321. (From the introduction) 80c:73017 73C40 (35C15)
- (with Rasmussen, H.) Solutions of free surface problems using a Rayleigh-Ritz procedure. *Information linkage between applied mathematics and industry (Proc. First Annual Workshop, Naval Postgraduate School, Monterey, Calif., 1978)*, pp. 357-364. *Academic Press, New York*, 1979. (From the introduction) 80i:65144 65P05 (76B05)
- Rogers, C. A. The topological classification of open co-countable subsets of  $S^2$ . *J. London Math. Soc.* (2) 18 (1978), no. 3, 546-552. (Patrick H. Doyle) 80d:57006 57N05
- Rogers, D. G. (with Shapiro, Louis W.) Some correspondences involving the Schröder numbers and relations. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 267-274. *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (M. S. Cheema) 80c:05009 05A15
- (with Temperley, H. N. V.) A note on Baxter's generalization of the Temperley-Lieb operators. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 324-328. *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (Louis Shapiro) 80c:05022 05A15 (82A99)
- Ascending sequences in permutations. *Discrete Math.* 22 (1978), no. 1, 35-40. (E. Keith Lloyd) 80a:05020 05A19 (05A05)
- Pascal triangles, Catalan numbers and renewal arrays. *Discrete Math.* 22 (1978), no. 3, 301-310. (Louis Shapiro) 80g:05008 05A15
- (with Koh, K. M.; Tan, T.) Two theorems on graceful trees. *Discrete Math.* 25 (1979), no. 2, 141-148. (Gary S. Bloom) 80c:05050 05C05
- Rogers, Gerald S. (with Young, Dennis L.) On testing a multivariate linear hypothesis when the covariance matrix and its inverse have the same pattern. *J. Amer. Statist. Assoc.* 73 (1978), no. 361, 203-207. (C. G. Khatri) 80a:62075 62H15 (62H10)
- Rogers, J. W., Jr. (with Ford, Jo) Refinable maps. *Colloq. Math.* 39 (1978), no. 2, 263-269. (A. Lelek) 80d:54009 54C10
- Rogers, James T., Jr. Almost everything you wanted to know about homogeneous, circle-like continua. *Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978)*, 1. *Topology Proc.* 3 (1978), no. 1, 169-174 (1979). (John G. Hocking) 80k:54065 54F20
- Weakly confluent mappings and finitely-generated cohomology. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 436-438. (T. Maćkowiak) 80m:54048 54F20 (54B20)
- Rogers, Joel C. (with Berger, Alan E.; Ciment, Melvyn) The alternating phase truncation method for numerical solution of a Stefan problem. *SIAM J. Numer. Anal.* 16 (1979), no. 4, 563-587. (Authors' summary) 80f:65136 65P05 (80A20)
- Rogers, L. C. G. The probability that two samples in the plane will have disjoint convex



- hulls. *J. Appl. Probab.* 15 (1978), no. 4, 790-802. (Franz Streit) **80a:60013** 60D05
- Rogers, T. G. (with Spencer, A. J. M.; Parker, D. F.; Berry, D. S.; England, A. H.; Faulkner, T. R.; Green, W. J.; Holden, J. T.; Middleton, D.) ★Engineering mathematics. Vol. 2. *Van Nostrand Reinhold Co. Ltd., New York-Toronto, Ont.-London*, 1977. 400 pp. ISBN 0-442-30206-1 (Vadim Komkov) **80g:00003** 00A06
- Rogge, Lothar Eine Konvexitätsungleichung für Integrale in Fréchet-Räumen. *J. Reine Angew. Math.* 301 (1978), 205-211. (S. D. Chatterji) **80a:28004** 28B05
- (with Landers, Dieter) On projections and monotony in  $L_p$ -spaces. *Manuscripta Math.* 26 (1978/79), no. 4, 363-369. (T. Andô) **80b:46042** 46E30
- (with Landers, Dieter) Connection between the different  $E_\alpha$  predictions with applications. *Z. Wahrsch. Verw. Gebiete* 45 (1978), no. 2, 169-173. (M. M. Rao) **80c:62002** 62B05 (60G25)
- (with Landers, Dieter) A functional relationship between the different  $r$ -means for indicator functions. *Ann. Probab.* 7 (1979), no. 1, 166-169. (T. Andô) **80c:46052** 46E30 (62B05)
- (with Landers, Dieter) On linearity of  $s$ -predictors. *Ann. Probab.* 7 (1979), no. 5, 887-892. (M. M. Rao) **80b:60074** 60G99 (62M99)
- (with Landers, Dieter) Martingale representation in uniformly convex spaces. *Proc. Amer. Math. Soc.* 75 (1979), no. 1, 108-110. (M. M. Rao) **80c:60065** 60G48
- (with Landers, Dieter) Characterization of  $p$ -predictors. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 307-309. (M. M. Rao) **80f:47063** 47H99 (60A10)
- Roggenkamp, Klaus W. Algebras of global dimension two. *Arch. Math. (Basel)* 30 (1978), no. 4, 385-390. (Z. Papp) **80c:16023** 16A60
- (with Ringel, Claus Michael) Indecomposable representations of orders and Dynkin diagrams. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 2, 91-94. (Sheila Brenner) **80c:16019** 16A64
- Erratum: "The construction of almost split sequences for integral group rings and orders" (Comm. Algebra 5 (1977), no. 13, 1363-1373). *Comm. Algebra* 6 (1978), no. 17, 1851. (Editors) **80b:16021** 16A62 (16A18, 16A26)
- Orders of global dimension two. *Math. Z.* 160 (1978), no. 1, 63-67. (C. M. Ringel) **80c:16012** 16A18
- (with Reiner, Irving) ★Integral representations. *Lecture Notes in Mathematics*, 744. Springer-Verlag, Berlin-New York, 1979. vi+275 pp. ISBN 3-540-09546-2 (Ken-ichi Tahara) **80c:20010** 20C10
- Rogli, Gino Some observations on the convergence of hyper-Gaussian quadrature formulas. (Italian. French summary) *Pubbl. Ist. Mat. Appl. Fac. Ingr. Univ. Stud. Roma Quaderno No. 12* (1978), 15-20. (M. R. Occorsio) **80c:65062** 65D32
- Rogov, V.-B. K. (with Ol'shanekii, M. A.) Bound states in completely integrable systems with two types of particles. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 29 (1978), no. 2, 169-177. (Mark Adler) **80c:58029** 58F07 (34C05, 58F05, 81C05)
- Rogovoi, M. R. Conjugate and biconjugate directions of the nonholonomic manifold  $V_n^{n-1}$  in  $E_n$ . (Russian) *Ukrain. Geom. Sb. No. 21* (1978), 120-125, 4. (L. Tamásy) **80b:53017** 53B15
- Rogozin, B. A. (with Sgibnev, M. S.) Maximal ideals in Banach algebras of measures on the line. (Russian) *Mat. Zametki* 24 (1978), no. 3, 315-318, 445. (K. A. Ross) **80a:43005** 43A10
- (with Sgibnev, M. S.) Banach algebras of absolutely continuous measures on the line. (Russian) *Sibirsk. Mat. Zh.* 20 (1979), no. 1, 119-127, 205. (Nicholas Young) **80f:43007** 43A10 (26A12, 60K05)
- Rogozin, V. S. (with Rasmblekov, S. N.) The Noether theory for integral equations of the third kind. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 9, 1678-1686, 1725. (G. S. Litvinčuk) **80c:45002** 45B05
- (with Rasmblekov, S. N.) Noether theory for integral equations of the third kind in spaces of continuous and generalized functions. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 1, 61-69. (S. G. Samko) **80c:45011** 45G10 (47A53)
- monakov-Rogozkin, A. See Monakov-Rogozkin, A.
- Rogula, Dominik (with Szyren, Małgorzata) Fundamental one-dimensional solutions in nonlocal elasticity. *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 26 (1978), no. 10, 417-423. (Dominic G. B. Edelen) **80b:73009** 73B99
- Geometrical and dynamical nonlocality. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Sios.)* 31 (1979), no. 1, 65-75. (François Sidoroff) **80f:73004** 73B99 (47H99)
- Rogulja, D. (with Zorski, G.; Rymaž, Č.) Nonlocal continuum models of discrete systems. (Russian. English summary) *Adv. in Mech.* 2 (1979), no. 1, 83-108. (W. Kecs) **80f:70001** 70D05 (47H99, 73B20)
- Rogulski, Jan Partial differential equations and dynamical systems. *Demonstratio Math.* 11 (1978), no. 2, 527-543. (J. E. Marsden) **80a:58029** 58F99 (35R99)
- Roguski, Stanisław (with Zarach, Andrzej) Inner models, ordinal definability and the axiom of power set. *Logic Colloquium '77 (Proc. Conf., Wrocław, 1977)*, pp. 211-220. *Studies in Logic and Foundations of Math.*, 96, North-Holland, Amsterdam, 1978. (John W. Dawson, Jr.) **80b:03079** 03E45
- Rohatgi, V. K. (with Gupta, A. K.) Estimation of the common positive mean of a multivariate population. *J. Statist. Comput. Simulation* 8 (1978/79), no. 3-4, 253-265. (N. Gini) **80c:62074** 62H12
- (with Laha, R. G.) ★Probability theory. *Wiley Series in Probability and Mathematical Statistics*. John Wiley & Sons, New York-Chichester-Brisbane, 1979. xiii+557 pp. ISBN 0-471-03262-X (V. M. Kruglov) **80a:60001** 60-01
- Rohde, Charles A. (with Cumberland, W. G.) A multivariate model for growth of populations. *Theoret. Population Biol.* 11 (1977), no. 1, 127-139. (Charles J. Mode) **80c:92042** 92A15
- Rohde, S. M. (with McAllister, M. N.; McAllister, G. T.) Constructive solution of the 1918 problem of Lord Rayleigh. *Proc. Amer. Math. Soc.* 76 (1979), no. 1, 60-66. (Authors' summary) **80c:49002** 49A10 (76A99)
- Rohlenko, A. V. (with Kolichev, V. I.) A new sufficient condition for the existence of phase transition in a classical system with long-range interaction. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 1, 90-93. (From the text) **80c:82032** 82A25
- Rohlf, J. Aritmetisch definierte Gruppen mit Galoisoperation. *Invent. Math.* 48 (1978), no. 2, 185-205. (T. Ono) **80j:20043** 20G30 (10D99, 12A60, 22E40)
- Rohrer, Hermann G. Mathematical learning theory and its relevance for the machine-building statistician. *Proceedings of the Tenth Brazilian Colloquium (Poços de*
- Caldas, 1975)*, Vol. II (Portuguese), pp. 341-354. *Cons. Nac. Desenvolvimento Ci. Tec., Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Kenneth Wickwire) **80c:68215** 68C05 (68D27)
- Learning processes. (Portuguese. English summary) *Proceedings of the 3rd National Symposium on Probability and Statistics (Inst. Mat. Estatist., Univ. São Paulo, São Paulo, 1978)* (Portuguese), pp. 153-159. *Univ. São Paulo, São Paulo*, 1979. (Author's summary) **80m:60105** 60K99
- Röhr, Helmut On the zeros of polynomials over arbitrary finite-dimensional algebras. *Manuscripta Math.* 25 (1978), no. 4, 359-390. (L. Roberts) **80g:16022** 16A46 (14A99, 17A99, 17D99)
- Finite-dimensional algebras without nilpotents over algebraically closed fields. *Arch. Math. (Basel)* 32 (1979), no. 1, 10-12. (Peter Seibt) **80c:17004** 17A99 (34C20)
- Rohrich, David (with Kobitz, Neal) Simple factors in the Jacobian of a Fermat curve. *Canad. J. Math.* 30 (1978), no. 6, 1183-1205. (M. Fried) **80d:14022** 14K10 (14G25, 14H25)
- Rohrich, F. (with Andreo, R. H.) Longitudinal vibrations of the relativistic string. *Phys. Rev. D* (3) 18 (1978), no. 8, 2967-2981. (Authors' summary) **80a:81123** 81M05 (58E30)
- Relativistic Hamiltonian dynamics. I. Classical mechanics. *Ann. Physics* 117 (1979), no. 2, 292-322. (From the summary) **80c:83029** 83C99 (22E70, 70H05)
- Rolder, Bernhard (with Buchberger, Bruno) Input/output codings and transition functions in effective systems. *Internat. J. Gen. Systems* 4 (1977/78), no. 3, 201-209. (George Tourlakis) **80d:68063** 68D05 (68C40)
- Roitberg, Ja. A. (with Kovalenko, I. P.; Šefel', Z. G.) The Green function of general inhomogeneous boundary value problems for systems elliptic in the sense of Douglas and Nirenberg. (Russian) *Ukrain. Mat. Zh.* 30 (1978), no. 5, 664-668, 717. (Authors' summary) **80c:35033** 35J55
- (with Šefel', Z. G.) Optimal control of systems described by general elliptic problems. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 6, 1075-1087, 1150. (L. von Wolfersdorf) **80j:49008** 49A22 (35J40, 49B22)
- The existence of limit values of generalized solutions of elliptic equations on the boundary of the domain. (Russian) *Sibirsk. Mat. Zh.* 20 (1979), no. 2, 386-396, 460. (G. Wildenhain) **80c:35062** 35J67 (35D99)
- Roitberg, Joseph (with Hilton, Peter; Mislin, Guido; Steiner, Richard) On free maps and free homotopies into nilpotent spaces. *Algebraic topology (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 202-218. *Lecture Notes in Math.*, 673, Springer, Berlin, 1978. (Albert O. Shar) **80c:55007** 55P60
- Free homotopy theory and localization. *Geometric applications of homotopy theory (Proc. Conf., Evanston, Ill., 1977)*, pp. 455-459. *Lecture Notes in Math.*, 657, Springer, Berlin, 1978. (Jerrold W. Grossman) **80g:55024** 55P60 (20F18)
- (with Hilton, Peter; Mislin, Guido) On co-H-spaces. *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. II (Portuguese), pp. 729-751. *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Albert O. Shar) **80c:55007** 55P45
- (with Hilton, Peter; Mislin, Guido) On co-H-spaces. *Comment. Math. Helv.* 53 (1978), no. 1, 1-14. (Richard Holzager) **80c:55014** 55P60
- Roitberg, M. A. Automata circuits and the mappings realized by them. *Axiomat. i Telemek. 1978*, no. 4, 151-160. (Russian. English summary; translated as *Automat. Remote Control* 39 (1978), no. 4, part 2, 592-601. (Aleksander Albicki) **80a:68061** 68D30 (94C15, 68D05)
- Roitberg, E. Ja. (with Selunskii, V. M.) Observability of nonlinear discrete systems. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 5, 68-73. (From the summary) **80b:93036** 93B07
- Roitman, Judy A reformulation of  $S$  and  $L$ . *Proc. Amer. Math. Soc.* 69 (1978), no. 2, 344-348. (V. V. Miškin) **80j:54016** 54D20 (54A25, 54G15, 54G20)
- Paracompact box products in forcing extensions. *Fund. Math.* 102 (1979), no. 3, 219-228. (S. A. Peregrudov) **80j:03078** 03E35 (54B10, 54D18)
- More paracompact box products. *Proc. Amer. Math. Soc.* 74 (1979), no. 1, 171-176. (C. M. Pareek) **80i:54006** 54B10 (03E35, 54D20)
- Roitman, Moshe On projective modules over polynomial rings. *J. Algebra* 58 (1979), no. 1, 51-63. (Daniel Lazard) **80g:13004** 13C10
- Roitz, E. N. (with Schein, Boris M.) Radicals of semigroups. *Semigroup Forum* 16 (1978), no. 3, 299-344. (Editors) **80c:20089** 20M11
- Roizen, S. I. (with Baraško, A. S.; Lipskaja, V. A.) ★Исследование по теории сложности вычислений и формальным языкам. (Russian) [Studies in the theory of computational complexity and formal languages] "Naukova Dumka", Kiev, 1978. 173 pp. (V. N. Agafonov) **80d:68001** 68-02 (68C25, 68Dxx)
- Rok, V. E. (with Loklin, A. A.) Self-similar solutions of wave equations with time delay. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 6(204), 221-222. (R. S. Levitin) **80b:35124** 35R10 (35C10)
- Roldugin, V. I. (with Bakanov, S. P.) Boundary value problems of the kinetic theory of gases and irreversible thermodynamics. *Prikl. Mat. Meh.* 41 (1977), no. 4, 651-659. (Russian; translated as *J. Appl. Math. Mech.* 41 (1977), no. 4, 665-673 (1978). (Authors' summary) **80a:82028** 82A40 (65R20)
- Roleff, Klaus A stable multiple exchange algorithm for linear SIP. *Semi-infinite programming (Proc. Workshop, Bad Honnef, 1978)*, pp. 83-96. *Lecture Notes in Control and Information Sci.*, 15, Springer, Berlin, 1979. (From the text) **80m:90066** 90C05
- przeworska-Rolewicz, Danuta See Przeworska-Rolewicz, Danuta
- Rolewicz, Stefan On operator theory and control theory. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics (Leipzig, 1977)*, pp. 114-118. *Teubner, Leipzig*, 1978. (Christopher I. Byrnes) **80g:93027** 93B05 (47A55, 93C99)
- On convex sets containing only points of support. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 1 (1978), 279-281. (A. J. Lazar) **80c:46029** 46B20
- On paracompact multifunctions. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section I, pp. 539-546. *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (Szymon Dolecki) **80c:49025** 49B27
- (with Dolecki, Szymon) Metric characterizations of upper semicontinuity. *J. Math. Anal. Appl.* 69 (1979), no. 1, 146-152. (M. Ali Khan) **80f:49010** 49A50 (54C08)

- On Pontryagin maximum principle for systems with non-one-point target sets and systems with additional constraints. (Russian and French summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 1, 97-100. (Author's summary) **80j:49030** 49B99 (90C48, 93C35)
- (with Dolecki, Szymon) Exact penalties for local minima. *SIAM J. Control Optim.* 17 (1979), no. 5, 596-606. (L. von Wolfersdorf) **80e:49022** 49D30 (90C30)
- Rollero, Aldo** Elementary considerations on plane algebraic curves. (Italian. English and French summaries) *Atti Accad. Ligure Sci. Lett.* 34 (1977), 134-148 (1978). (D. Gallarati) **80e:14027** 14N10 (14-01)
- On certain projective invariants of  $n$  collinear points. (Italian. English and French summaries) *Atti Accad. Ligure Sci. Lett.* 35 (1978), 208-211 (1979). (From the text) **80j:51004** 51A20
- Rollik, Hans-Anton** (with Antelmann, Horst; Budach, Lothar) On universal traps. (Russian and German summaries) *Elektron. Informatsionverarb. Kybernet.* 15 (1979), no. 3, 123-131. (Masaharu Mizumoto) **80i:68042** 68D27
- Robov, B. N.** (with Ivin, V. A.; Kuzovkov, V. N.) ★Статистика и кинетика фазовых переходов в твёрдом теле. (Russian) [Statistics and kinetics of phase transition in a solid] "Zinatne", Riga, 1979. 180 pp. (loose errata). (From the introduction) **80j:82011** 82A25 (45C05)
- Rolph, R. N.** (with Rayward-Smith, V. J.) Finding linear and circular sequences of minimal and maximal total adjacency. *Inform. Process. Lett.* 10 (1980), no. 1, 9-13. (From the introduction) **80j:68015** 68B15 (68C25)
- Rolski, T.** (with König, D.; Schmidt, V.; Stoyan, Dietrich) Stochastic processes with imbedded marked point processes (PMP) and their application in queueing. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 1, 125-141. (N. P. Leon'teva) **80e:60068** 60G55 (60K25)
- Roman, Steven** A problem on multi-colorings of graphs. *Discrete Math.* 22 (1978), no. 1, 41-47. (D. de Werra) **80a:05097** 05C15
- Romančuk, V. S.** The numerical solution of some integral equations of the first kind. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* 1978, no. 3, 26-30, 87. (V. B. Dybin) **80e:65158** 65R20 (73C99)
- Romanenko, A. G.** (with Popov, I. I.; Sumarokov, L. N.) Set-theoretic modeling of information systems. (Russian) *Voprosy Informacion. Teorii i Praktiki* No. 33-34 (1978), 16-63. (Vladimir Steinkov) **80g:68027** 68B15 (68C01)
- Romani, Francesco** On the fast synchronization of tree connected networks. *Inform. Sci.* 12 (1977), no. 3, 229-244. (Author's summary) **80g:94104** 94C15 (68E10)
- (with Bini, Dario; Capovani, Milvio; Lotti, Grazia)  $O(n^{2.799})$  complexity for  $n \times n$  approximate matrix multiplication. *Inform. Process. Lett.* 8 (1979), no. 5, 234-235. (From the introduction) **80h:68024** 68C05 (68C25)
- Romanin-Jacur, G.** (with Bossi, A.; Cobelli, C.; Colussi, L.) A method of writing symbolically the transfer matrix of a compartmental model. *Math. Biosci.* 43 (1979), no. 3, 187-198. (Robert J. Mulholland) **80g:92008** 92A09 (93B30)
- Romanko, V. K.** Solvability of boundary value problems for higher order operator-differential equations. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 6, 1081-1092, 1150-1151. (R. Vyborny) **80c:34066** 34G10 (47A50)
- On the theory of boundary value problems for equations with discontinuous coefficients. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 4, 761-764. (P. Talpalaru) **80d:34086** 34G10
- Three-point boundary value problems for equations with discontinuous coefficients. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 3, 479-491, 573. (M. A. Atahodjaev) **80i:35118** 35R05
- Operational calculus and the solvability of boundary value problems. (Russian) *Mat. Zametki* 26 (1979), no. 3, 399-409, 493. (L. Berg) **80j:34076** 34G10 (44A40, 47A50)
- Roman'kov, V. A.** Universal theory of nilpotent groups. (Russian) *Mat. Zametki* 25 (1979), no. 4, 487-495, 635. (O. V. Belegradskii) **80j:03058** 03D35 (03C60, 12L05, 20F10, 20F18)
- Equations in free metabelian groups. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 3, 671-673, 694. (V. N. Remeslennikov) **80k:20040** 20F10 (03D40)
- Romano, Antonio** Proof that the formulations of the electrodynamics of moving bodies are equivalent. *Arch. Rational Mech. Anal.* 68 (1978), no. 4, 283-298. (Tuan W. Chen) **80i:78064** 78A25 (53A55)
- Romano, Manfredi** (with Esposito, Anna) Error estimates for eigenvector approximation in the theory of elastic vibrations. (Italian summary) *Rend. Mat.* (6) 11 (1978), no. 1, 39-56. (Jacques Lemordant) **80e:49036** 49G10 (65P05, 73D35)
- Romanov, A. V.** Convergence of iterations of the Martinelli-Bochner operator, and the Cauchy-Riemann equation. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 4, 780-783. (I. P. Ramadanov) **80i:32012** 32A25
- Spectral analysis of the Martinelli-Bochner operator for the ball in  $C^n$  and its applications. (Russian) *Funktsional. Anal. i Prilozhen.* 12 (1978), no. 3, 86-87. (I. P. Ramadanov) **80i:32013** 32A25 (32A27)
- Romanov, M. A.** Extremal algorithms of pattern recognition using the method of potential functions. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 3, 785-787, 800. (Author's summary) **80e:68225** 68G10
- Romanov, V. A.** Limits of quasi-invariant measures in Hilbert space. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 2, 211-214, 224. (W. A. Woyczyński) **80e:28021** 28C20 (46G99)
- (with Malkov, E. V.) Continuous translations of the Feynman measure. (Russian. French summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 1, 56-61, 88. (S. A. Čobanjan) **80g:28016** 28C20
- (with Mizgailov, V. N.; Muhiin, V. V.) Optimal statistical regularization of operator equations with restriction on the norm of the solution. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 1036-1040, 1084. (Authors' summary) **80i:65064** 65J10 (47A50)
- Romanov, V. G.** Problèmes inverses pour les systèmes hyperboliques. *Étude numérique des grands systèmes* (Proc. Sympos., Novosibirsk, 1976), pp. 100-109. *Méthodes Math. de l'Informatique*, T. Dunod, Paris, 1978. (Alan Jeffrey) **80e:35099** 35R30 (35L40)
- Inverse problems for hyperbolic systems. (Russian) *Numerical methods in mathematical physics, geophysics and optimal control* (Sympos., Novosibirsk, 1976) (Russian), pp. 75-83, 233. "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (Author's summary) **80i:35180** 35R30 (35L40)
- Inverse problems for hyperbolic equations and energy inequalities. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 3, 541-544. (Alexander Doktor) **80i:35144** 35R30 (35L20)
- A formulation of an inverse problem for first-order symmetric hyperbolic systems. (Russian) *Mat. Zametki* 24 (1978), no. 2, 231-236, 302. (Author's summary) **80e:35108** 35R30 (35L40)
- The uniqueness of the solution of an inverse problem for first-order hyperbolic systems. (Russian) *Mat. Zametki* 24 (1978), no. 3, 359-365, 446. (V. B. Dybin) **80i:35181** 35R30 (35L40)
- Romanov, V. N.** (with Frolov, I. V.; Švarc, A. S.) Spherically symmetric solitons. (Russian. English summary) *Teoret. Mat. Fiz.* 37 (1978), no. 3, 305-318. (Authors' summary) **80b:81091** 81E99 (58G10)
- Romanova, S. E.** Solution of a mixed boundary value problem for the Laplace difference equation on stepped domains via the Schwartz alternating method. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 3, 536-539. (I. M. Sheffer) **80g:65124** 65Q05 (39A12)
- Romanovskii, A. A.** See **Romanovskii, O. O.**
- Romanovskii, A. V.** Simple finite groups with a complemented  $F$ -subgroup. (Russian) *Finite groups (Proc. Gomel Sem., Gomel, 1975-1977)* (Russian), pp. 78-81, 175. "Nauka i Tehnika", Minsk, 1978. (M. Herzog) **80e:20020** 20D05
- Finite groups with a Frobenius subgroup. (Russian) *Mat. Sb. (N.S.)* 100(150) (1979), no. 4, 609-635, 640. (S. S. Levišenko) **80m:20022** 20D25 (20C15, 20D06)
- Romanovskii, O. O.** A method for the inversion of a high order polynomial matrix. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 6, 494-496, 572. (G. C. Barozzi) **80g:65046** 65F30 (15A09, 65F05)
- (with Val'nev, K. G.) On the theory of finding the inverse matrix. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 10 (1979), 842-845, 880. (George P. Barker) **80i:65038** 65F10
- Romanovska, Anna** On free algebras in some equational classes defined by regular equations. *Demonstratio Math.* 11 (1978), no. 4, 1131-1137 (1979). (A. Yaqub) **80h:08013** 08B20 (08A05)
- (with McKenzie, R.) Varieties of  $\omega$ -distributive bisemilattices. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 213-218. Heyn, Klagenfurt, 1979. (R. Balbes) **80h:06006** 06B20 (06A12)
- Romenskii, E. I.** The dynamical three-dimensional equations of the elasto-plastic model of H. A. Rahmatulin. (Russian) *Ž. Prikl. Meh. i Tehn. Fiz.* 1979, no. 2, 138-158, 183. (Author's summary) **80g:73033** 73E99 (35Q99)
- Romenskii, V. P.** (with Imamov, A.) Spline-collocation method for the Poisson equation in a rectangular domain. (Russian) *Vychisl. Sistemy No. 75 Metody Splain-Funktsii* (1978), 56-67, 139. (Murlu M. Gupta) **80i:65129** 65N35
- Romerio, M.** (with Wreszinski, W.) On the Lifschitz singularity and the tailing in the density of states for random lattice systems. *J. Statist. Phys.* 21 (1979), no. 2, 169-178. (Koichiro Matsuno) **80h:82008** 82A05 (60K35)
- Romero, A.** (with Chong, C. Y.) Multilayer control of large linear systems. *Proceedings of the Eleventh Annual Southeastern Symposium on System Theory* (Clemson Univ., Clemson, S. C., 1979), pp. 57-61, IEEE, New York, 1979. (Authors' summary) **80m:93009** 93A20
- Romic, Stefan** Stability conditions and design of control using Liapunov-Zubov functionals. *Control of distributed parameter systems (Proc. Second IFAC Symp., Coventry, 1977)*, pp. 163-171. IFAC, Düsseldorf, 1978. (Marshall Slemrod) **80c:93099** 93D05
- Rönnisch, Werner** (with Schulze, Reinhard) Kennwertmethoden für nichtlineare Volterraische Integralgleichungen in stetigen stochastischen Prozessen. VII. Internationale Konferenz über Nichtlineare Schwingungen (Berlin, 1977), Band I, Teil 2, pp. 245-251. Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech., 1977, 4. Akademie-Verlag, Berlin, 1977. (A. T. Bharucha-Reid) **80i:60055** 60H20 (45D05)
- Romo Santos, Concepción** Resolution of singularities of algebraic varieties using quadratic transformations. I. (Spanish) *Rev. Mat. Hisp.-Amer. (4)* 38 (1978), no. 2-3, 100-115. (José L. Vicente) **80i:14009** 14E15
- Romov, B. A.** Post algebras of type  $F_2^*$ . (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 4, 19-22. (V. V. Gorlov) **80b:03105** 03G20 (03B50)
- Roncadelli, M.** A simplified approach to the Schrödinger equation. (Italian and Russian summaries) *Nuovo Cimento A (11)* 50 (1979), no. 4, 509-514. (Author's summary) **80b:81027** 81C05
- Ronchi Della Rocca, S.** (with Dezani-Ciancaglini, M.) Reduction of storage employed to represent families of information structures. *Calcolo* 14 (1977), no. 1, 45-83. (Cristian Calude) **80b:68064** 68D20 (68B15)
- (with Coppo, M.; Dezani-Ciancaglini, M.) (Semi)-separability of finite sets of terms in Scott's  $D_{\omega}$ -models of the  $\lambda$ -calculus. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978)*, pp. 142-164. *Lecture Notes in Comput. Sci.*, 62. Springer, Berlin, 1978. (G. Berry) **80i:03018** 03B40
- (with Böhm, Corrado; Dezani-Ciancaglini, M.; Peretti, P.) A discrimination algorithm inside  $\lambda$ - $\beta$ -calculus. *Theoret. Comput. Sci.* 8 (1979), no. 3, 271-291. (Henk Barendsen) **80g:03012a** 03B40
- Ronga, Felice** Une application topologiquement stable qui ne peut pas être approchée par une application différentiablement stable. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 11, A779-A782. (From the text) **80i:58014** 58C27
- Ronkin, L. I.** The Liouville theorems for functions that are holomorphic on the set of zeros of a polynomial. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 5, 582-586, 622. (P. Agranovich) **80i:32002** 32A10
- Ronning, G.** Pseudo-Bayessche Schätzer in der Ökonometrie. *First Symposium on Operations Research (Univ. Heidelberg, Heidelberg, 1976)*, Teil 2, pp. 861-871. *Operations Research Verfahren. XXVI*, Hain, Königstein, 1977. (Hans-Peter Höschel) **80c:62119** 62P20
- Ronse, Christian** On homogeneous graphs. *J. London Math. Soc.* (2) 17 (1978), no. 3, 375-379. (J. Sheehan) **80e:05066** 05C25
- On centralizers of involutions in 2-groups. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 2, 199-204. (John L. Hayden) **80i:20009** 20D15
- Ronto, N. I.** (with Samoilenko, A. M.) ★Numerical-analytic methods of investigating periodic solutions. Translated from the Russian by Vladimir Shokurov (Vladimir



- Šokurov]. With a foreword by Yu. A. Mitropolsky [Yu. A. Mitropol'skiĭ]. "Mir", Moscow, 1979. 183 pp. (Editors) **80k:65075** 65L99 (34C25)
- Ramvieux, André (with Gazeau, J. P.; Dumont-Lepage, M.-Cl.) Gel'fand lattice polynomials and irreducible representations of  $U(n)$ . *J. Math. Phys.* **19** (1978), no. 4, 734-748. (Philip H. Butler) **80k:81027** 81C40 (20G05, 22E70)
- (with Dumont-Lepage, M.-Cl.) États liés de potentiels bisphériques et toroïdaux. (English summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* **30** (1979), no. 3, 207-221. (Authors' summary) **80k:81016** 81C05 (35J10)
- Polynômes orthogonaux dont les polynômes dérivés sont quasi orthogonaux. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 7, A433-A436. (Author's summary) **80k:33021** 33A65
- (with Moussiaux, A.) Electrostatic capacity of two unequal adhering spheres. *J. Phys. A* **12** (1979), no. 3, 423-428. (Authors' summary) **80k:78004** 78A30 (35C05)
- Ramlin, A. F. Limit theorems for sums of dependent random variables. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 3, 542-552. (Gábor J. Székely) **80k:60037** 60F05
- de Roo, M. (with Meyers, C.; Sorba, P.) On embeddings of gauge groups in Yang-Mills theory. *Nuclear Phys. B* **140** (1978), no. 3, 533-546. (James D. Fabrey) **80k:81070** 81E10 (22E70)
- (with Meyers, C.) New explicit instantons and the geometry of the parameter space. *Nuclear Phys. B* **148** (1979), no. 1-2, 61-73. (Nicholas M. J. Woodhouse) **80k:81115** 81G05 (53C80, 57T99, 81E10)
- (with Meyers, C.; Sorba, P.) Group-theoretical aspects of instantons. (Italian and Russian summaries) *Nuovo Cimento A (11)* **52** (1979), no. 4, 519-530. (Don Weingarten) **80k:81100** 81G20 (53C05)
- Roodman, Gary M. Post-infeasibility analysis in linear programming. *Management Sci.* **25** (1979), no. 9, 916-922 (1980). (Author's summary) **80m:90067** 90C05
- van Rooij, A. Convexity on  $p$ -adic Banach spaces. *Proceedings of the Conference on  $p$ -adic Analysis (Nijmegen, 1978)*, pp. 185-192. Report, 1978, Katholieke Univ., Nijmegen, 1978. (E. Beckenstein) **80k:46061** 46P05 (46B99)
- Rooney, P. G. On the ranges of certain fractional integrals. II. *Applicable Anal.* **8** (1978/79), no. 2, 175-184. (Philip Heywood) **80k:26006** 26A33 (44A15)
- On the range of the Hankel transformation. *Bull. London Math. Soc.* **11** (1979), no. 1, 45-48. (V. M. Bhise) **80k:44006** 44A15
- Ross, C. (with de Vroedt, C.) A short proof of a theorem of W. M. Kantor. *Delft Progr. Rep.* **4** (1979), no. 1, 3-4. (W. M. Kantor) **80d:05015** 05B20
- A class of regularities for rings. *J. Austral. Math. Soc. Ser. A* **27** (1979), no. 4, 437-453. (Louis Rowen) **80k:16011** 16A30
- Ross, Guy Recollement universel de noyaux. *Fonctions de plusieurs variables complexes, III (Sém. François Norguet, 1975-1977)*, pp. 22-30, *Lecture Notes in Math.*, 670, Springer, Berlin, 1978. (M. Herrera) **80k:32014** 32A25
- Formules intégrales pour les formes différentielles sur  $C^*$ . II. *Fonctions de plusieurs variables complexes, III (Sém. François Norguet, 1975-1977)*, pp. 31-52, *Lecture Notes in Math.*, 670, Springer, Berlin, 1978. (R. Michael Range) **80k:32008** 32A25 (32A27, 46F20)
- Cocycles de noyaux de Martinelli. *Fonctions de plusieurs variables complexes, III (Sém. François Norguet, 1975-1977)*, pp. 365-369, *Lecture Notes in Math.*, 670, Springer, Berlin, 1978. (Adib A. Fadlalla) **80k:32012** 32A27
- Ross, H. Consequences of convexity: a variational principle for the pressure and related results. *Rep. Math. Phys.* **14** (1978), no. 2, 147-160. (D. A. Dubin) **80k:82022a** 82A15
- On the definition of the pressure of an infinite system. *Rep. Math. Phys.* **14** (1978), no. 2, 161-170. (D. A. Dubin) **80k:82022b** 82A15
- Ross, H.-G. Die Konstruktion asymptotischer Fundamentalsysteme für lineare Differentialgleichungen mit Wendepunkten. *Comment. Math. Univ. Carolin.* **20** (1979), no. 2, 195-205. (W. Wasow) **80k:34037** 34E20
- Die asymptotische Lösung einer linearen Differentialgleichung mit dreisegmentigem charakteristischen Polygon. *Math. Nachr.* **88** (1979), 93-103. (W. Wasow) **80k:34058** 34E20
- Die asymptotische Lösung einer speziellen Randwertaufgabe. *Z. Angew. Math. Mech.* **59** (1979), no. 1, 61. (L. A. Peletier) **80k:35013** 35B25
- Roosma, Luitzen (with Duin, Robert P. W.; van Haersma Buma, Chris E.) On the evaluation of independent binary features. *IEEE Trans. Inform. Theory* **24** (1978), no. 2, 248-249. (Authors' summary) **80k:68219** 68G10
- Root, William L. Consideration regarding input and output spaces for time-varying dynamical systems. *Appl. Math. Optim.* **4** (1977/78), no. 4, 365-384. (V. Gourishankar) **80k:93012** 93A10
- Rootzén, H. (with Leadbetter, M. R.; Lindgren, Georg) Conditions for the convergence in distribution of maxima of stationary normal processes. *Stochastic Process. Appl.* **8** (1978), no. 2, 131-139. (Y. Mittal) **80k:60056** 60G15
- Roque, Jean-Louis Annulation de l'homologie et de la cohomologie des anneaux augmentés. (English summary) *Bull. Sci. Math. (2)* **102** (1978), no. 4, 387-397. (Peter Seibt) **80k:16033** 16A61 (18G40)
- Rorres, Chris A nonlinear model of population growth in which fertility is dependent on birth rate. *SIAM J. Appl. Math.* **37** (1979), no. 2, 423-432. (K. Gopalsamy) **80k:92017** 92A15
- roca hernández-Ros, José Manuel See Aroca Hernández-Ros, José Manuel
- Rosa, Alexander (with Doyen, Jean) An extended bibliography and survey of Steiner systems. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1977)*, pp. 297-361, *Congress. Numer., XX, Utilitas Math., Winnipeg, Man.*, 1978. (J. S. Joel) **80k:51009** 51E10 (00A15, 05B05)
- (with Huang, Charlotte) Decomposition of complete graphs into trees. *Ars Combin.* **5** (1978), 23-63. (Nicholas Wormald) **80k:05091** 05C99
- (with Lindner, Charles C.) Steiner quadruple systems—a survey. *Discrete Math.* **22** (1978), no. 2, 147-181. (Luc Teirlinck) **80k:05055** 05B30 (51E10)
- de la Rosa, B. On a refinement in the classification of the nil rings. *Portugal. Math.* **36** (1977), no. 1, 49-60. (E.-A. Behrens) **80d:16005** 16A21
- Primes, powers, and partitions. *Fibonacci Quart.* **16** (1978), no. 6, 518-522. (N. G. de Bruijn) **80a:10028** 10A45
- Rosa, K. (with Nedoma, Jiří; Čupal, I.) Geophysical problems and finite element and finite difference methods. *The use of finite element method and finite difference method in geophysics (Proc. Summer School, Liblice, 1977)*, pp. 9-35, *Česk. Akad. Věd, Prague*, 1978. (G. Pavia) **80k:86001** 86-06 (86A15, 86A25)
- Rosa, Vladislav On periodic solutions of the fourth-order linear systems. (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* **33** (1977), 139-150 (1978). (Author's summary) **80k:34024** 34C25 (34A30)
- Rosales, Rodolfo R. (with Cohen, Donald S.; Neu, John C.) Rotating spiral wave solutions of reaction-diffusion equations. *SIAM J. Appl. Math.* **35** (1978), no. 3, 536-547. (T. W. Barrett) **80k:80008** 80A30 (35Q20, 92A40)
- Rosca, Ioan (with Dincă, George) Une méthode variationnelle pour l'étude des opérateurs non linéaires à différentielle  $K$ -positivement définie. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 1, A25-A28. (Authors' summary) **80k:35026** 35G30 (47H15)
- Rosca, Radu (with Arca, Giuseppe) Variétés riemanniennes portant un couple de champs symplectiquement quasi-parallèles. (Italian summary) *Rend. Sem. Mat. Univ. Politec. Torino* **36** (1977/78), 139-146 (1979). (Virgil Obădeanu) **80k:53052** 53C15 (58B20)
- (with Morvan, Jean-Marie) Structures presque cosymplectiques à couple de champs quasi-récurrents réciproques. (Italian summary) *Rend. Sem. Mat. Univ. Politec. Torino* **36** (1977/78), 225-234 (1979). (J. D. Zund) **80k:53040** 53C55
- Sous-variétés anti-invariantes d'une variété parakähleriennne structurée par une connexion géodésique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 7, A539-A541. (Author's summary) **80k:53043** 53C40 (53C55)
- Variétés sasakienues structurées par une connexion conforme. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 10, A551-A554. (Author's summary) **80k:53048** 53C25
- Variétés para-cokähleriennes à champ canonique bi quasi parallèle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 14, A695-A698. (Author's summary) **80k:53055** 53C15
- On parallel conformal connections. *Kodai Math. J.* **2** (1979), no. 1, 1-10. (J. Ferrand) **80k:53044** 53C20
- Roscoe, D. F. The numerical solution of the Navier-Stokes equations for a three-dimensional laminar flow in curved pipes using finite-difference methods. *J. Engrg. Math.* **12** (1978), no. 4, 303-323. (Mutsuto Kawahara) **80k:76022** 76D05 (39A12, 65P05)
- Roscutet, Marcel N. Sur les équations aux dérivées partielles qui expriment les conditions de monogénéité, itérées. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 5, 783-790. (L. R. Sons) **80d:35036** 35G99 (30A05, 30G35)
- Rose, Alan A note on formalisation by the method of description of truth-tables. *Z. Math. Logik Grundlag. Math.* **24** (1978), no. 2, 109-112. (J. Drabbe) **80k:03010** 03B05
- A three-valued model for set theory. *Z. Math. Logik Grundlag. Math.* **24** (1978), no. 5, 437-440. (Siegfried Gottwald) **80d:03051** 03E30 (03B50)
- Rose, Bruce L. Rings which admit elimination of quantifiers. *J. Symbolic Logic* **43** (1978), no. 1, 92-112. (Alan Mekler) **80k:03036a** 03C60 (03C10, 13L05, 17D05)
- The  $\aleph_1$ -categoricity of strictly upper triangular matrix rings over algebraically closed fields. *J. Symbolic Logic* **43** (1978), no. 2, 250-259. (U. Felgner) **80d:03031** 03C60 (03C35, 03C45, 16A22, 20D99)
- Corrigendum: "Rings which admit elimination of quantifiers" (*J. Symbolic Logic* **43** (1978), no. 1, 92-112). *J. Symbolic Logic* **44** (1979), no. 1, 109-110. (Alan Mekler) **80k:03036b** 03C60 (03C10, 13L05, 17D05)
- Rose, David Alan On Levine's decomposition of continuity. *Canad. Math. Bull.* **21** (1978), no. 4, 477-481. (S. T. Lin) **80k:54009** 54C05
- Rose, Donald J. (with Lipton, Richard J.; Tarjan, Robert Endre) Generalized nested dissection. *SIAM J. Numer. Anal.* **16** (1979), no. 2, 346-358. (Petr Liebl) **80d:65041** 65F05
- Rose, G. St. C. (with Baxandall, P. R.; Brown, W. S.; Watson, F. R.) ★Proof in mathematics ("if", "then" and "perhaps"). A collection of material illustrating the nature and variety of the idea of proof in mathematics. *University of Keele, Institute of Education, Keele*, 1978. v+130 pp. (B. Artmann) **80k:00091** 00-01 (00A25)
- Rose, Harvey A. Renormalized kinetic theory of nonequilibrium many-particle classical systems. *J. Statist. Phys.* **20** (1979), no. 4, 415-447. (Ronald F. Fox) **80k:82009** 82A05
- Rose, J. See Current topics in cybernetics and systems, **80k:68001**
- Rose, Nicholas J. (with Campbell, Stephen L.) Singular perturbation of autonomous linear systems. III. *Houston J. Math.* **4** (1978), no. 4, 527-539. (R. E. O'Malley, Jr.) **80k:34009c** 34E15
- (with Campbell, Stephen L.) Singular perturbation of autonomous linear systems. *SIAM J. Math. Anal.* **10** (1979), no. 3, 542-551. (R. E. O'Malley, Jr.) **80k:34009a** 34E15
- Roseau, Maurice Régimes quasi périodiques dans les systèmes vibrants non linéaires. *J. Math. Pures Appl. (9)* **57** (1978), no. 1, 21-68. (N. Chafee) **80k:34047** 34C27 (34C50)
- Röseberg, Ulrich See Sačkov, J. V., **80k:00019**
- Roseblade, J. E. (with Smith, Patrick F.) A note on the Artin-Rees property of certain polycyclic group algebras. *Bull. London Math. Soc.* **11** (1979), no. 2, 184-185. (Ralph W. Wilkerson) **80k:16008** 16A26 (20C07)
- Rosebrugh, Robert Coequalizers in algebras for an internal type. *Indexed categories and their applications*, pp. 243-260, *Lecture Notes in Math.*, 661, Springer, Berlin, 1978. (A. Preller) **80k:03114** 03G30 (18B25)
- Rosiek, Jan (with Król, Jerzy; Lembas, Jacek) Syntactical analysis based on simple precedence grammar. (Polish. Russian and English summaries) *Podstawy Sterowania* **7** (1977), no. 2, 149-164. (Authors' summary) **80k:68107** 68F25
- Roselle, David P. Award of the Chauvenet Prize to Dr. Neil J. A. Sloane. *Amer. Math. Monthly* **86** (1979), no. 2, 79. (Editors) **80k:01057** 01A70
- Roseman, Joseph J. (with Breuer, Shlomo) Integral bounds on the strain energy for the traction problem in finite elasticity. *Arch. Rational Mech. Anal.* **68** (1978), no. 4, 333-342. (W. Keca) **80k:73039** 73G05 (35Q99)
- (with Breuer, Shlomo) An integral bound for the strain energy in nonlinear elasticity in terms of the boundary displacements. *J. Elasticity* **9** (1979), no. 1, 21-27. (Cornelius O. Horgan) **80d:73065** 73G05 (35B30)
- Rosen, Barry K. (with Ehrig, Hartmut) Concurrency of manipulations in multidimensional information structures. *Mathematical foundations of computer science, 1978 (Proc.*

- Seventh Sympos., Zakopane, 1978), pp. 165-176, *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (Giovanni Uccella) **80f:68031** 68B99 (18B20)  
(with Ehrig, Hartmut; Krewski, Hans-Jörg; Maggiolo-Schettini, Andrea; Winkowski, Józef) Deriving structures from structures. *Mathematical foundations of computer science*, 1978 (Proc. Seventh Sympos., Zakopane, 1978), pp. 177-190, *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (V. Ju. Melits) **80d:68036** 68C01 (18B20)
- Data flow analysis for procedural languages. *J. Assoc. Comput. Mach.* 26 (1979), no. 2, 322-344. (Henry S. Warren, Jr.) **80e:68038** 68B10
- Rosen, Bernard Operator method for the perturbative solution of ordinary differential equations. *Comput. Math. Appl.* 4 (1978), no. 3, 225-235. (F. Milinazzo) **80h:34069** 34E10 (58F40, 65L05)
- Rosen, Gerald Explicit functional integration method for determining approximate stationary states in quantum field theories. *Path integrals and their applications in quantum, statistical and solid state physics* (Proc. NATO Advanced Study Inst., State Univ. Antwerp, Antwerp, 1977), pp. 201-235, NATO Adv. Study Inst. Ser., Ser. B: Physics, 34, Plenum, New York, 1978. (Robert L. Warnock) **80e:81073** 81E10
- Steady-state distribution of bacteria chemotactic toward oxygen. *Bull. Math. Biol.* 40 (1978), no. 5, 671-674. (Kuang-Ho Chen) **80b:92011** 92A09 (35K60)
- Galerkin-Ritz procedures for approximate solutions to systems of reaction-diffusion equations. *Bull. Math. Biol.* 40 (1978), no. 6, 853-863. (Pierre Lesaint) **80e:65117** 65P05 (35K20)
- Variational principles for non-Lagrangian field equations. (Italian and Russian summaries) *Nuovo Cimento A* (11) 48 (1978), no. 3, 386-390. (Chindhu S. Warke) **80c:81022** 81C05 (49C10)
- Alternative integration procedure for scale-invariant ordinary differential equations. *Internat. J. Math. Math. Sci.* 2 (1979), no. 1, 143-145. (J. D. Kečkić) **80d:34002** 34A05
- (with Jakubowicz, Oleg; Tatoi, Vahe) Constrained Hamiltonian formulation for interacting fields: stable particlelike solutions. *J. Math. Phys.* 20 (1979), no. 3, 441-442. (Authors' summary) **80e:81032** 81C10 (35Q99)
- Rosen, Harvey Fixed points of sequences of locally expansive maps. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 387-390. (S. K. Kaul) **80a:54091** 54H25
- Rosen, J. B. Two-phase algorithm for nonlinear constraint problems. *Nonlinear programming*, 3 (Proc. Sympos., Special Interest Group Math. Programming, Univ. Wisconsin, Madison, Wis., 1977), pp. 97-124, Academic Press, New York, 1978. (Author's summary) **80g:90101** 90C30
- See also Goodman, John C., **80h:90042**
- Rosen, Joe (with Freundlich, Yehudah) Symmetry and conservation. *Amer. J. Phys.* 46 (1978), no. 10, 1030-1041. (Authors' summary) **80d:70041** 70H35
- Necessity and sufficiency of  $f$  being a divergence for vanishing of variational derivatives of  $f$ : general case. *Let. Math. Phys.* 3 (1979), no. 3, 237-240. (Author's summary) **80d:49003** 49A22
- See also Abellanas, L.; et al., **80k:49018**
- Rosen, Nathan Does gravitational radiation exist? *Gen. Relativity Gravitation* 10 (1979), no. 4, 351-364. (Author's summary) **80f:83020** 83C35
- (with Robart, F.) The field of a charge in the bimetric gravitation theory. *Gen. Relativity Gravitation* 10 (1979), no. 6, 489-495. (Kenneth Dunn) **80f:83053a** 83D05
- Conservation laws in bimetric gravitation theories. *Gen. Relativity Gravitation* 10 (1979), no. 8, 639-646. (W. Israel) **80k:83025** 83C40
- Bimetric general relativity. *Let. Nuovo Cimento* (2) 25 (1979), no. 9, 266-270. (Sotiris Persides) **80f:83042** 83F05 (53B50)
- Rosen, Robert ★Fundamentals of measurement and representation of natural systems. The North-Holland Series in General Systems Research. North-Holland, New York-Oxford, 1978. \$22.95. ISBN 0-444-00261-8 (C. P. Bruter) **80e:93005** 93A05 (00A25, 00A69, 58F35, 92A05)
- A comment on structural stability. *Internat. J. Gen. Systems* 5 (1979), no. 3, 185-187. (D. R. J. Chillingworth) **80m:34051** 34D30 (58F10, 92A05)
- Rosen, Ronald H. (with Gross, Jonathan L.) A linear time planarity algorithm for 2-complexes. *J. Assoc. Comput. Mach.* 26 (1979), no. 4, 611-617. (Authors' summary) **80f:68031** 68C25 (68E10)
- Rosen, S. P. (with Kacser, C.) Three-pion states and a new approach to the permutation group  $S_3$ . *I. Phys. Rev. D* (3) 18 (1978), no. 9, 3427-3433. (Pierre Hillion) **80a:8112a** 81G40 (20C30)
- (with Kacser, C.) Three-pion states and a new approach to the permutation group  $S_3$ . II. Pseudoscalar-meson decays. *Phys. Rev. D* (3) 18 (1978), no. 9, 3434-3441. (Pierre Hillion) **80a:8112b** 81G40 (20C30)
- Rosen, Sherwin (with Mussa, Michael) Monopoly and product quality. *J. Econom. Theory* 18 (1978), no. 2, 301-317. (Anjan Mukherji) **80e:90024** 90A14
- Rosen, V. V. Ordered events games on graphs admitting chance moves. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 4, 579-586. (J.-F. Mertens) **80e:90135** 90D10
- Rosenbaum, Marcos (with Ryan, Michael P., Jr.; Shepley, L. C.) Space-time homogeneous models with torsion. *J. Math. Phys.* 20 (1979), no. 4, 744-751. (Andrzej Trautman) **80d:83095** 83F05 (53C80)
- Rosenberg, Alex La dimension globale d'extensions d'Ore. *Groupe d'Étude d'Algèbre (Marie-Paule Malliauin), 1re année (1975/76), Exp. No. 3, 2 pp., Secrétariat Math., Paris, 1978. (Editors) **80f:16032** 16A60 (13D05)*
- (with Kleinstein, Jerrold L.) Signatures and semisignatures of abstract Witt rings and Witt rings of semilocal rings. *Canad. J. Math.* 30 (1978), no. 4, 872-895. (Joel Cunningham) **80a:13028** 13K05 (10C99)
- Rosenberg, Arnold L. (with Snyder, Lawrence) Bounds on the cost of data encodings. *Math. Systems Theory* 12 (1978/79), no. 1, 9-39. (Authors' summary) **80b:68033** 68B15 (68E10)
- (with Snyder, Lawrence) Minimal-comparison 2, 3-trees. *SIAM J. Comput.* 7 (1978), no. 4, 465-480. (Giorgio Ausiello) **80a:68115** 68H05 (68E10)
- A note on paths embedded in trees. *Inform. Process. Lett.* 8 (1979), no. 5, 272-273. (From the text) **80e:68172** 68E10
- (with Miller, Raymond E.; Pippenger, Nicholas; Snyder, Lawrence) Optimal 2, 3-trees. *SIAM J. Comput.* 8 (1979), no. 1, 42-59. (Richard A. DeMillo) **80c:68050** 68E10 (68B10)
- Rosenberg, Grzegorz (with Ehrenfeucht, Andrzej) Finding a homomorphism between two words is NP-complete. *Inform. Process. Lett.* 9 (1979), no. 2, 86-88. (R. K. Shyamundar) **80j:68030** 68C25 (68F05)
- Rosenberg, Harold (with Langevin, Rémi) Integrable perturbations of fibrations and a theorem of Seifert. *Differential topology, foliations and Gelfand-Fuks cohomology* (Proc. Sympos., Pontificia Univ. Católica, Rio de Janeiro, 1976), pp. 122-127, *Lecture Notes in Math.*, 652, Springer, Berlin, 1978. (C. S. Hartzman) **80d:57013** 57R30 (58F10, 58F18)
- Rosenberg, Ivo G. (with Fleischer, Isidore) The Galois connection between partial functions and relations. *Pacific J. Math.* 79 (1978), no. 1, 93-97. (H. Peter Gumm) **80m:08005** 08A55
- On a Galois connection between algebras and relations and its applications. *Contributions to general algebra* (Proc. Klagenfurt Conf., Klagenfurt, 1978), pp. 273-289, Heyn, Klagenfurt, 1979. (Agnes Szendrei) **80h:08007** 08A40 (06A15)
- (with Deza, Mikhail) Intersection and distance patterns. *Graph theory and related topics* (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977), pp. 133-143, Academic Press, New York, 1979. (R. A. Mena) **80k:05041** 05B99 (05C10, 90C10)
- Rosenberg, Jonathan (with Effros, Edward G.)  $C^*$ -algebras with approximately inner flip. *Pacific J. Math.* 77 (1978), no. 2, 417-443. (Trond Digernes) **80k:46065** 46L05
- (with Gootman, Elliot C.) The structure of crossed product  $C^*$ -algebras: a proof of the generalized Effros-Hahn conjecture. *Invent. Math.* 52 (1979), no. 3, 283-298. (Robert S. Doran) **80k:46091** 46L05 (22D25)
- Rosenberg, Reinhardt M. ★Analytical dynamics of discrete systems. *Mathematical Concepts and Methods in Science and Engineering*, 4, Plenum Press, New York-London, 1977. xvii + 424 pp. ISBN 0-306-31014-7 (P. Pascual) **80k:70001** 70-01 (53A17)
- Rosenberg, Ronald C. (with Andry, Albert N., Jr.) Solvability of bond graph junction structures with loops. *IEEE Trans. Circuits and Systems* 26 (1979), no. 2, 130-137. (Takao Ozawa) **80i:94026** 94C15
- On gyrobondgraphs and their uses. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* 100 (1978), no. 1, 76-82. (From the introduction) **80a:94070** 94C15
- Rosenberger, B. (with Ramanujan, M. S.) On the Djakov-Mitiagin example of a nuclear Fréchet space without basis. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 3, 231-236. (William Robinson) **80m:46001** 46A12
- Rosenberger, Gerhard Über alternierende Wörter in freien Produkten mit Malmgren. *Arch. Math. (Basel)* 31 (1978/79), no. 5, 417-422. (Ian M. Chiswell) **80b:20047** 20F05 (20F06)
- (with Kalia, R. N.) Automorphisms of the Fuchsian groups of type  $(0; 2, 2, 2, q; 0)$ . *Comm. Algebra* 6 (1978), no. 11, 1115-1129. (L. Alayne Parson) **80a:10039** 10D07 (20H10)
- Produkte von Potenzen und Kommutatoren in freien Gruppen. *J. Algebra* 53 (1978), no. 2, 416-422. (S. Andreadakis (Zbl 384:20023)) **80a:20034** 20E05
- Alternierende Produkte in freien Gruppen. *Pacific J. Math.* 78 (1978), no. 1, 243-250. (Ian M. Chiswell) **80d:20026** 20E05 (20F05, 20F06)
- (with Tesson, Franz) Über vollständige Automorphismengruppen und Gleichungen in der Modulgruppe. *Czechoslovak Math. J.* 29(104) (1979), no. 2, 192-201. (A. M. Macbeath) **80e:20049** 20F28
- Über die diophantische Gleichung  $ax^2 + by^2 + cz^2 = dxyz$ . *J. Reine Angew. Math.* 305 (1979), 122-125. (A. L. Schmidt) **80d:10030** 10B10 (10E20)
- Rosenblatt, S. Asymmetric bifurcation. *J. Austral. Math. Soc. Ser. B* 21 (1979/80), no. 3, 297-304. (James Geer) **80j:35008** 35B32 (58E07, 76E30)
- (with Secomb, T. W.) Torsional oscillations of a non-Newtonian fluid with a free surface. *J. Fluid Mech.* 93 (1979), no. 4, 767-780. (R. K. Gupta) **80k:76004** 76A05
- (with Davis, Stephen H.) Bifurcation from infinity. *SIAM J. Appl. Math.* 37 (1979), no. 1, 1-19. (W. O. Crimale, Jr.) **80d:76009** 76C05 (34A34, 34C25)
- Asymptotic methods for bifurcation and stability problems. *Stud. Appl. Math.* 6 (1979), no. 3, 241-259. (J. E. Marsden) **80k:58039** 58E07 (35B32)
- Rosenblatt, J. M. (with Edgar, G. A.) Difference equations over locally compact abelian groups. *Trans. Amer. Math. Soc.* 253 (1979), 273-289. (B. G. Pachpatte) **80i:39001** 39A10 (43A99)
- Rosenblatt, Murray Dependence and asymptotic independence for random processes. *Studies in probability theory*, pp. 24-45, *MAA Studies in Math.*, 18, Math. Assoc. America, Washington, D. C., 1978. (Bennett Eisenberg) **80j:60046** 60G10 (60F05)
- Some remarks on a mixing condition. *Ann. Probab.* 7 (1979), no. 1, 170-172. (M. Iosifescu) **80k:60071a** 60G99
- Correction to: "Some remarks on a mixing condition" [Ann. Probab. 7 (1979), no. 1, 170-172; MR 80k:60071a]. *Ann. Probab.* 7 (1979), no. 6, 1097. (Editors) **80k:60071b** 60G99
- (with Mack, Y. P.) Multivariate  $k$ -nearest neighbor density estimates. *J. Multivariate Anal.* 9 (1979), no. 1, 1-15. (Luc P. Devroye) **80k:62057** 62G05
- See also Studies in probability theory, **80b:60007** and Smoothing techniques for curve estimation, **80m:62002**
- Rosenblatt-Roth, Millu On the measure of a minimal set in Markov chains. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes* (Prague, 1978), Vol. B, pp. 119-127, Reidel, Dordrecht, 1978. (Gérard Letac) **80m:60006** 60A10 (60J05)
- Rosenbloom, P. C. Commutation relations for linear operators in Hilbert space with applications to partial differential equations. I. *Bull. Inst. Math. Acad. Sinica* 6 (1978), no. 2, part 2, 525-568. (Lawrence E. Thomas) **80d:47003** 47A05 (35A05, 47F05)
- Rosenbrock, H. H. Transformation of system equations. *Recent theoretical developments in control* (Proc. Conf., Univ. Leicester, Leicester, 1976), pp. 3-8, Academic Press, London, 1978. (Christopher I. Byrnes) **80i:93019** 93B15
- Rosencrans, Steven I. (with Dupré, Maurice J.) Classical and relativistic vorticity in a semi-Riemannian manifold. *J. Math. Phys.* 19 (1978), no. 7, 1532-1535. (Alan Barnes) **80e:58023** 58D30 (35Q10, 58G40)
- Rosendahl, Adelheid (with Kühn, Oda) Wedderburnzerlegung für Jordan-Paare. (English summary) *Manuscripta Math.* 24 (1978), no. 4, 403-435. (Armin Thedy) **80e:17010** 17C10
- Rosendo, J. L. (with Martinez Gadea, Pedro) Integrable case of almost tangent structure of order  $K$ . *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 3, 437-448. (F. Brickell) **80j:53042** 53C15



- Rosenfeld, Andrew M.** (with Myhr, Janet M.; Saunders, Sam C.) Determining confidence bounds for highly reliable coherent systems based on a paucity of component failures. *Naval Res. Logist. Quart.* 25 (1978), no. 2, 213-227. (Masanori Kodama) **80b:90074** 90B25
- Rosenfeld, Azriel** (with Haralick, Robert M.; Davis, Larry S.; Milgram, David L.) Reduction operations for constraint satisfaction. *Inform. Sci.* 14 (1978), no. 3, 199-219. (Authors' summary) **80c:68108** 68C25
- ★Picture languages. Formal models for picture recognition. Computer Science and Applied Mathematics. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xiii + 225 pp. ISBN 0-12-597340-3 (Josef Kittler) **80g:68113** 68G10 (68D20)
- Digital topology. *Amer. Math. Monthly* 86 (1979), no. 8, 621-630. (Shin-Yee Lu) **80b:68078** 68G10 (68E99)
- (with Dias Velasco, Flavio R.) The application of relaxation to waveforms with ambiguous segmentations. *IEEE Trans. Systems Man Cybernet.* 9 (1979), no. 8, 420-428. (Authors' summary) **80g:68110** 68G10
- (with Kitchen, Les) Discrete relaxation for matching relational structures. *IEEE Trans. Systems Man Cybernet.* 9 (1979), no. 12, 869-874. (Authors' summary) **80i:68073** 68G10
- Fuzzy digital topology. *Inform. and Control* 40 (1979), no. 1, 76-87. (Masaharu Mizumoto) **80b:68109** 68G10 (03E72)
- (with Wu, Angela) Sequential and cellular graph automata. *Inform. Sci.* 20 (1980), no. 1, 57-68. (Authors' summary) **80i:68041** 68D20
- Rosenfeld, Léon** ★Selected papers of Léon Rosenfeld. Edited by Robert S. Cohen and John J. Stachel. With an introduction by Stefan Rozental. Synthese Library, 100. Boston Studies in the Philosophy of Science, XXI. D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1979. xxiv + 929 pp. ISBN 90-277-0651-4 (H. Tredor) **80k:01068** 01A75 (81-03)
- Rosenfeld, Moshe** Distance geometry and graphs. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1978), pp. 639-648. *Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978.* (R. A. Melter) **80j:05060** 05C10 (51K05)
- (with Goodey, P. R.) Hamiltonian circuits in prisms over certain simple 3-polytopes. *Discrete Math.* 21 (1978), no. 3, 229-235. (J. Bosák) **80c:05076** 05C45 (05C10)
- Rosenhaus, V.** (with Kőiv, M.) Family of two-dimensional Born-Infeld equations and a system of conservation laws. (Estonian and Russian summaries) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* 28 (1979), no. 3, 187-193. (Authors' summary) **80k:81224** 81M05 (58F07)
- Rosenholtz, Ira** (with Martin, Joseph) An elementary solution of the monotone mapping problem. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 352-354. (H. W. Lambert) **80a:54014** 54C10 (57N12)
- There is no differentiable metric for  $\mathbb{R}^n$ . *Amer. Math. Monthly* 86 (1979), no. 7, 585-586. (G. A. Heuer) **80g:26019** 26B05
- Rosenkrantz, Daniel J.** (with Hunt, Harry B., III) Polynomial algorithms for deterministic pushdown automata. *SIAM J. Comput.* 7 (1978), no. 4, 405-412. (Authors' summary) **80f:68053** 68C25 (68D35)
- Rosenlicht, Maxwell** See Well, André; **80k:10004**
- Rosenlund, Stig I.** Controlling a Markovian queue at equidistant time epochs. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes* (Prague, 1978), Vol. B, pp. 129-143. *Reidel, Dordrecht*, 1978. (N. U. Prabhu) **80c:60113** 60K25 (90B22)
- Rosensteel, G.** (with Rowe, D. J.) The nuclear collective model and the symplectic group. *Group theoretical methods in physics* (Sixth Internat. Colloq., Tübingen, 1977), pp. 144-161. *Lecture Notes in Phys.* 79, Springer, Berlin, 1978. (William H. Klink) **80d:81134** 81G40 (22E70)
- (with Rowe, D. J.) Geometric derivation of the kinetic energy in collective models. *J. Math. Phys.* 20 (1979), no. 3, 465-468. (Authors' summary) **80f:81043** 81C40
- Rosenstiel, P.** (with Read, Ronald C.) On the Gauss crossing problem. *Combinatorics* (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II, pp. 843-876. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (Richard D. Ringeisen) **80c:05057** 05C10
- Rosenthal, Arnie** Dynamic programming is optimal for certain sequential decision processes. *J. Math. Anal. Appl.* 73 (1980), no. 1, 134-137. (Author's summary) **80m:90084** 90C39 (68E10)
- Rosenthal, Erik J.** Power bounded strictly cyclic operators. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 276-280. (D. A. Herrero) **80a:47028** 47A65
- Rosenthal, H.** (with Lee, M.; McKelvey, Richard D.) Game theory and the French apprenticeships of 1951. *Internat. J. Game Theory* 8 (1979), no. 1, 27-53. (Authors' summary) **80c:90158** 90D40 (90A08)
- Rosenthal, Haskell P.** Some recent discoveries in the isomorphic theory of Banach spaces. *Bull. Amer. Math. Soc.* 84 (1978), no. 5, 803-831. (R. C. James) **80d:46023** 46B10 (46E99)
- (with Lotz, Heinrich P.) Embeddings of  $C(\Delta)$  and  $L^1[0, 1]$  in Banach lattices. *Israel J. Math.* 31 (1978), no. 2, 169-179. (John Wolfe) **80g:46023** 46B30 (46E05)
- Rosenthal, John W.** Truth in all of certain well-founded countable models arising in set theory. II. *Z. Math. Logik Grundlag. Math.* 25 (1979), no. 5, 403-405. (S. Feferman) **80i:03065** 03E99 (03C65)
- Rosenthal, Peter** (with Fong, Che Kao; Nordgren, Eric A.; Radjabipour, Mehdi; Radjavi, Heydar) Extensions of Lomonosov's invariant subspace theorem. *Acta Sci. Math. (Szeged)* 41 (1979), no. 1-2, 55-62. (R. G. Bartle) **80h:47006** 47A15
- (with Hadwin, Donald W.; Nordgren, Eric A.; Radjavi, Heydar) Most similarity orbits are strongly dense. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 250-252. (Lawrence Fialkow) **80i:47029** 47A65 (47A15)
- Rosenthal, Richard E.** (with Rardin, Ronald L.) Graph structures underlying submatrices of network flow tableaux. *Transportation Sci.* 13 (1979), no. 2, 98-111. (Authors' summary) **80m:90049** 90B10 (90C08)
- Rosenwald, R. D.** (with Hill, H. A.; Ballard, P. T.; Bryan, S. D.) Representation of observable signals in Chebyshev polynomials: application to phase-sensitive detection. *J. Opt. Soc. Amer.* 69 (1979), no. 7, 978-984. (Tamer Başar) **80g:93071** 93E10 (94A12)
- Rosenzweig, Michael L.** (with Schaffer, William M.) Homage to the Red Queen. I. Coevolution of predators and their victims. *Theoret. Population Biol.* 14 (1978), no. 1, 135-157. (Nishan Krikorian) **80f:92021a** 92A15
- (with Schaffer, William M.) Homage to the Red Queen. II. Coevolutionary response to enrichment of exploitation ecosystems. *Theoret. Population Biol.* 14 (1978), no. 1, 158-163. (Nishan Krikorian) **80f:92021b** 92A15
- Rosický, Jiří** Categories of models of infinitary Horn theories. *Arch. Math. (Brno)* 14 (1978), no. 4, 219-226. (A. Preller) **80b:18004** 18C10 (03C05)
- Rosinger, Elemer E.** ★Distributions and nonlinear partial differential equations. Lecture Notes in Mathematics, 684. Springer-Verlag, Berlin-New York, 1978. xi + 146 pp. ISBN 3-540-08951-9 (S. Łojasiewicz) **80j:46067** 46F10 (35C99)
- Multiojective duality without convexity. *J. Math. Anal. Appl.* 66 (1978), no. 2, 442-450. (D. J. van Wyk) **80f:90136** 90C33 (90C48)
- Roskies, Ralph** (with Anandan, J.) Polynomial basis for Yang-Mills invariants. *J. Math. Phys.* 19 (1978), no. 12, 2614-2618. (U. Cattaneo) **80d:81117** 81G20 (22E70, 53C05)
- (with Castillejo, L.; Kugler, M.) Little-group classification of gauge fields. *Phys. Rev. D* (3) 19 (1979), no. 6, 1782-1790. (Authors' summary) **80d:81088** 81E15
- (with Bender, Carl M.; Cooper, Fred; Guralnik, G. S.; Sharp, David H.; Silverstein, Martin L.) Multilegged propagators in strong-coupling expansions. *Phys. Rev. D* (3) 20 (1979), no. 6, 1374-1385. (A. Rouet) **80i:81040** 81E15
- Rosjakov, G. S.** See Numerical methods in continuum mechanics, **80k:76001**
- Rosner, Jonathan L.** (with Quigg, C.) Quantum mechanics with applications to quarkonium. *Phys. Rep.* 56 (1979), no. 4, 167-235. (Editors) **80m:81020** 81C05 (81G25)
- Resource letter NP-1: new particles. *Amer. J. Phys.* 48 (1980), no. 2, 90-103. (From the summary) **80k:81176** 81G25
- Rösner, Th.** (with Streich, W. J.) ★Theorie linearer Automaten. Studienbücherei. VEB Deutscher Verlag der Wissenschaften, Berlin, 1978. 157 pp. (Dorothy Bollman) **80c:68066** 68D15
- Rosolci, S. K.** The correctness of modules. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* 1978, no. 10(197), 77-82. (W. G. Leavitt) **80a:16043** 16A64
- Ross, D. K.** Scalar tensor theories and variable rest masses. *J. Phys. A* 13 (1980), no. 2, 557-567. (Author's summary) **80k:83047** 83D05
- Ross, G.** (with Fiddy, M. A.; Nieto-Vesperinas, M.; Manolitsakis, I.) The propagation and encoding of information in the scattered field by complex zeros. *Optica Acta* 26 (1979), no. 2, 229-238. (Authors' summary) **80b:78008** 78A45
- (with Fiddy, M. A.) Analytic Fourier optics. The encoding of information by complex zeros. *Optica Acta* 26 (1979), no. 9, 1139-1146. (Authors' summary) **80m:78001** 78A05
- Ross, George G.** (with Slade, Norman A.) A predator-prey viewpoint of a single species population. *J. Theoret. Biol.* 77 (1979), no. 4, 513-522. (Authors' summary) **80c:92037** 92A15
- Ross, John** (with Gutkowitz-Krusin, Dina; Procaccia, Itamar) Analytic results for asymmetric random walk with exponential transition probabilities. *J. Statist. Phys.* 19 (1978), no. 5, 525-541. (J. Gillis) **80m:60075** 60J15 (82A99)
- Ross, Rockford J.** (with Hotz, Günter)  $LL(k)$ - and  $LR(k)$ -Invarianz von kontextfreien Grammatiken unter einer Transformation auf Greibach-Normalform. (English and Russian summaries) *Elektron. Informatsverarb. Kybernet.* 15 (1979), no. 1-2, 73-86. (Horst Reichel) **80m:68074** 68F10
- Ross, Sheldon M.** (with Derman, C.; Lieberman, G. J.) A renewal decision problem. *Management Sci.* 24 (1977/78), no. 5, 554-561. (Authors' summary) **80a:90072a** 90B25
- (with Derman, C.; Lieberman, G. J.) On renewal decisions. *Dynamic programming and its applications* (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977), pp. 163-171. Academic Press, New York, 1978. (S. M. Pandit) **80c:90071** 90B25
- (with Nozaki, Shirley A.) Approximations in finite-capacity multi-server queues with Poisson arrivals. *J. Appl. Probab.* 15 (1978), no. 4, 826-834. (Jacqueline Loris-Teghem) **80b:60125** 60K25
- (with Fond, Simson) A heterogeneous arrival and service queueing loss model. *Naval Res. Logist. Quart.* 25 (1978), no. 3, 483-488. (Peter Purdue) **80a:60118** 60K25
- Multivalued state component systems. *Ann. Probab.* 7 (1979), no. 2, 379-383. (Henry W. Block) **80c:60100** 60K10 (62N05)
- (with Derman, C.; Lieberman, G. J.) Adaptive disposal models. *Naval Res. Logist. Quart.* 26 (1979), no. 1, 33-40. (John C. Gittins) **80h:90148** 90C40
- See also Smith, Donald R. **80c:90072b**
- Rosberg, Hans-Joachim** (with Jesiak, B.; Siegel, G.) ★On the central limit theorem for the triangular array and the Lindeberg-Feller theorem. With German and Russian summaries. *Wissenschaftliche Sitzungen zur Stochastik* 79, 7. Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin, 1979. 29 pp. (H. Bergström) **80m:60034** 60F05
- See also Gnedenko, B. V. **80c:60003**
- Rosser, J. Barkley** ★Logic for mathematicians. Second edition. Chelsea Publishing Co., New York, 1978. xv + 574 pp. ISBN 0-8284-0294-9 (Editors) **80b:03001** 03-01 (03E25, 03E30, 03H05)
- Harmonic functions on regions with reentrant corners. I. *Transactions of the Twenty-Third Conference of Army Mathematicians* (Langley Res. Center, Hampton, Va., 1977), pp. 493-502. *ARO Rep.* 78, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1978. (Author's summary) **80c:65222** 65N99
- Majorization formulas for a biharmonic function of two variables. *Transactions of the Twenty-Fourth Conference of Army Mathematicians* (Univ. Virginia, Charlottesville, Va., 1978), pp. 231-248. *ARO Rep.* 79, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (B. A. Bondarenko) **80f:73012** 73C05
- Rossi, Anna Maria** (with Sambucetti, Patrizia) The existence of a local solution of an evolution equation in Banach spaces. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 1, 348-363. (A. Corduneanu) **80i:34111** 34G99 (45G10, 47B44)
- Rossi, Fabio** (with Pedicchio, Maria Cristina)  $V$ -monoidality,  $V$ -adjunctions and monoidal functors. I, II. (Italian. English summary) *Rend. Istit. Mat. Univ. Trieste* 10 (1978), no. 1-2, 5-40, 80-100 (1979). (G. M. Kelly) **80i:18015** 18D10 (18D20, 18D25)
- Rossi, G. C.** (with Testa, M.) The structure of Yang-Mills theories in the temporal gauge. I. General formulation. *Nuclear Phys. B* 163 (1980), no. 1-2, 109-132. (Authors' summary) **80k:81109** 81E10

- Rossi, Maria Evelina Height and dimension of a graded ring associated with an ideal. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 36 (1977/78), 305–312 (1979). (Author's summary) **80d:13004** 13C15 (16A03)
- Rossi, P. Propagation functions in the field of a monopole. *Nuclear Phys. B* 149 (1979), no. 1, 170–188. (Author's summary) **80f:81111** 81G25
- Rossi, Peter E. The independence transformation of specific substitutes and specific complements. *Econom. Lett.* 2 (1979), no. 3, 299–301. (Gerhard Hieber) **80c:90013** 90A15
- Rosenblin, Ju. A. The impact of a thermoelastic rod against a heated barrier. (Russian) *Prikl. Meh.* 14 (1978), no. 9, 76–82, 142. (Editors) **80c:73023** 73D05
- Rösner, Otto E. Deductive biology—some cautious steps. Papers presented at the Society for Mathematical Biology Meeting (Univ. Pennsylvania, Philadelphia, Pa., 1976). *Bull. Math. Biol.* 40 (1978), no. 1, 45–58. (Michael Conrad) **80a:92019** 92A05  
(with Gürel, Okan) Bifurcation to toroidal surfaces. *Math. Japon.* 23 (1978/79), no. 5, 491–507. (P. J. Holmes) **80d:58044** 58F14 (34C35)  
See also Bifurcation theory and applications in scientific disciplines, **80c:00007**
- Rossman, Michael (with Selden, Larry) Time preferences, conditional risk preferences, and two-period cardinal utility. *J. Econom. Theory* 19 (1978), no. 1, 64–83. (Ernst-Wilhelm Zachow) **80a:90011** 90A06 (90A10)
- Rossmann, Wulf Analysis on real hyperbolic spaces. *Lie theories and their applications* (Proc. Ann. Sem. Canad. Math. Congr., Queen's Univ., Kingston, Ont., 1977), pp. 521–527. *Queen's Papers in Pure and Appl. Math.*, 48, Queen's Univ., Kingston, Ont., 1978. (From the text) **80a:43011** 43A85  
Analysis on real hyperbolic spaces. *J. Funct. Anal.* 30 (1978), no. 3, 448–477. (Jacques Faraut) **80f:43021** 43A85
- Rosso, Fabio A comparison between Schmidt and Geroch space-time incompleteness. (Italian summary) *Rend. Mat.* (6) 11 (1978), no. 1, 141–149. (Author's summary) **80g:83009** 83C15 (58Exx)
- Rostanin, Roeben The completeness of Maxwell's stress function representation. (French summary) *J. Elasticity* 9 (1979), no. 4, 349–356. (Author's summary) **80k:73012** 73C05
- Rota, Gian-Carlo (with Birkhoff, Garrett) ★Ordinary differential equations. Third edition. *John Wiley & Sons, New York-Chichester-Brisbane*, 1978. xi + 342 pp. ISBN 0-471-07411-X (Editors) **80a:34001** 34-01  
Hopf algebra methods in combinatorics. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 363–365. *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (J. W. Moon) **80i:05012** 05A15  
(with d'Antona, Ottavio) Two rings connected with the inclusion-exclusion principle. *J. Combin. Theory Ser. A* 24 (1978), no. 3, 395–402. (Dominique Foata) **80b:05007** 05A19  
(with Metropolis, N.) Combinatorial structure of the faces of the  $n$ -cube. *SIAM J. Appl. Math.* 35 (1978), no. 4, 689–694. (R. W. Quackenbush) **80c:06015** 06C15 (05A17, 05B30)  
See also Studies in foundations and combinatorics, **80b:00004**; Studies in probability and ergodic theory, **80b:28001**; Studies in algebra and number theory, **80c:00011**; Studies in algebraic topology, **80c:00012**; Studies in analysis, **80f:00006**; Ruelle, David, **80g:82017**; Kelata, Gina Bari, **80j:01030** and MacMahon, Percy Alexander, **80k:01065**
- Roter, V. I. Control models of a large complex of tasks under conditions of uncertainty. (Russian) *Probabilistic control problems in economics* (Russian), pp. 198–238, "Nauka", Moscow, 1977. (B. L. Ovsievit) **80c:90004** 90B35 (93A15)  
(with Gamkrelidze, N. G.) A non-uniform analogue of Esseen's inequality. (Russian. Georgian and English summaries) *Sankharth. SSR Meen. Akad. Moambe* 90 (1978), no. 1, 21–24. (Zdzisław Rychlik) **80c:60035** 60F05
- Rotaru, P. (with Pascu, N. N.; Podaru, V.) Calculation of the alpha-starlike radius for starlike functions of order beta. (Romanian. German summary) *Bul. Univ. Braşov Ser. C* 19 (1977), 41–46 (1978). (A. W. Goodman) **80j:30022** 30C45 (30C30, 65E05)
- Rotaru, Stancu Two methods of solving an integer program. (Romanian. English summary) *Studia Univ. Babeş-Bolyai Math.* 23 (1978), no. 2, 7–15. (Dobro Ion) **80g:90084** 90C10
- Rothart, F. (with Rosen, Nathan) The field of a charge in the bimetric gravitation theory. *Gen. Relativity Gravitation* 10 (1979), no. 6, 489–495. (Kenneth Dunn) **80f:83053a** 83D05  
A charge of finite size in the bimetric gravitation theory. *Gen. Relativity Gravitation* 10 (1979), no. 6, 497–502. (Kenneth Dunn) **80f:83053b** 83D05
- Rosenberg, Manuel Stability analysis of the two compartment model of cell proliferation. *J. Theoret. Biol.* 77 (1979), no. 1, 51–63. (Author's summary) **80c:92041** 92A15
- Roter, W. (with Dierdzinski, Andrzej) Some theories of conformally symmetric manifolds. *Tenor (N.S.)* 32 (1978), no. 1, 11–23. (T. Okubo) **80a:53015** 53B20
- Rotguz, B. A. Generalization of a stability theorem to the motion of nonconservative systems. (Russian) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1978, no. 1, 83–86, 94. (Erich Miersemann) **80b:70030** 70J20 (34D99)
- Roth, Alice Uniform approximation by meromorphic functions on closed sets with continuous extension into the boundary. *Canad. J. Math.* 30 (1978), no. 6, 1243–1255. (V. M. Kokilavili) **80d:30037** 30E10
- Roth, Alvin E. Two-person games on graphs. *J. Combin. Theory Ser. B* 24 (1978), no. 2, 238–241. (Richard K. Guy) **80c:90159** 90D05 (05A99)  
A note concerning asymmetric games on graphs. *Naval Res. Logist. Quart.* 25 (1978), no. 2, 365–367. (Milan Mareš) **80b:90147** 90D05  
(with Blair, Charles E.) An extension and simple proof of a constrained lattice fixed point theorem. *Algebra Universalis* 9 (1979), no. 1, 131–132. (Iqbālunnisa) **80b:06009** 06B99  
Proportional solutions to the bargaining problem. *Econometrica* 47 (1979), no. 3, 775–778. (Hans Keiding) **80c:90139** 90D12 (90A07)
- Roth, Arthur J. A new procedure for selecting a subset containing the best normal population. *J. Amer. Statist. Assoc.* 73 (1978), no. 363, 613–617. (E. J. Dudewicz) **80k:62038** 62F07
- Roth, B. (with Asimow, L.) The rigidity of graphs. *Trans. Amer. Math. Soc.* 245 (1978/79), 279–289. (G. Laman) **80f:57004a** 57M15 (05C10, 52A40, 53B50, 73K05)  
(with Asimow, L.) The rigidity of graphs. II. *J. Math. Anal. Appl.* 68 (1979), no. 1, 171–190. (G. Laman) **80f:57004b** 57M15 (05C10, 52A40, 53B50, 73K05)
- Roth, Jean-Pierre Les opérateurs elliptiques comme générateurs infinisimaux de semi-groupes de Feller. *Séminaire de Théorie du Potentiel, No. 3* (Paris, 1976/1977), pp. 234–251. *Lecture Notes in Math.*, 681, Springer, Berlin, 1978. (Francis Hirsch) **80g:47052** 47F05 (31B99, 35J15, 60J35)  
Semi-groupes de mesures matricielles. *Probability measures on groups (Proc. Fifth Conf., Oberwolfach, 1978)*, pp. 336–343. *Lecture Notes in Math.*, 706, Springer, Berlin, 1979. (Francis Hirsch) **80f:47059** 47D05 (43A05)
- Rosenblatt-Roth, Milin See Rosenblatt-Roth, Milin
- Roth, Robert S. (with Bellman, Richard E.) Systems identification with partial information. *J. Math. Anal. Appl.* 68 (1979), no. 2, 321–333. (J. O'Reilly) **80d:93075** 93E12  
(with Bellman, Richard E.) A scanning technique for systems identification. *J. Math. Anal. Appl.* 71 (1979), no. 2, 403–411. (Ju. A. Nikolaev) **80j:93038** 93B30
- Roth, Walter A stability theorem for the Choquet-ordering in  $C_c(X)$ . *Math. Scand.* 4 (1978/79), no. 1, 92–98. (Thomas E. Armstrong) **80g:46026** 46E05 (46A55)  
(with Flösser, Hans-Otto) Korovkinhüllen in Funktionennäumen. *Math. Z.* 166 (1979), no. 2, 187–203. (Hans-Bernd Knoop) **80f:46024** 46E05 (41A36, 41A65)
- Rothaus, O. S. Ordered Jordan algebras. *Amer. J. Math.* 100 (1978), no. 5, 925–939. (Harald Upmeyer) **80a:17015** 17C35
- Rothblum, Uriel G. On solving optimization problems with proportion-constraints. *Math. Programming* 15 (1978), no. 1, 77–86. (Klaus Lommatzsch) **80c:65133** 65K05 (90C99)  
Solving stopping stochastic games by maximizing a linear function subject to quadratic constraints. *Game theory and related topics (Proc. Sem., Bonn and Hagen, 1978)*, pp. 103–105. North-Holland, Amsterdam, 1979. (Author's summary) **80m:93078** 93E03  
An index classification of  $M$ -matrices. *Linear Algebra Appl.* 23 (1979), 1–12. (R. J. Plemmons) **80d:15006** 15A09 (15A24, 15A48)  
A rank characterization of the number of final classes of a nonnegative matrix. *Linear Algebra Appl.* 23 (1979), 65–68. (Donald Kershaw) **80b:15030** 15A48  
(with Denardo, Eric V.) Overtaking optimality for Markov decision chains. *Math. Oper. Res.* 4 (1979), no. 2, 144–152. (L. C. Thomas) **80j:90111** 90C40
- Rothe, Erich H. See Bibliography: Rothe, Erich H., **80a:01049**
- Rothe, Franz Convergence to travelling fronts in semilinear parabolic equations. *Proc. Roy. Soc. Edinburgh Sect. A* 80 (1978), no. 3-4, 213–234. (J. Smoller) **80c:35051** 35K55  
(with Hader, K. P.; Vogt, H.) Stationary solutions of reaction-diffusion equations. *Math. Methods Appl. Sci.* 1 (1979), no. 3, 418–431. (C. V. Pao) **80c:35091** 35K20 (92A05)  
Solutions for systems of nonlinear elliptic equations with nonlinear boundary conditions. *Math. Methods Appl. Sci.* 1 (1979), no. 4, 545–553. (W. F. Ames) **80j:35036** 35J65 (47H15)
- Rothe, K. D. (with Swieca, J. A.) Path-integral representation for tunneling amplitudes in the Schwinger model. *Ann. Physics* 117 (1979), no. 2, 382–392. (Authors' summary) **80d:81030** 81C35  
(with Belvedere, L. V.; Swieca, J. A.; Schroer, B.) Generalized two-dimensional abelian gauge theories and confinement. *Nuclear Phys. B* 153 (1979), no. 1-2, 112–140. (F. R. Halpern) **80c:81094** 81G05  
(with Hortaşu, M.; Schroer, B.) Generalized two-dimensional QED and functional determinants. *Phys. Rev. D* (3) 20 (1979), no. 12, 3203–3212. (Authors' summary) **80k:81161** 81G10 (81L05)
- Rothberg, Mel (with Lashof, R.) G-smoothing theory. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976)*, Part 1, pp. 211–266. *Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I.*, 1978. (Steven H. Weintraub) **80b:57030** 57R10 (57S15)  
Torsion invariants and finite transformation groups. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976)*, Part 1, pp. 267–311. *Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I.*, 1978. (Steven H. Weintraub) **80j:57038** 57S17 (57Q10, 57S25)
- Rothberg, Thomas J. See Zellner, Arnold, **80m:62106**
- von Rothkirch, Christoph Axiomatic definition and comparison of three aggregation rules in cardinal social choice theory. (German, French and Russian summaries) *Statist. Hefte (N.F.)* 19 (1978), no. 1, 25–44. (Maurice Salles) **80a:90013** 90A08
- Rothkopf, Michael H. (with Stark, Robert M.) Competitive bidding: a comprehensive bibliography. *Oper. Res.* 27 (1979), no. 2, 364–390. (Authors' summary) **80c:90039** 90A16 (90D35)
- Rothmaier, Philipp ★Total transzendente abelsche Gruppen und Morley-Rang. With English and Russian summaries. Report des Zentralinstituts für Math. und Mechanik. Akad. Wissenschaften der DDR, Berlin, 5. Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin, 1978. 45 pp. (B. I. Zil'ber) **80c:03035** 03C45 (03C60, 20A15)
- Rothschild, B. L. (with Graham, R. L.) Ramsey theory. *Studies in combinatorics*, pp. 80–99, *MAA Studies in Math.*, 17, Math. Assoc. America, Washington, D.C., 1978. (F. Harary) **80b:05039** 05C55
- Rothschild, Linda Preiss Smoothness of solutions of certain partial differential equations constructed from vector fields. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 2, pp. 227–230. *Proc. Sympos. Pure Math., XXXV, Part 2, Amer. Math. Soc., Providence, R.I.*, 1979. (A. I. Atanasev) **80m:58038** 58G05 (22E30, 35H05)  
(with Tartakoff, David S.) Parametrics with  $C^\infty$  error for  $\square$ , and operators of Hörmander type. *Partial differential equations and geometry (Proc. Conf., Park City, Utah, 1977)*, pp. 255–271. *Lecture Notes in Pure and Appl. Math.*, 48, Dekker, New York, 1979. (Makhlof Derridj) **80g:35039** 35H05 (32F20, 58G05)  
A criterion for hypoellipticity of operators constructed from vector fields. *Comm. Partial Differential Equations* 4 (1979), no. 6, 645–699. (Ju. V. Egorov) **80c:58040** 58G05 (35H05)
- Rothschild, Michael (with Werden, Gregory J.) Returns to scale from random factor services: existence and scope. *Bell J. Econom.* 10 (1979), no. 1, 329–335. (Ronald W. Shephard) **80c:90010** 90A11



- Rothstein, Jerome** Generalized entropy, boundary conditions and biology. *Maximum entropy formalism* (Conf., Mass. Inst. Tech., Cambridge, Mass., 1978), pp. 423-468, MIT Press, Cambridge, Mass., 1979. (J. W. Jerome) **80d:92006** 92A05
- Rothstein, Michael** (with Caviness, B. F.) A structure theorem for exponential and primitive functions. *SIAM J. Comput.* **8** (1979), no. 3, 357-367. (Michael F. Singer) **80m:12028** 12H05 (68C20)
- Rothstein, W.** See **Dionansky, G.** **80j:32023**
- Rukova, O. V.** (with Lunc, G. L.; Bořuk, V. S.) Singularities and the Riemann surface of a function that is defined by a Dirichlet series, and the indicators of entire functions associated with it. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* **18** (1978), no. 3, 73-85, 214. (Authors' summary) **80m:30024** 30D10 (30B50)
- Rutman, Joseph J.** Cartier duality and formal groups over  $\mathbb{Z}$ . *Enseign. Math.* (2) **24** (1978), no. 3-4, 293-303. (Bodo Pareigis) **80a:14020** 14L05
- ★ An introduction to homological algebra. Pure and Applied Mathematics, 85. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xi+376 pp. ISBN 0-12-599250-5 (Editors) **80k:18001** 18-01 (16A62, 18Gxx, 20J05)
- Rothaus, Christel** (with Langmann, Klaus) Über den regulären Ort bei japanischen lokalen Ringen. (English summary) *Manuscripta Math.* **27** (1979), no. 1, 19-30. (Gerhard Pfister) **80e:13003** 13B20 (14E15)
- Universell japanische Ringe mit nicht offenem regulärem Ort. *Nagoya Math. J.* **74** (1979), 123-135. (Gerhard Pfister) **80k:14007** 14E20 (13B20)
- Rottman, James W.** (with Olfe, D. B.) Numerical calculations of steady gravity-capillary waves using an integro-differential formulation. *J. Fluid Mech.* **94** (1979), no. 4, 777-793. (From the summary) **80j:76008** 76B15
- Rottman, Richard** A note on the stability of a cylindrical vortex sheet. *J. Fluid Mech.* **87** (1978), no. 4, 761-771. (D. M. Sloan) **80d:76010** 76C05
- Roussel, Alain** Lois de Zipf et sources markoviennes. (English summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* **14** (1978), no. 2, 169-188. (Bruce M. Hill) **80e:62026a** 62E99 (60J20, 62P99)
- Errata de l'article: "Lois de Zipf sources markoviennes" (Ann. Inst. H. Poincaré Sect. B (N.S.) **14** (1978), no. 2, 169-188). *Ann. Inst. H. Poincaré Sect. B (N.S.)* **15** (1979), no. 2, 195-196. (Editors) **80e:62026b** 62E99 (60J20, 62P99)
- Rubens, Marc** Pattern classification problems and fuzzy sets. *Fuzzy Sets and Systems* **1** (1978), no. 4, 239-253. (James C. Bezdek) **80j:68114** 68G10 (94D05)
- Roucaud, Catherine** Un nouvel algorithme pour le problème d'affectation quadratique. (English summary) *RAIRO Rech. Opér.* **13** (1979), no. 3, 275-301. (Author's summary) **80g:90091** 90C20
- Rouch, Timothy** Some sufficient conditions for regular approximate differentiability. *Colloq. Math.* **41** (1979/80), no. 1, 123-132. (B. Bongiorno) **80k:26009** 26B05
- Rouet, A.** Renormalization of Yang-Mills theory developed around an instanton. *Feynman path integrals* (Proc. Internat. Colloq., Marseille, 1978), pp. 444-447, Lecture Notes in Phys., 106, Springer, Berlin, 1979. (George Leibbrandt) **80m:81060** 81E15
- (with Amati, D.) Renormalization of Yang-Mills theory developed around an instanton. (Italian and Russian summaries) *Nuovo Cimento A* (11) **50** (1979), no. 2, 265-286. (James D. Fabry) **80f:81064** 81E10 (81E15)
- Roulier, John A.** (with Fletcher, Yates) Approximation of functions with a positive derivative. *J. Approx. Theory* **25** (1979), no. 1, 50-55. (V. Veselinov) **80k:41012** 41A50 (41A10)
- (with Fletcher, Yates) A counterexample to strong unicity in monotone approximation. *J. Approx. Theory* **27** (1979), no. 1, 19-33. (Darrell Schmidt) **80j:41030** 41A29 (41A10, 41A50)
- Rounds, Erica M.** (with Ginsburg, Seymour) Dynamic syntax specification using grammar forms. *IEEE Trans. Software Engrg.* **4** (1978), no. 1, 44-55. (Authors' summary) **80b:68014** 68B05 (68F05)
- Rourke, Colin** (with César de Sá, Eugénia) The homotopy type of homeomorphisms of 3-manifolds. *Bull. Amer. Math. Soc. (N.S.)* **1** (1979), no. 1, 251-254. (M.-E. Hamstrom) **80j:57006** 57M99 (57S05)
- (with Fenn, Roger A.) On Kirby's calculus of links. *Topology* **18** (1979), no. 1, 1-15. (Wilbur Whitten) **80e:57005** 57M25
- Romik, Fred** (with Butler, Kim Ki-Hang) Words with prescribed adjacencies. *J. Combin. Theory Ser. B* **26** (1979), no. 1, 85-97. (R. A. Meltzer) **80j:05008** 05A99 (05C45)
- Romik, Fred W.** (with Kim, Ki Hang) Enumeration of isomorphism classes of semiorders. *J. Combin. Inform. System Sci.* **3** (1978), no. 2, 58-61. (Derek C. J. Burgess) **80i:06004** 06A10
- (with Kim, Ki Hang) Ultrametrics and matrix theory. *J. Math. Psych.* **18** (1978), no. 2, 195-203. (Authors' summary) **80a:15021** 15A48 (92A25)
- (with Kim, Ki Hang) Inverses of Boolean matrices. *Linear Algebra Appl.* **22** (1978), 247-262. (R. J. Plemmons) **80b:15007** 15A09
- (with Kim, Ki Hang) The semigroup of adjacency patterns of words. *Algebraic theory of semigroups* (Proc. Sixth Algebraic Conf., Szeged, 1976), pp. 281-297, Colloq. Math. Soc. János Bolyai, 20, North-Holland, Amsterdam, 1979. (Anna Ja. Alzenštat) **80k:20083** 20M05 (68F05)
- (with Kim, Ki Hang) A universal algebra approach to free projective planes. *Aequationes Math.* **19** (1979), no. 1, 48-52. (V. Havel) **80j:08003** 08A45 (51A45, 51D99)
- (with Kim, Ki Hang) A conjecture of Recski in combinatorial set theory. *J. Combin. Theory Ser. A* **26** (1979), no. 1, 87-89. (András Recski) **80b:05006** 05A17
- (with Kim, Ki Hang) Characterization of certain choice functions. *J. Econom. Theory* **20** (1979), no. 2, 271-275. (Albert Schild) **80d:90011** 90A06
- (with Kim, Ki Hang) On a conjecture of Erdős and Rényi. *Linear Algebra Appl.* **23** (1979), 179-189. (P. Erdős) **80b:15012** 15A15
- (with Kim, Ki Hang) The group-theoretic complexity of subsemigroups of Boolean matrices. *Linear Algebra Appl.* **25** (1979), 289-297. (S. Lajos) **80k:20073** 20M10
- (with Kim, Ki Hang) On the  $\mathcal{Q}$ -class of a product. *Semigroup Forum* **18** (1979), no. 1, 93-94. (William R. Nico) **80i:20036** 20M10
- (with Kim, Ki Hang) Reflexive lattices of subspaces. *Proc. Amer. Math. Soc.* **78** (1980), no. 1, 17-18. (R. A. Meltzer) **80i:15001** 15A03 (06B99, 15A04)
- Roussarie, Robert** Singularités des champs de vecteurs et existence d'intégrales premières. *Bol. Soc. Brasil. Mat.* **7** (1976), no. 2, 127-144. (J. S. Joel) **80f:58005** 58A15 (34C05, 58C27, 58F99)
- Constructions de feuilletages (d'après W. Thurston). *Séminaire Bourbaki, 29e année* (1976/77), Exp. No. 499, pp. 138-154, Lecture Notes in Math., 677, Springer, Berlin, 1978. (Editors) **80k:57051** 57R30
- Roussas, George G.** (with Akritas, M. G.) Sample size, parameter rates and contiguity—the i.n.i.d. case. *Bull. Soc. Math. Grèce (N.S.)* **19** (1978), no. 2, 240-259. (Masafumi Akahira) **80i:60002** 60B10 (62E20)
- (with Akritas, M. G.; Puri, Madan L.) Sample size, parameter rates and contiguity—the I.I.D. case. *Comm. Statist. A—Theory Methods* **8** (1979), no. 1, 71-83. (Constantin Drossos) **80d:62038** 60G30 (62B20)
- Asymptotic distribution of the log-likelihood function for stochastic processes. *Z. Wahrsch. Verw. Gebiete* **47** (1979), no. 1, 31-46. (Rashid Ahmad) **80b:62029** 62E20 (62M07)
- Roussas, C. C.** (with Sheehan, J.) Ramsey numbers for books. (French summary) *Problèmes combinatoires et théorie des graphes* (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 367-369, Colloques Internat. CNRS, 260, CNRS, Paris, 1978. (Authors' summary) **80j:05092** 05C55
- (with Faudree, R. J.; Sheehan, J.) More from the good book. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1978), pp. 289-299, Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978. (Torrence D. Parsons) **80b:05038** 05C55 (05B25)
- (with Sheehan, J.) On Ramsey numbers for books. *J. Graph Theory* **2** (1978), no. 1, 77-87. (Jean-Claude Bermond) **80a:05151** 05C55
- (with Erdős, Paul; Faudree, R. J.; Schelp, R. H.) The size Ramsey number. *Period. Math. Hungar.* **9** (1978), no. 1-2, no. 2, 145-161. (F. Harary) **80b:05037** 05C55
- Roussas, Christiane** Nombres réels et complexes dans les topos spatiaux. *Ann. Sci. Math. Québec* **3** (1979), no. 1, 143-154. (Gavin Wraith) **80e:18004** 18B25 (03E70)
- Roussas, Guy** Difféomorphismes d'une variété symplectique non compacte. *Comment. Math. Helv.* **53** (1978), no. 4, 622-633. (I. Vaisman) **80a:58010** 58D05 (53C15)
- Roussas, Jean-Jacques** See **Kamecov, B. G.** **80d:01012**
- Roussas, Pascale** (with Sankoff, David) Singularities in the analysis of binomial data. *Biometrika* **65** (1978), no. 3, 603-608. (Authors' summary) **80a:62042** 62F11
- Roussas, Ronny** (with van Daele, Alfons) Crossed products of commutation systems. *Math. Ann.* **239** (1979), no. 1, 7-20. (Marie Choda) **80k:46068** 46L10
- The covariance algebra of an extended covariant system. *Math. Proc. Cambridge Philos. Soc.* **85** (1979), no. 2, 271-280. (Ole A. Nielsen) **80e:46040** 46L10
- Roussas-Egebe, J.** La loi forte des grands nombres pour les processus harmonisables. (English summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* **15** (1979), no. 2, 175-186. (T. Kawata) **80k:60045** 60G12 (60F15)
- Rousselle, Bernard** ★ Identification de domaines et problèmes de valeurs propres. Thèse présentée à l'Université de Nice pour obtenir le grade de Docteur de Spécialité en Mathématiques Appliquées. Université de Nice, Institut de Mathématiques et Sciences Physiques, Nice, 1977. 204 pp. (not consecutively pagged). (From the introduction) **80e:49012** 49A99
- Roussignol, Michel** (with Cocozza, Christiane; Galves, Antonio) Méthodes d'association pour des systèmes infinis de particules sur  $\mathbb{R}$ . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 21, A1011-A1014. (Authors' summary) **80b:60132** 60K35
- (with Cocozza, Christiane) Unicité d'un processus de naissance et mort sur la droite réelle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 7, A547-A550. (Authors' summary) **80b:60109** 60J80
- (with Cocozza, Christiane) Unicité d'un processus de naissance et mort sur la droite réelle. (English summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* **15** (1979), no. 1, 93-106. (H. Kesten) **80k:60131** 60K35 (60J80)
- Routledge, R. D.** Diversity indices: which ones are admissible? *J. Theoret. Biol.* **76** (1979), no. 4, 503-515. (Author's summary) **80e:92037** 92A15 (92A10)
- Routley, Richard** (with Meyer, Robert K.) Towards a general semantical theory of implication and conditionals. II. Improved negation theory and propositional identity. *Rep. Math. Logic* No. 9 (1977), 47-62. (Editors) **80d:03019** 03B20
- Constant domain semantics for quantified nonnormal modal logics and for certain quantified quasi-entailment logics. *Rep. Math. Logic* No. 10 (1978), 103-121 (1979). (David Makinson) **80m:03041** 03B45
- (with Loparic, André) Semantical analysis of Arruda da Costa P systems and adjacent nonreplacement relevant systems. *Studia Logica* **37** (1978), no. 4, 301-320 (1979). (Garrel Pottinger) **80g:03020** 03B45
- (with Routley, V.) The (logical) importance of not existing. *Dialogue* **18** (1979), no. 2, 129-165. (From the introduction) **80d:03019** 03B45 (03A05)
- (with Griffin, Nicholas) Towards a logic of relative identity. *Logique et Anal.* (N.S.) **22** (1979), no. 85-86, 65-83. (David Makinson) **80j:03018** 03B15 (03B99)
- Routley, V.** (with Routley, Richard) The (logical) importance of not existing. *Dialogue* **18** (1979), no. 2, 129-165. (From the introduction) **80d:03019** 03B45 (03A05)
- le Roux, Alain Yves** Convergence d'un schéma quasi d'ordre deux pour une équation quasi linéaire du premier ordre. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **280** (1979), no. 11, A575-A577. (Author's summary) **80k:65076** 65M10
- Roux, B.** (with Escofier, B.) Mesure de l'influence d'un descripteur sur une analyse en composantes principales. *Publ. Inst. Statist. Univ. Paris* **22** (1977), no. 1-2, 25-44. **80f:62059** 62H25
- (with Bontoux, P.; Forestier, B.) Analyse et optimisation d'une méthode de haute précision pour la résolution des équations de Navier-Stokes instationnaires. (English summary) *J. Méc. Appl.* **2** (1978), no. 3, 291-316. (Authors' summary) **80a:62111** 65N20 (76D05)
- Roux, C. Z.** Sex differences in linkage between autosomal loci. *Theoret. Population Biol.* **13** (1978), no. 3, 295-303. (K. Gopalsamy) **80b:92038** 92A15 (92A10)
- Roux, Delfina** (with Massa, Silvio) A fixed point theorem for generalized nonexpansive mappings. (Italian summary) *Boll. Un. Mat. Ital.* **4** (5) **15** (1978), no. 3, 624-634. (Norman Dancer) **80a:47088** 47H10
- le Roux, H. J.** (with Heyman, G. A. P.) On the characterizations of certain radical classes. *Kyungpook Math. J.* **19** (1979), no. 1, 3-7. (R. F. Rossa) **80j:16007** 16A21
- gulu-Roux, J.** See **Gulu-Roux, J.**
- le Roux, Marie-Noëlle** See **Le Roux, Marie-Noëlle**
- Rovnyak, James** (with Frankfurt, Richard) Recent results and unsolved problems on finite

- convolution operators. *Linear spaces and approximation* (Proc. Conf., Math. Res. Inst., Oberwolfach, 1977), pp. 133–150, *Internat. Ser. Numer. Math.*, 40, Birkhäuser, Basel, 1978. (Thomas Hoover) **80a:47078** 47G05
- Row, Dan** Almost-Baer subplanes of free projective planes. *Geom. Dedicata* 7 (1978), no. 4, 399–401. (F. Wilke) **80a:51006** 51A45
- Row, W. H.** An algebraic characterization of connected sum factors of closed 3-manifolds. *Trans. Amer. Math. Soc.* 250 (1979), 347–356. (L. Neuirth) **80g:57009** 57M25 (57N10)
- Rowe, D. J.** (with Rosensteel, G.) The nuclear collective model and the symplectic group. *Group theoretical methods in physics* (Sixth Internat. Colloq., Tübingen, 1977), pp. 144–161, *Lecture Notes in Phys.*, 79, Springer, Berlin, 1978. (William H. Klink) **80d:81134** 81G40 (22E70)
- (with Rosensteel, G.) Geometric derivation of the kinetic energy in collective models. *J. Math. Phys.* 20 (1979), no. 3, 465–468. (Authors' summary) **80f:81043** 81C40
- (with Giraud, B. G.) Curvature as a measure of collectivity. *Nuclear Phys. A* 330 (1979), no. 2-3, 352–366. (Gerald Kaiser) **80f:81079** 81H05
- Rowe, E. G. Peter** Structure of the energy tensor in the classical electrodynamics of point particles. *Phys. Rev. D* (3) 18 (1978), no. 10, 3639–3654. (Edwin Ihrig) **80k:78013** 78A25
- Decomposition of vector fields by scalar potentials. *J. Phys. A* 12 (1979), no. 1, 145–150. (C. W. Kilmister) **80c:58001** 58-01 (78-01)
- The elementary sources of multiple radiation. *J. Phys. A* 12 (1979), no. 2, 245–255. (W. Witschel) **80c:78015** 78A40
- Rowen, Louis Halle** Polynomial identities of nonassociative rings. I. The general structure theory of nonassociative rings, with emphasis on polynomial identities and central polynomials. *Illinois J. Math.* 22 (1978), no. 3, 341–378. (M. F. Smiley) **80b:17001a** 17A30 (16A38)
- Polynomial identities of nonassociative rings. II. Fine points of the structure theory. *Illinois J. Math.* 22 (1978), no. 4, 521–540. (M. F. Smiley) **80b:17001b** 17A30 (16A38)
- Correction to: "Monomial conditions on prime rings" (Israel J. Math. 27 (1977), no. 2, 131–149). *Israel J. Math.* 30 (1978), no. 1-2, 192. (J. K. Luedeman) **80b:16013** 16A38 (16A12)
- (with Amitsur, S. A.; Tignol, J.-P.) Division algebras of degree 4 and 8 with involution. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 4, 691–693. (D. A. Jordan) **80c:16029** 16A45 (16A28)
- Polynomial identities of nonassociative rings. III. Applications. *Illinois J. Math.* 23 (1979), no. 1, 15–35. (M. F. Smiley) **80b:17001c** 17A30 (16A38)
- Rowlands, G.** (with Infeld, E.) Stability of nonlinear ion sound waves and solitons in plasmas. *Proc. Roy. Soc. London Ser. A* 366 (1979), no. 1727, 537–554. (Magdi M. Shoucri) **80f:76050** 76X05
- Rowlett, Russell J.** The fixed-point construction in equivariant bordism. *Trans. Amer. Math. Soc.* 246 (1978), 473–481. (R. E. Stong) **80c:57042** 57R85
- Erratum to: "Torsion in the bordism of oriented involutions" (Trans. Amer. Math. 231 (1977), no. 2, 541–548). *Trans. Amer. Math. Soc.* 248 (1979), no. 1, 221. (Editors) **80c:57021** 57R85
- Rowley, N.** Connection between Coulomb and oscillator problems. *J. Phys. A* 12 (1979), no. 1, L7–L11. (Georges Bessis) **80c:81023** 81C05
- Rowley, Peter** On factorizable groups. *Arch. Math. (Basel)* 31 (1978/79), no. 2, 113–116. (Thomas Laffey) **80f:20018** 20D10
- Solubility of finite groups admitting a fixed-point-free abelian automorphism group of square-free exponent  $rs$ . *Proc. London Math. Soc.* (3) 37 (1978), no. 3, 385–421. (M. E. Harris) **80c:20024** 20D10 (20D45)
- A note on strongly closed 2-subgroups of finite groups. *Comm. Algebra* 7 (1979), no. 10, 1029–1042. (Bernd Baumann) **80c:20030** 20D20
- Roxia, Emilio O.** See Differential games and control theory, **80d:90001** and Differential games and control theory, **80f:90006a**
- Roy, Gildas** (with Gourieroux, Christian) Enquête en deux vagues: renouvellement de l'échantillon. (English and Spanish summaries) *Ann. I.N.S.E.E.* No. 29 (1978), 115–135. (Jan Lanke) **80d:62012** 62D05
- Coste-Roy, Marie-Françoise** See Coste-Roy, Marie-Françoise
- Roy, Pradip** (with Berkowitz, H. W.) General positioning in a mapping cylinder. *Yokohama Math. J.* 26 (1978), no. 1, 39–47. (C. R. F. Maunder) **80g:57028** 57Q65
- Roy, S. K.** (with Agarwal, J. P.) Effect of suction and injection on flow along a vertical plane surface. *Appl. Sci. Res.* 35 (1979), no. 5-6, 373–391. (From the summary) **80m:76071** 76S05
- On the differential equation  $dy/dx = (a_1x + b_1y + c_1)/(a_2x + b_2y + c_2)$ . *Internat. J. Math. Ed. Sci. Tech.* 10 (1979), no. 2, 289–290. (Editors) **80g:34002** 34A05
- Roy, S. M.** (with Singh, Virendra) Completeness of tests of local hidden variable theories. *J. Phys. A* 12 (1979), no. 7, 1003–1009. (Authors' summary) **80f:81014** 81B10 (26D15)
- Condition for nonexistence of Aharonov-Bohm effect. *Phys. Rev. Lett.* 44 (1980), no. 3, 111–114. (Author's summary) **80j:81046** 81D99
- Roy, S. R.** (with Rajbali; Prakash, S.) A cylindrically symmetric universe in general relativity. *Proc. Indian Acad. Sci. Sect. A* 87 (1978), no. 9, 181–188. (Carl Brans) **80j:83007** 83C15 (53B50)
- (with Prakash, S.) An anisotropic incoherent fluid cosmological model in general relativity. *Indian J. Pure Appl. Math.* 10 (1979), no. 1, 1–5. (Authors' summary) **80c:83059** 83F05 (53B50)
- (with Narain, Shyam) Some plane symmetric models of perfect fluid distribution in general relativity. *Indian J. Pure Appl. Math.* 10 (1979), no. 6, 763–771. (Authors' summary) **80c:83033** 83C55
- Roy, T.** (with Chaudhuri, Kasturi Roy; Chaudhuri, A. Roy) Quantisation of soliton solution of a generalised discrete non-linear equation. *J. Phys. A* 12 (1979), no. 2, 187–190. (G. Vitiello) **80d:81113** 81G05 (39A12)
- Royall, Richard M.** Corrigenda: "The linear least-squares prediction approach to two-stage sampling" [J. Amer. Statist. Assoc. 71 (1976), no. 355, 657–664; MR 56 #9766]. *J. Amer. Statist. Assoc.* 74 (1979), no. 366, part 1, 516. (Editors) **80c:62019** 62D05
- Roy Chowdhury, A. N.** (with Chaki, M. C.) On a type of Kähler space. *Mathematica (Cluj)* 16(39) (1974), no. 2, 223–227 (1977). (N. Prakash) **80b:53015** 53B35
- van Royen, R. P.** (with van Neerven, W. L.) Infrared behaviour of  $\phi^4$  theory in three dimensions and connection with critical phenomena. (Italian and Russian summaries) *Nuovo Cimento A* (11) 51 (1979), no. 4, 489–508. (Authors' summary) **80i:81116** 81E15 (82A25)
- Royer, G.** (with Doss, Halim) Processus de diffusion associé aux mesures de Gibbs sur  $\mathbb{R}^{\mathbb{Z}}$ . *Z. Wahrsch. Verw. Gebiete* 46 (1978/79), no. 1, 107–124. (Hermann Rost) **80b:60122** 60K35
- Processus de diffusion associé à certains modèles d'Ising à spins continus. *Z. Wahrsch. Verw. Gebiete* 46 (1978/79), no. 2, 165–176. (Hermann Rost) **80b:60121** 60K35
- Royer, J.** (with Miannay, D.; Le Poac, P.; Tissot, J. M.) Approches de l'intégrale de Rice. *Ann. École Nat. Sup. Méc. Nantes* 1978, 93–107. (Authors' conclusion) **80b:73054** 73M05
- Roymette, B.** Marches aléatoires sur les groupes de Lie. *École d'Été de Probabilités de Saint-Flour, VII* (Saint-Flour, 1977), pp. 237–379, *Lecture Notes in Math.*, 678, Springer, Berlin, 1978. (Pierre Crépel) **80c:60087** 60J15 (60B15)
- Rozanov, Jurii Anatol'evič** (with Ibragimov, I. A.) ★ Gaussian random processes. Translated from the Russian by A. B. Aries. Applications of Mathematics, 9. Springer-Verlag, New York-Heidelberg, 1978. x+275 pp. ISBN 0-387-90302-X (Editors) **80f:60038** 60G15
- On the paper "Markov random fields, and stochastic partial differential equations" (Mat. Sb. (N.S.) 103(145) (1977), no. 4, 590–613). (Russian) *Mat. Sb. (N.S.)* 106(146) (1978), no. 3, 484–492, 496. (D. Surgailis) **80a:60081** 60H15 (60G25)
- Théorie des processus d'innovation. (English summary) *Rev. CETHEDC Cahier* 1978, no. 1, 107 pp. (Editors) **80c:60057** 60G25
- ★ Случайные процессы. (Russian) [Random processes] Second edition, revised and augmented. "Nauka", Moscow, 1979. 183 pp. (Editors) **80g:60003** 60-01
- Rožanskii, M. M.** See Forbes, Eric Gray, **80m:01021**
- Roždenskii, B. L.** (with Levitan, Ju. L.; Moiseenko, B. D.; Priimak, V. G.; Sidorova, V. K.) Methods of numerical modeling of turbulent flows of an incompressible viscous fluid. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 14* (1979), 20 pp. (Authors' summary) **80b:76020** 76F99 (65P05)
- Rozeboom, William W.** The logic of unboundedly reactive systems. Automaton-theoretical foundations of psychology and biology. II. *Synthese* 39 (1978), no. 3, 435–530. (P. Suppes) **80g:92041** 92A25
- Rozen, V. V.** The direct product of games with ordered outcomes. (Russian) *Mathematical models of behavior*, No. 3 (Russian), pp. 16–28, 86, Saratov. Gos. Univ., Saratov, 1978. (M. Mañas) **80i:90108** 90D10
- Games with ordered outcomes and monocompactly generated lattices. (Russian) *Ordered sets and lattices*, No. 5 (Russian), pp. 90–97, 119, Saratov. Gos. Univ., Saratov, 1978. (Author's summary) **80c:90142** 90D42 (06B99)
- Rozenberg, Grzegorz** (with Salomaa, Arto K.) New squeezing mechanisms for L systems. *Inform. Sci.* 12 (1977), no. 3, 187–201. (Authors' summary) **80c:68205** 68F10
- (with Lee, K. P.) TIL systems and languages. *Inform. Sci.* 12 (1977), no. 3, 203–227. (Authors' summary) **80c:68203** 68F10 (92A05)
- (with Albert, Jürgen; Maurer, Hermann) Simple EOL forms under uniform interpretation generating CF languages. *Automata, languages and programming* (Fifth Internat. Colloq., Udine, 1978), pp. 1–14, *Lecture Notes in Comput. Sci.*, 62, Springer, Berlin, 1978. (Gheorghe Păun) **80d:68081** 68F05
- (with Meersman, Robert) Cooperating grammar systems. *Mathematical foundations of computer science*, 1978 (Proc. Seventh Sympos., Zakopane, 1978), pp. 364–373, *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (K. P. Lee) **80d:68091** 68F05
- (with Meersman, Robert) Two-level meta-controlled substitution grammars. *Acta Inform.* 10 (1978), no. 4, 323–339. (P. Deussen) **80c:68063** 68F05
- (with Ehrenfeucht, Andrzej; Karhumäki, Juhani) A note on DOL length sets. *Discrete Math.* 22 (1978), no. 3, 233–242. (Jürgen Dassow) **80f:68082** 68F05
- (with Vermeir, D.) On the effect of the finite index restriction on several families of grammars. II. Context dependent systems and grammars. *Found. Control Engng.* 3 (1978), no. 3, 125–142. (Juhani Karhumäki) **80f:68089b** 68F05
- (with Ehrenfeucht, Andrzej) Simplifications of homomorphisms. *Inform. and Control* 38 (1978), no. 3, 298–309. (Juhani Karhumäki) **80a:20080** 20M15 (20M05, 68C30)
- (with Maurer, Hermann) Increasing the similarity of EOL form interpretations. *Inform. and Control* 38 (1978), no. 3, 330–342. (A. Salomaa) **80d:68090** 68F05
- (with Vermeir, D.) On the effect of the finite index restriction on several families of grammars. *Inform. and Control* 39 (1978), no. 3, 284–302. (Juhani Karhumäki) **80f:68089a** 68F05
- (with von Solms, S. H.) Priorities on context conditions in rewriting systems. *Inform. Sci.* 14 (1978), no. 1, 15–50. (Authors' summary) **80c:68206** 68F10
- (with von Solms, S. H.) Rewriting systems with a clocking mechanism. *Inform. Sci.* 14 (1978), no. 3, 221–280. (Authors' summary) **80c:68207** 68F10
- (with Ehrenfeucht, Andrzej) On the structure of derivations in deterministic ETOL systems. *J. Comput. System Sci.* 17 (1978), no. 3, 331–347. (Jürgen Dassow) **80a:68080** 68F05
- (with Ehrenfeucht, Andrzej) Elementary homomorphisms and a solution of the DOL sequence equivalence problem. *Theoret. Comput. Sci.* 7 (1978), no. 2, 169–183. (K. P. Lee) **80c:68053** 68F05
- (with Ehrenfeucht, Andrzej) On arithmetic substitutions of EDTOL languages. *Found. Control Engng.* 4 (1979), no. 2, 57–62. (Authors' summary) **80d:68086** 68F05
- (with Pawlak, Z.; Savitch, Walter J.) Programs for instruction machines. *Inform. and Control* 41 (1979), no. 1, 9–28. (Authors' summary) **80c:68019** 68B05 (68D35)
- (with Ehrenfeucht, Andrzej) An observation on scattered grammars. *Inform. Process. Lett.* 9 (1979), no. 2, 84–85. (From the introduction) **80f:68058** 68F05
- (with Meersman, Robert) Parallelism and synchronization in two-level metacontrolled-substitution grammars. *Inform. Sci.* 18 (1979), no. 1, 67–82. (Authors' summary) **80i:68061** 68F05
- (with Meersman, Robert; Vermeir, D.) Persistent ETOL systems. *Inform. Sci.* 18 (1979), no. 3, 189–212. (Authors' summary) **80c:68204** 68F10
- (with Vermeir, D.) On acceptors of iteration languages. *Internat. J. Comput. Math.*



- 7 (1979), no. 1, 3-19. (Juhani Karhumäki) **80d:68103** 68F10 (68F05)  
(with Ehrenfeucht, Andrzej) Every two equivalent DOL systems have a regular tree envelope. *Theoret. Comput. Sci.* **10** (1980), no. 1, 45-52. (David B. Benson) **80m:68073** 68F10 (68D45)
- Rosenblatt, B. V. Positive theories of free inverse semigroups. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 6, 1282-1293, 1408. (M. A. Taiclin) **80m:03079** 03D35 (03D40, 20M05)
- Rosenblatt, G. M. Vibrational stabilization of controllable systems. *Avtomat. i Telemekh.* **1978**, no. 3, 14-23 (Russian. English summary); translated as *Automat. Remote Control* **39** (1978), no. 3, part 1, 322-330. (K. W. Han) **80a:93144** 93D99  
(with Gnenskil, L. S.) Accuracy of certain nonstationary servosystems. *Avtomat. i Telemekh.* **1978**, no. 9, 5-19 (Russian); translated as *Automat. Remote Control* **39** (1978), no. 9, part 1, 1263-1276 (1979). (Authors' summary) **80j:93098** 93D25
- Rosenbljum, G. V. Near-similarity of operators and the spectral asymptotic behavior of pseudo-differential operators on the circle. (Russian) *Trudy Moskov. Mat. Obšč.* **36** (1978), 59-84, 294. (A. S. Dynin) **80m:47024** 47B25 (47G05)
- Rosenfeld, B. A. (with Kuznecova, V. A.; Hanturina, S. A.) Geometric construction of operations of the algebra of  $m$ -planes in projective  $(2m+1)$ -space. (Russian) *Problems of group theory and homological algebra*, No. 1 (Russian), pp. 211-219, Jaroslav. Gos. Univ., Yaroslavl, 1977. (E. J. F. Primrose) **80j:51001** 51A05  
(with Sergeeva, N. D.) The astronomical treatises of al-Khwarizmi. (Russian) *Istor.-Astronom. Issled.* **10** (1977), 201-218. (E. S. Kennedy) **80a:01006** 01A30  
Obituary for I. N. Veselovskii. (Russian) *Istor.-Astronom. Issled.* **10** (1978), 119-120. (Editors) **80g:01030** 01A70  
(with Ucheha, L. G.) al-Birūnī's astronomical treatise on shadows. (Russian) *Istor.-Astronom. Issled.* **10** (1978), 303-314. (E. S. Kennedy) **80a:01013** 01A30 (70-03)  
(with Bašmakova, I. G.; Slavutin, E. I.) The Arabic text of Diophantus' *Arithmetica*. (Russian) *Istor.-Mat. Issled.* **10** (1978), 192-225, 358. (E. M. Bruins) **80d:01005** 01A20 (01A30)  
Some questions on the mathematics of variable quantities in al-Birūnī's treatise on shadows. (Russian) *Istor.-Mat. Issled.* **10** (1978), 226-230, 358. (E. S. Kennedy) **80d:01008** 01A30
- Rosenfeld, M. Z. (with Žaičenko, V. A.; Ivanov, A. V.; Faradžev, I. A.) An algorithm for checking the canonicity of a partially augmented adjacency matrix of a graph. (Russian) *Algorithmic studies in combinatorics* (Russian), pp. 19-25, 185 (errata insert), "Nauka", Moscow, 1978. (Authors' summary) **80a:05082** 05C50 (05C25, 68E10)
- Rozenskiy, Zdeněk. Verbände von Kernen der Abbildungen, die orthogonalreut sind. (Czech and Russian summaries) *Časopis Pěst. Mat.* **104** (1979), no. 2, 134-148, 200. (Jacques Lévy-Bruhl) **80j:06008** 06B10  
Ein Beitrag zur Theorie der Orthogonalität auf Mengen. (Czech and Russian summaries) *Časopis Pěst. Mat.* **104** (1979), no. 3, 255-266, 311. (Harald Scheid) **80i:04003** 04A05 (03G12, 06A23, 46C99, 81B05)
- Rozental, Stefan. See Rosenfeld, Léon, **80a:01068**
- Rozenvasser, E. N. Sufficient conditions for applicability of the first approximation in problems of sensitivity theory. *Avtomat. i Telemekh.* **1978**, no. 11, 35-41 (Russian. English summary); translated as *Automat. Remote Control* **39** (1978), no. 11, part 1, 1606-1612 (1979). (Authors' summary) **80c:93039** 93B35 (34D05)
- Rozin, A. L. (with Davydov, Ju. A.) Sojourn times for functions and stochastic processes. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **23** (1978), no. 3, 650-654. (J. G. Wendel) **80a:60046** 60G17 (60J65)
- Rozin, L. A. ★ Вариационные постановки задач для упругих систем. (Russian) [Variational formulations of problems for elastic systems] *Leningrad. Univ., Leningrad*, 1978. 223 pp. (errata insert). (Vadim Komkov) **80g:73006** 73A05 (49H05)
- Rozinas, M. G. (with Poljakov, E. A.) Correlations between different forms of relative computability of functions. (Russian) *Mat. Sb. (N.S.)* **107** (1978), no. 1, 134-145, 160. (Cristian Calude) **80c:81135** 68C40 (03D30)
- Ruklov, V. I. (with Panfilov, N. G.) A boundary value problem for a linear system with a small parameter multiplying the derivative. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 10, 1806-1813, 1917. (I. Kiguradze) **80a:34014** 34B05 (34D15)
- Rozonoer, L. I. Extension operators in the general theory of dynamic systems. *Avtomat. i Telemekh.* **1979**, no. 6, 49-62 (Russian); translated as *Automat. Remote Control* **40** (1979), no. 6, part 1, 820-830. (Authors' summary) **80j:93087** 93C99
- Rozor, N. H. (with Rahimberdiev, M. I.) Distribution of Ljapunov exponents in linear systems with periodic coefficients that are nearly constant in the mean. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 9, 1710-1714, 1727. (A. Somolinskii) **80f:34042** 34D05  
(with Efimov, N. V.; Kolmogorov, A. N.; Millionsčikov, V. M.) In memoriam Boris Pavlovič Demidovič. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 2(200), 169-174. (Editors) **80a:01031** 01A70
- Rozovskiĭ, L. V. A lower bound for the remainder term in the central limit theorem. (Russian) *Mat. Zametki* **24** (1978), no. 3, 403-410, 447. (S. A. Book) **80c:60040** 60F05  
The accuracy of an estimate of the remainder term in the central limit theorem. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **23** (1978), no. 4, 744-761. (Dominik Szybal) **80i:60027** 60F05
- Róza, P. See Kao, Y. S.; et al., **80a:65087**
- Rozvany, G. I. N. (with Prager, W.) A new class of structural optimization problems: optimal archgrids. *Comput. Methods Appl. Mech. Engrg.* **19** (1979), no. 1, 127-150. (Authors' summary) **80f:73065** 73K99 (65K10)
- Rózycka, M. (with Tschamner, W. M.; Winkler, K.-H.; Yorke, H. W.) Fragmentation of interstellar clouds: three-dimensional hydrodynamical calculations. *Astronom. and Astrophys.* **83** (1980), no. 1-2, 118-128. (Authors' summary) **80m:85005** 85A20 (65N05)
- Ruan, Tu Nan (with Zhou, Guang Zhao; Du, Dong Sheng) The pure gauge fields on a coset space. *Sci. Sinica* **22** (1979), no. 1, 37-52. (William H. Klink) **80a:81063** 81E15 (53C10)  
(with Du, Dong Sheng; Yin, Hung Chun) General form of effective Lagrangian in path integral quantization formalism. *Nuclear Phys. B* **164** (1980), no. 1, 103-113. (Authors' summary) **80m:81031** 81C35
- Ruas de Barros, V. Some results on the curved plate bending problem solved with non-conforming finite elements. *Calcolo* **15** (1978), no. 2, 101-120. (Author's summary) **80d:73094** 73K10 (65N30)
- Rubakov, V. A. (with Lapčinskii, V. G.) A superspace quantization of gravity. (Russian) *Problemy Teor. Gravitacii i Element. Čistic No. 9* (1978), 33-40. (A. K. Guc) **80d:83031** 83C35  
(with Krasnikov, N. V.; Tokarev, V. F.) Dynamic spontaneous breaking of symmetry. (Russian. English summary) *Teoret. Mat. Fiz.* **37** (1978), no. 3, 319-325. (Authors' summary) **80b:81082** 81E15
- Ruban, A. I. A numerical solution of the local asymptotic problem on the nonstationary separation of the laminar boundary layer in a supersonic flow. (Russian) *Ž. Vyšisl. Mat. i Mat. Fiz.* **18** (1978), no. 5, 1253-1265, 1357. (Author's summary) **80c:76031** 76J99 (65F05)
- Rubanov, I. S. Characterization of shapes of compacta with the aid of spectra of nerves of coverings. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 1, 128-140, 206. (Jerzy Dydak) **80c:54024** 54C56 (55P55)
- Rubanović, E. M. Some properties of conservative systems. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **2** (1979), 83-87, 104. (From the text) **80i:49002** 49A22 (70E15)
- Rubel, Lee A. (with Squires, W. A.; Taylor, B. A.) Irreducibility of certain entire functions with applications to harmonic analysis. *Ann. of Math.* (2) **108** (1978), no. 3, 553-567. (Carlos A. Berenstein) **80d:32003** 32A15 (30D30)  
(with Anderson, J. M.) Hypernormal meromorphic functions. *Houston J. Math.* **4** (1978), no. 3, 301-309. (Ch. Pommerenke) **80b:30026** 30D45  
(with Newman, Donald J.) On osculatory interpolation by trigonometric polynomials. *Internat. J. Math. Math. Sci.* **2** (1979), no. 4, 717-720. (Authors' summary) **80i:42003** 42A15  
(with Posluszný, Jeffrey) The motions of an ordinary differential equation. *J. Differential Equations* **34** (1979), no. 2, 291-302. (F. Neuman) **80m:58036** 58F35 (34C20)  
(with Timoney, Richard M.) An extremal property of the Bloch space. *Proc. Amer. Math. Soc.* **75** (1979), no. 1, 45-49. (Joel H. Shapiro) **80m:30034** 30D99 (32A10, 46E15)
- Ruben, Harold. On the distance between points in polygons. *Geometrical probability and biological structure: Buffon's 200th anniversary (Proc. Buffon Bicentenary Sympos., Paris, 1977)*, pp. 49-69, *Lecture Notes in Biomath.*, 23, Springer, Berlin, 1978. (Mir M. Ali) **80b:60026** 60D05  
On quadratic forms and normality. *Sankhyā Ser. A* **40** (1978), no. 2, 156-173. (C. G. Khatri) **80i:62010** 62E10
- Rubenfeld, L. A. A model bifurcation problem exhibiting the effects of slow passage through critical. *SIAM J. Appl. Math.* **37** (1979), no. 2, 302-306. (W. Güttinger) **80j:35009** 35B32 (35K55)
- Rubežanskii, Ju. I. (with Litvinov, V. G.) Methods of the theory of duality in problems of optimal loading of thin plates. (Russian) *Prikl. Meh.* **14** (1978), no. 2, 73-79, 142. (Vadim Komkov) **80d:73092** 73K10 (35Q99)  
Some inverse problems for cylindrical shells. (Russian) *Prikl. Meh.* **15** (1979), no. 9, 32-36, 141. (Authors' summary) **80i:73057** 73L99
- Rubi, J. M. (with Jou, D.; Perez-Garcia, C.) Variational solutions for the two-stream mixing of power-law fluids. *Appl. Sci. Res.* **35** (1979), no. 5-6, 393-407. (Authors' summary) **80m:76006** 76A05
- Rubin, Arthur L. (with Howard, Paul E.; Rubin, Jean E.) Independence results for class forms of the axiom of choice. *J. Symbolic Logic* **43** (1978), no. 4, 673-684. (James D. Halpern) **80b:03070** 03E25
- Rubin, B. S. (with Volodarskaja, G. F.) An imbedding theorem for convolutions on a finite interval and its application to integral equations of the first kind. (Russian) *Dokl. Akad. Nauk SSSR* **244** (1979), no. 6, 1322-1326. (A. Ramm) **80j:45009** 45E10 (46E35)  
Correction: "A general method for the study of the Noethericity of operators of potential type with power-logarithmic kernels on a finite segment" [*Izv. Akad. Nauk Armjan. SSR Ser. Mat.* **12** (1977), no. 6, 447-461; MR **58** #7224]. (Russian) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* **14** (1979), no. 1, 70-71. (J. Kolomoj) **80j:47062** 47G05 (45H05)
- Rubin, David S. (with Links, Graham) Finite primal cutting plane algorithms for integer programs. *SIAM J. Control Optim.* **17** (1979), no. 1, 47-55. (Mary W. Cooper) **80b:90099** 90C10
- Rubin, Donald B. Bayesian inference for causal effects: the role of randomization. *Ann. Statist.* **6** (1978), no. 1, 34-58. (D. V. Lindley) **80c:62097** 62K99 (62A15)
- Rubin, Frank. Decrypting a stream cipher based on J-K flip-flops. *IEEE Trans. Comput.* **28** (1979), no. 7, 483-487. (A. T. Amin) **80k:94049** 94C10 (68A05, 94B99)
- Rubin, Izhak (with Hartman, Jehuda) On diameter stability of graphs. *Theory and applications of graphs (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976)*, pp. 247-254, *Lecture Notes in Math.*, 642, Springer, Berlin, 1978. (Jerald A. Kabell) **80g:05044** 05C38 (05C99)  
Group random-access disciplines for multi-access broadcast channels. *IEEE Trans. Inform. Theory* **24** (1978), no. 5, 578-592. (M. C. Cheng) **80c:94014** 94A40
- Rubin, Jean E. (with Howard, Paul E.; Rubin, Arthur L.) Independence results for class forms of the axiom of choice. *J. Symbolic Logic* **43** (1978), no. 4, 673-684. (James D. Halpern) **80b:03070** 03E25
- Rubin, Leonard R. (with Schori, R. M.; Walsh, John J.) New dimension-theory techniques for constructing infinite-dimensional examples. *General Topology Appl.* **10** (1979), no. 1, 93-102. (A. R. Pears) **80c:54049** 54F45 (57N20)  
Hereditarily strongly infinite-dimensional spaces. *Michigan Math. J.* **27** (1980), no. 1, 65-73. (John J. Walsh) **80m:54050** 54F45
- Rubin, Matatyahu (with Loats, James T.) Boolean algebras without nontrivial onto endomorphisms exist in every uncountable cardinality. *Proc. Amer. Math. Soc.* **72** (1978), no. 2, 346-351. (L. Bukovsky) **80f:03071** 03G05 (03C65, 06E99)  
On the automorphism groups of homogeneous and saturated Boolean algebras. *Algebra Universalis* **9** (1979), no. 1, 54-86. (Peter Schmitt) **80d:03032** 03C60 (03G05, 06E20)
- Rubinson, A. M. Growth rates of trajectories in models with variable technology. (Russian) *Optimizacija* **No. 19**(36) (1977), 119-126, 155. (Ju. G. Pavlov) **80c:90032** 90A16 (90A14)

- A vector minimax theorem. (Russian. English summary) *Game theory questions of decision making (Russian)*, pp. 39-43, 126, Nauka Leningrad. Otdel., Leningrad, 1978. (G. Zatiašvili) **80i:90101** 90C48
- A generalization of Choquet's ordering. (Russian. English summary) *Game theory questions of decision making (Russian)*, pp. 78-85, 127, Nauka Leningrad. Otdel., Leningrad, 1978. (G. D. Maistrovskii) **80i:46024** 46E15 (90D99)
- Turnpikes in von Neumann-Gale models. (Russian) *Dokl. Akad. Nauk SSSR* **242** (1978), no. 2, 287-289. (A. Aganbegian) **80i:90030** 90A14 (90C30)
- A class of optimal trajectories in Neumann-Gale models. (Russian) *Optimizacija* No. 20(37) (1978), 147-155, 157. (A. A. Piontkovskii) **80i:90034** 90A14 (90A16, 90C25)
- Rubinovich, Michael (with Barzily, Zeev) On platoon formation on two-lane roads. *J. Appl. Probab.* **16** (1979), no. 2, 347-361. (Frank A. Haight) **80e:90044** 90B20
- Rubinsow, S. L. (with Berger, R. Oppenheim) Time-dependent solution to age-structured equations for sexual populations. *Theoret. Population Biol.* **16** (1979), no. 4, 35-47. (Authors' summary) **80g:92027** 92A15
- Rubinstein, A. G. Calculation of equilibrium in a model of economic interaction of regions. (Russian) *Optimizacija* No. 22(39) (1978), 127-142, 157. (Author's summary) **80m:90039** 90A17 (90A14)
- Rubinstein, A. I. Parseval's equality. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 6(193), 102-108. (K. Karták) **80i:42011** 42A16
- Rubinstein, Arfel A note about the "nowhere denseness" of societies having an equilibrium under majority rule. *Econometrica* **47** (1979), no. 2, 511-514. (Ron Heiner) **80g:90009** 90A06 (90A08)
- Equilibrium in supergames with the overtaking criterion. *J. Econom. Theory* **21** (1979), no. 1, 1-9. (Mamoru Kaneko) **80i:90116** 90D20
- Rubinstein, J. H. (with Gardiner, C.) A note on a 3-dimensional homogeneous space. *Compositio Math.* **39** (1979), no. 3, 297-299. (W. D. Neumann) **80i:57010** 57N10 (20H05)
- Free actions of some finite groups on  $S^2$ . I. *Math. Ann.* **240** (1979), no. 2, 165-175. (C. B. Thomas) **80i:57071** 57S17 (57N10)
- On 3-manifolds that have finite fundamental group and contain Klein bottles. *Trans. Amer. Math. Soc.* **251** (1979), 129-137. (Benny Evans) **80i:57004** 57N10
- Rubinstein, L. The Stefan problem: comments on its present state. *J. Inst. Math. Appl.* **24** (1979), no. 3, 259-277. (W. F. Ames) **80i:35096** 35R35 (35-02, 35K60)
- Rubinstein, Y. (with Karnovsky, A.) The regenerative method for constrained optimization problems. (French summary) *Operational research '78 (Proc. Eighth IFORS Internat. Conf., Toronto, Ont., 1978)*, pp. 931-949, North-Holland, Amsterdam, 1979. (F. Giannessi) **80d:90061** 90C15 (90C05)
- (with Weissman, Ishay) The Monte Carlo method for global optimization. *Cahiers Centre Études Rech. Opér.* **21** (1979), no. 2, 143-147. (Istvan Deak) **80i:65005** 65C05
- Rubinstein, Ryszard L. Some remarks on the cohomotopy of  $RP^\infty$ . *Quart. J. Math. Oxford Ser. (2)* **30** (1979), no. 117, 119-128. (Stewart B. Priddy) **80i:55011** 55P42 (55Q55)
- Rubio, J. E. Existence and approximation in control problems in Hilbert spaces. *J. Math. Anal. Appl.* **69** (1979), no. 2, 419-427. (V. L. Bakke) **80i:49002** 49A27
- Rubio de Francia, José L. Nets of subgroups in locally compact groups. *Comment. Math. Prace Mat.* **20** (1977/78), no. 2, 453-466. (Norman J. Weiss) **80i:43002** 43A07
- Rubins, George Second-order estimates in singular perturbation of output regulator problems. *IEEE Trans. Automat. Control* **24** (1979), no. 2, 350-353. (Author's summary) **80c:93120** 93E10
- Rublev, V. S. (with Bondarenko, V. A.; Sokolov, V. A.) Simultaneous ordering of input data structures and of output data generation. (Russian) *Heuristic optimization algorithms (Russian)*, pp. 114-143, Jaroslav. Gos. Univ., Yaroslavl, 1976. (L. Hizder (RŽMat 1977:9 V771)) **80i:68025** 68B15 (68H05, 90C50)
- Rublik, Frantisek A note on codes for compound memoryless channels. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 145-147, Reidel, Dordrecht, 1978. (Author's summary) **80g:94041** 94A24
- On conditional expectations of vector valued variables. (Russian summary) *Math. Slovaca* **28** (1978), no. 2, 153-156. (Jerzy Szulga) **80i:60065** 60G42
- Rubtsov, B. A. Normalizer of a diminishing sequence of measurable partitions. (Russian) *Dokl. Akad. Nauk UzSSR* No. 9 (1979), 9-10. (B. S. Pickel') **80m:28017** 28D15
- Ruck, Herbert M. (with Constantinescu, Florin) Phase transitions in a continuous three states model with discrete gauge symmetry. *Ann. Physics* **115** (1978), no. 2, 474-495. (U. Cattaneo) **80i:81067** 81E10
- (with Constantinescu, Florin) Quantum field theory Potts model. *J. Math. Phys.* **19** (1978), no. 11, 2359-2361. (Jean-Pierre Eckmann) **80i:81004** 82A67 (81E10)
- Ruckebusch, Guy On the theory of Markovian representation. *Measure theory applications to stochastic analysis (Proc. Conf., Res. Inst. Math., Oberwolfach, 1977)*, pp. 77-87, *Lecture Notes in Math.*, 695, Springer, Berlin, 1978. (R. S. Bucy) **80i:93150** 93E20 (60C99)
- (with Lindquist, Anders; Picci, Giorgio) On minimal splitting subspaces and Markovian representations. *Math. Systems Theory* **12** (1978/79), no. 3, 271-279. (M. V. Kartalov) **80i:60048** 60G12 (46C99, 93E03)
- Ruckle, William H. The Mackey and strong topologies on Köthe sequence spaces. *Indiana Univ. Math. J.* **27** (1978), no. 3, 505-513. (Piotr Antosik) **80i:46014** 46A45
- Errata: "The Mackey and strong topologies on Köthe sequence spaces" [*Indiana Univ. Math. J.* **27** (1978), no. 3, 505-513; MR 80d:46014]. *Indiana Univ. Math. J.* **28** (1979), no. 1, 191. (From the text) **80i:46011** 46A45
- Geometric games of search and ambush. *Math. Mag.* **52** (1979), no. 4, 195-206. (Editors) **80m:93079** 93E03
- Ruda, L. G. (with Burtstein, M. I.; Vainstein, Ju. B.; Patarkacišvili, M. M.) Realization of one approach to integrated circuit layout automation. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* **94** (1979), no. 3, 573-576. (Author's summary) **80m:94108** 94C15
- Rudakov, A. N. (with Baismakova, I. G.; Gnedzenko, B. V.; Kuz'čeva, Z. A.; Medvedev, F. A.; Ožigova, E. P.; Paršin, A. N.; Slavutin, E. I.; Šefin, O. B.; Juškevič, A. P.) ★Математика XIX века. (Russian) [XIXth century mathematics] Математическая логика. Алгебра. Теория чисел. Теория вероятностей. [Mathematical logic. Algebra. Number theory. Probability theory] Edited by A. N. Kolmogorov and A. P. Juškevič. "Nauka", Moscow, 1978. 255 pp. (I. Grattan-Guinness) **80i:01010** 01A55
- (with Šafarevič, I. R.) Supersingular  $K3$  surfaces over fields of characteristic 2. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* **42** (1978), no. 4, 848-869. (Miles Reid) **80i:14015** 14J25 (14J10)
- (with Šafarevič, I. R.) Vector fields on elliptic surfaces. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 6(204), 231-232. (P. E. Newstead) **80i:14022** 14J25 (14J10)
- Local universal algebras and reducible representations of Lie algebras. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* **43** (1979), no. 1, 178-183. (J. E. Humphreys) **80i:17007** 17B10 (17B35)
- See also Bourbaki, Nicolas, **80i:17001**
- Rudakov, L. I. (with Gorev, V. V.; Koldoba, A. V.; Poveičenko, Ju. A.; Popov, Ju. P.) Numerical simulation of strong current relativistic electron beam diffusion through matter. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 102 (1978), 31 pp. (Authors' summary) **80i:78013** 78A35 (00A89)
- Rudčenko, P. A. (with Lučko, I. A.; Jurik, I. I.) Computation of the filtration from channels that are formed by detonations. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint* No. 14 (1978), 23 pp. (Authors' summary) **80i:76094** 76S05
- Solution of a system of linear algebraic equations. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 37 (1979), 118-121, 145. **80i:65073** 65F05
- Rudeanu, Sergiu On reproductive solutions of arbitrary equations. *Publ. Inst. Math. (Beograd) (N.S.)* **24(38)** (1978), 143-145. (M. Kuczma) **80i:39008** 39B10
- Rudenko, V. M. Investigation of the dynamics of an astatic gyroscope with elastic gimbal suspension. *Izv. Akad. Nauk SSSR Meh. Toerd. Tela* **13** (1978), no. 1, 15-21. (Russian); translated as *Mech. Solids* **13** (1978), no. 1, 12-17. (Author's summary) **80i:70004** 70E05
- Rüdiger, Günther On the  $\alpha$ -effect for slow and fast rotation. (German summary) *Astronom. Nachr.* **299** (1978), no. 4, 217-222. (Author's summary) **80i:76043** 76F05
- Rudin, Mary Ellen (with Shelah, Saharon) Unordered types of ultrafilms. *Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978)*, I. *Topology Proc.* **3** (1978), no. 1, 199-204 (1979). (James Baumgartner) **80i:04002** 04A20 (54A25)
- Hereditary normality and Souslin lines. *General Topology Appl.* **10** (1979), no. 1, 103-105. (Paul Bankston) **80i:03071** 03E25 (54B10, 54D20)
- The undecidability of the existence of a perfectly normal nonmetrizable manifold. *Houston J. Math.* **5** (1979), no. 2, 249-252. (A. Császár) **80i:54014** 54D15 (03E50, 54A35, 54E30)
- Pixley-Roy and the Souslin line. *Proc. Amer. Math. Soc.* **74** (1979), no. 1, 128-134. (William G. Fleissner) **80i:54030** 54E99 (03E35, 54G20)
- Rudin, Walter The fixed-point sets of some holomorphic maps. *Bull. Malaysian Math. Soc. (2)* **1** (1978), 25-28. (D. J. Eustice) **80i:32002** 32A10
- Inner function images of radii. *Math. Proc. Cambridge Philos. Soc.* **85** (1979), no. 2, 357-360. (George L. Csordas) **80i:30030** 30D40
- Rudko, M. (with Weiner, D. D.) Optimum non-linear Wiener filters. *J. Franklin Inst.* **308** (1979), no. 1, 57-68. (Authors' summary) **80i:93074** 93E11
- Rudko, V. N. (with Fišček, I. I.) Theory of the phononless high frequency Hall effect in disordered systems. (Russian summary) *Phys. Status Solidi (B)* **89** (1978), no. 1, 61-68. (Authors' summary) **80i:82042** 82A42
- Rudnev, V. V. Systems of interconnected graphs and algorithmic programming of sampled-data controllers. *Avtomat. i Telemekh.* **1979**, no. 7, 122-129. (Russian. English summary); translated as *Automat. Remote Control* **40** (1979), no. 7, part 2, 1044-1049. (Author's summary) **80i:68015** 68B20 (68B15)
- Rudnick, Karl (with Bennett, Colin; Vaaler, Jeffrey D.) Note on best approximation of  $j$ . *Canad. Math. Bull.* **22** (1979), no. 3, 363-366. (Jean Tzimbario) **80i:41006** 41A20
- Rudoj, Ju. G. Generalized dynamic random phase approximation for the collective Green function of the anisotropic Heisenberg ferromagnet. (Russian. English summary) *Teoret. Mat. Fiz.* **40** (1979), no. 1, 112-123. (Author's summary) **80i:82046** 82A65
- Rudolph, Daniel J. If a two-point extension of a Bernoulli shift has an ergodic square, then it is Bernoulli. *Israel J. Math.* **30** (1978), no. 1-2, 159-180. (Paul C. Shields) **80i:28020** 28D05 (28D20)
- If a finite extension of a Bernoulli shift has no finite rotation factors, it is Bernoulli. *Israel J. Math.* **30** (1978), no. 3, 193-206. (Paul C. Shields) **80i:28028** 28D05 (28D20)
- Counting the relatively finite factors of a Bernoulli shift. *Israel J. Math.* **30** (1978), no. 3, 255-263. (Paul C. Shields) **80i:28028c** 28D05 (28D20)
- Classifying the isometric extensions of a Bernoulli shift. *J. Analyse Math.* **34** (1978), 36-60 (1979). (Manfred Denker) **80i:28020** 28D20
- Smooth orbit equivalence of ergodic  $\mathbb{R}^d$  actions,  $d \geq 2$ . *Trans. Amer. Math. Soc.* **253** (1979), 291-302. (Peter Walters) **80i:28017** 28D05 (58F11)
- Rudolph, H. Zur Approximation semininfinit Programme. *Wiss. Z. Karl-Marx-Univ. Leipzig Math.-Natur. Reihe* **27** (1978), no. 5, 501-508. (Markku Kallio) **80i:90089** 90C05
- Rudolph, Luther D. (with Hartmann, Carlos R. P.; Hwang, Tai Yang; Nguyen Q. Duc) Algebraic analog decoding of linear binary codes. *IEEE Trans. Inform. Theory* **25** (1979), no. 4, 430-440. (Authors' summary) **80i:94063** 94B35 (94B15)
- Rudolph, Stefan (with Philipp, Klaus) Über die Komplexität formaler Zuweisungsprobleme und die Effizienz der den Problemlöseprozess steuernden Strategien. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* **20** (1978), no. 4, 425-435. (Authors' summary) **80i:90150** 90C50 (90C15)
- Rudra, P. (with Sikdar, M. K.) Group theoretical analysis of second-order phase transitions in magnetic structures. *J. Math. Phys.* **20** (1979), no. 7, 1579-1592. (R. L. Ingraham) **80i:81117** 81G50 (20C35)
- Rudraiah, N. (with Venkatachallappa, M.) Propagation of hydromagnetic waves in a perfectly conducting non-isothermal atmosphere in the presence of rotation and a variable magnetic field. *J. Fluid Mech.* **89** (1978), no. 4, 785-792. (Authors' summary) **80i:86011** 86A35 (78A40)
- Rudzikas, Z. B. (with Špakauskas, V. V.; Kaniauskas, J.) Genealogical coefficients that are reduced in a quasipin space, and submatrix elements of tensorial operators. (Russian. Lithuanian and English summaries) *Lietuvos. Fiz. Sb.* **18** (1978), no. 3, 293-315, 412. (J. Niederle) **80i:22017** 22E70 (17B10, 81G40)



- Rudakis, R.** (with Saulis, L. I.; Statulevičius, V.) Large deviations for sums of independent random variables. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 1, 169–179, 232. (S. A. Book) **80f:60029** 60F10
- Rueh, Adolf Stephann** See Bottema, O.; et al. **80k:01029**
- Ruegg, H.** Octonionic quark confinement. *Acta Phys. Polon. B* 9 (1978), no. 12, 1037–1050. (Woodford W. Zachary) **80d:81049** 81D05 (51C05, 81G05)
- Ruelle, David** ★ Thermodynamic formalism. The mathematical structures of classical equilibrium statistical mechanics. With a foreword by Giovanni Gallavotti and Gian-Carlo Rota. Encyclopedia of Mathematics and its Applications, 5. Addison-Wesley Publishing Co., Reading, Mass., 1978. xix + 183 pp. ISBN 0-201-13504-3 (J. E. Marsden) **80g:82017** 82A05 (28D20)
- An inequality for the entropy of differentiable maps. *Bol. Soc. Brasil. Mat.* 9 (1978), no. 1, 83–87. (D. Newton) **80f:58026** 58F11 (28D20)
- (with Newhouse, Sheldon; Takens, Floris) Occurrence of strange Axiom A attractors near quasiperiodic flows on  $T^m$ ,  $m \geq 3$ . *Comm. Math. Phys.* 64 (1978/79), no. 1, 35–40. (Shigehiro Ushiki) **80f:58029** 58F13
- Integral representation of measures associated with a foliation. *Inst. Hautes Études Sci. Publ. Math.* No. 48 (1978), 127–132. (Peter Walters) **80d:58040** 58F11 (28D20)
- Invariant measures for a diffeomorphism which expands the leaves of a foliation. *Inst. Hautes Études Sci. Publ. Math.* No. 48 (1978), 133–135. (Peter Walters) **80d:58041** 58F11 (28D20)
- Analytic properties of the characteristic exponents of random matrix products. *Adv. in Math.* 32 (1979), no. 1, 68–80. (Michael Keane) **80e:58035** 58F15 (28D99, 82A15)
- Ruffini, R.** (with Belinskii, V. A.) On axially symmetric soliton solutions of the coupled scalar-vector-tensor equations in general relativity. *Phys. Lett. B* 89 (1980), no. 2, 195–198. (Authors' summary) **80m:83006** 83C15
- Ruffo, S.** (with Bergia, S.; Cannata, F.; Savoia, M.) Group theoretical interpretation of von Neumann's theorem on composite systems. *Amer. J. Phys.* 47 (1979), no. 6, 548–552. (Authors' summary) **80h:81040** 81C40
- Rüger, B.** Das maximale Signifikanzniveau des Tests: "Lehne  $H_0$  ab, wenn  $k$  unter  $n$  gegebenen Tests zur Ablehnung führen". (English summary) *Metrika* 25 (1978), no. 3, 171–178. (Detlef Plachky) **80f:60011** 60C05 (62F03)
- Rugot, Gabriel** (with Benveniste, Albert; Goursat, Maurice) Un résultat de convergence des algorithmes d'approximation stochastique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 10, A771–A773. (Authors' summary) **80c:62101** 62L20
- (with Benveniste, Albert; Goursat, Maurice) Une fonctionnelle mesurant la déformation par rotation d'une loi produit; application à l'identification aveugle d'un système à non-minimum de phase. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 14, A965–A968. (Authors' summary) **80h:93153** 93E12
- Ruggieri, Tommaso** (with Boillat, Guy) Limite de la vitesse des chocs dans les champs à densité d'énergie convexe. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 3, A257–A258. (Authors' summary) **80f:76027** 76L05 (35L67)
- (with Boillat, Guy) Reflection and transmission of discontinuity waves through a shock wave. General theory including also the case of characteristic shocks. *Proc. Roy. Soc. Edinburgh Sect. A* 83 (1979), no. 1–2, 17–24. (Alan Jeffrey) **80f:35078** 35L65
- (with Boillat, Guy) On the evolution law of weak discontinuities for hyperbolic quasilinear systems. *Wave Motion* 1 (1979), no. 2, 149–152. (Alan Jeffrey) **80f:35077** 35L65
- Ruggiero, J. R.** (with Villani, A.; Zimmerman, A. H.) Some comments on the application of analytic regularisation to the Casimir forces. *J. Phys. A* 13 (1980), no. 2, 761–766. (Authors' summary) **80k:81214** 81L05 (82A15)
- Ruggiero, Patrizia** (with Dohrn, Daniela; Guerra, Francesco) Spinning particles and relativistic particles in the framework of Nelson's stochastic mechanics. *Feynman path integrals (Proc. Internat. Colloq., Marseille, 1978)*, pp. 165–181, *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (Steven M. Moore) **80m:81028** 81C20 (58D30, 60J60)
- Rugh, Wilson J.** (with Mitzel, Glenn E.; Clancy, Steven J.) On transfer function representations for homogeneous nonlinear systems. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 242–249. (Authors' summary) **80h:93018** 93A99
- Ruh, Ernst A.** Comparison theorems for noncompact symmetric spaces. *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. II. (Portuguese), pp. 453–460, *Inst. Mat. Pura Apl., Rio de Janeiro, 1978*. (O. Kowalski) **80g:53033** 53C20 (53C35)
- Rubaja, H. M.** A formal equality theory  $\mathcal{S}_{\text{eq}}$ . (Russian. Georgian and English summaries) *Studies in mathematical logic and the theory of algorithms (Russian)*, pp. 9–23, *Tbilis. Univ., Tbilis.*, 1978. (Jerzy Kotas) **80j:03017** 03B10
- Rühs, Fritz** Über die Lösung der Potentialgleichung im Halbstreifen durch Integraltransformation. *Rostock. Math. Kolloq. No. 9* (1978), 93–104. (B. Hellwig) **80h:35025** 35C15 (35J05)
- Ruijsenaars, Simon N. M.** On Bogoliubov transformations. II. The general case. *Ann. Physics* 116 (1978), no. 1, 105–134. (Y. Kato) **80a:81090** 81E99 (47A65)
- (with Garber, Wolf-Dieter; Seiler, Erhard; Burns, Dan) On finite action solutions of the nonlinear  $\sigma$ -model. *Ann. Physics* 119 (1979), no. 2, 305–325. (H. Rund) **80e:81059** 81E10 (58E20)
- de Ruijter, J.** Split extensions of Lie algebras. *Nieuw Arch. Wisk.* (3) 26 (1978), no. 3, 428–440. (D. Ž. Doković) **80c:17017** 17B65
- Trillas Ruiz, Enrique** See Trillas Ruiz, Enrique
- Ruiz, Roberto** (with Ruiz Salguero, C.) Remarks about the Eilenberg-Zilber type decomposition in cosimplicial sets. *Rev. Colombiana Mat.* 12 (1978), no. 3–4, 61–82. (John Roy Dennett) **80j:55025** 55U10
- Ruiz Salguero, C.** (with Ruiz, Roberto) Remarks about the Eilenberg-Zilber type decomposition in cosimplicial sets. *Rev. Colombiana Mat.* 12 (1978), no. 3–4, 61–82. (John Roy Dennett) **80j:55025** 55U10
- Rukhala, Kh. M.** A duality theorem. *Studia Logica* 37 (1978), no. 2, 157–159. (W. S. Hatcher) **80c:03062** 03E99 (03B30)
- Rukhin, Andrew L.** Universal statistical procedures for the estimation of a real parameter. (French and Italian summaries) *Statistica (Bologna)* 37 (1977), no. 4, 525–533. (Bruce M. Hill) **80a:62012** 62C10
- Universal Bayes estimators. *Ann. Statist.* 6 (1978), no. 6, 1345–1351. (S. K. Katti) **80f:62039** 62F15 (62C10)
- (with Penney, R. C.) d'Alembert's functional equation on groups. *Proc. Amer. Math. Soc.* 77 (1979), no. 1, 73–80. (Ferenc Fenyes) **80h:39013** 39B50 (39B30)
- Rukolaime, A. V.** The center of the semigroup algebra of a finite inverse semigroup over the field of complex numbers. (Russian) Rings and linear groups. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 75 (1978), 154–158, 198. (Uno Kaljulaid) **80b:20085** 20M25
- Rumčev, V. G.** (with Čelankov, B.) Cadre movement in hierarchical organization systems as an optimal control problem. (Bulgarian. Russian and English summaries) *Godinik Vizit. Učebn. Zaved. Prilozna Mat.* 12 (1976), no. 3, 31–40 (1978). (Authors' summary) **80b:93005** 93A13
- Rumjancev, A. N.** (with Babeiko, V. A.) Vibrations of a stamp adhering to an elastic layer over part of its surface. *Prikl. Mat. Meh.* 41 (1977), no. 4, 716–726. (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 4, 734–744 (1978). (H. K. Verma) **80h:73069** 73T05
- Rumjancev, G. Ja.** ★ Линейно-алгебраическая теория переноса нейтронов в плоских решетках. (Russian) [Linear-algebraic theory of neutron transport in flat lattices] "Atomizdat", Moscow, 1979. 223 pp. (N. Trinajstić) **80e:82046** 82A70 (82A67)
- Rumjancev, N. V.** (with Šiškovskii, G. I.) Waiting time distributions in the system  $M/G_1/G_2(\text{end})/1$  and  $M/G_1/G_2(\text{in})/1$ . (Russian. English summary) *Izvest. Operacii i ASU* No. 12 (1978), 108–114, 133. (H. T. Talmann) **80g:60187** 60K25
- Rumjancev, V. V.** The Hamiltonian principle and Hamilton-Jacobi methods for nonholonomic systems. (Russian. English and Serbo-Croatian summaries) *Teor. Primen. Meh.* No. 4 (1978), 131–137. (M. A. Jagubov) **80d:49053** 49C05 (70H20)
- (with Sumbatov, A. S.) On the problem of a generalization of the Hamilton-Jacobi method for nonholonomic systems. (German and Russian summaries) *Z. Angew. Math. Mech.* 58 (1978), no. 11, 477–481. (D. L. Rod) **80e:70024** 70H20 (70F25)
- Rumjanceva, E. N.** A statistical model of Fridman's spherical universe. (Russian) *Problemy Teor. Gravitacii i Element. Častic* No. 9 (1978), 29–33. (From the introduction) **80a:83023** 83C20 (53A35)
- Rummel, Hansluis** Métriques kählériennes et surfaces minimales. *Enseign. Math.* (2) 24 (1978), no. 3–4, 305–310. (Toru Ishihara) **80e:53068** 53C40 (53C55)
- Quelques notions simples en géométrie riemannienne et leurs applications aux feuilletages compacts. *Comment. Math. Helv.* 54 (1979), no. 2, 224–239. (Bruce L. Reinhart) **80m:57021** 57R30 (53C20)
- Rump, Siegfried M.** Polynomial minimum root separation. *Math. Comp.* 33 (1979), no. 145, 327–336. (Maurice Mignotte) **80d:12018** 12D10
- Rumpf, Helmut** (with Urbantke, H. K.) Covariant "in-out" formalism for creation by external fields. *Ann. Physics* 114 (1978), no. 1–2, 332–355. (N. D. Sengupta) **80a:81066** 81E05 (00A89)
- On the translational part of the Lagrangian in the Poincaré gauge theory of gravitation. *Z. Naturforsch. A* 33 (1978), no. 10, 1224–1225. (Author's summary) **80d:83080** 83D05 (53C50)
- Creation of Dirac particles in general relativity with torsion and electromagnetism. I. The general formalism. *Gen. Relativity Gravitation* 10 (1979), no. 6, 509–523. (G. R. Alcock) **80f:83038a** 83C99 (58G16, 81C05)
- Creation of Dirac particles in general relativity with torsion and electromagnetism. II. The constant electric field—a "pedagogical" example. *Gen. Relativity Gravitation* 10 (1979), no. 6, 525–533. (G. R. Alcock) **80f:83038b** 83C99 (58G16, 81C05)
- Creation of Dirac particles in general relativity with torsion and electromagnetism. III. Matter production in a model of torsion. *Gen. Relativity Gravitation* 10 (1979), no. 6, 647–658. (G. R. Alcock) **80m:83023** 83C50 (58G16)
- Rumsey, H. C., Jr.** (with McElice, Robert J.; Rodemich, E. R.) The Lovász bound and some generalizations. *J. Combin. Inform. System Sci.* 3 (1978), no. 3, 134–152. (László Lovász) **80a:05168** 05C99 (05B20, 94A24)
- Rumsey, V. H.** Space-time analysis of wave propagation through a turbulent medium. *Radio Sci.* 12 (1977), no. 2, 205–211. (William C. Meecham) **80e:76063** 76W05
- Rumyantsev, V. V.** See Rumjancev, V. V.
- Rund, Hanno** Generalized gauge field theories. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 2, 83–86. (B. N. Frolov) **80f:81072** 81E10 (49F05, 58E30)
- Systems of total differential equations and the group  $SL(n, \mathbb{R})$ . *Tensor (N.S.)* 32 (1978), no. 3, 373–379. (Akira Asada) **80e:58011** 58F07
- Evolution equations and curvature forms. I. Equations of the sine-Gordon type. *Utilitas Math.* 14 (1978), 189–218. (Ngô Van Quê) **80j:58003a** 58A15 (35Q20, 58F07)
- Clebsch representations and relativistic dynamical systems. *Arch. Rational Mech. Anal.* 71 (1979), no. 3, 199–220. (C. S. Sharma) **80d:83054** 83C55 (49C10, 76Y05)
- Variational derivation and uniqueness of the equations of motion of a particle in a classical gauge field. *Hadronic J.* 2 (1979), no. 1, 67–90. (Marcos D. Maia) **80d:81082** 81E10 (53C80, 81G20)
- Representations of the duals of gauge field tensors. *J. Math. Phys.* 20 (1979), no. 7, 1392–1397. (R. Behari) **80f:81037** 81E10 (53C05, 53C80)
- Evolution equations and curvature forms. II. Equations of the Korteweg-de Vries type. *Utilitas Math.* 15 (1979), 217–243. (Ngô Van Quê) **80j:58003b** 58A15 (35Q20, 58F07)
- Rundell, William** The Stefan problem for a pseudo-heat equation. *Indiana Univ. Math. J.* 27 (1978), no. 5, 739–750. (R. E. Showalter) **80b:35006** 35K70 (35R35)
- (with Stecher, Michael) A Runge approximation and unique continuation theorem for pseudoparabolic equations. *SIAM J. Math. Anal.* 9 (1978), no. 6, 1120–1125. (E. Kreyzig) **80c:35055** 35K99
- (with Stecher, Michael) The nonpositivity of solutions to pseudoparabolic equations. *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 251–254. (Charles C. Conley) **80e:35031** 35K25
- The uniqueness class for the Cauchy problem for pseudoparabolic equations. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 253–257. (David S. Tartakoff) **80c:35097** 35K30
- Rung, Donald C.** (with Dragosh, Stephen) Normal functions bounded on arcs and a proof of the Gross cluster-value theorem. *Hiroshima Math. J.* 9 (1979), no. 2, 303–312. (Tatsuo Fujii) **80j:30043** 30D45 (30D40)
- Runge, Walter** (with Schoch, Manfred) An algorithm for the solution of a generalized problem with fixed charges. I. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* 1978, no. 2,

- 10-17, 93. (M. M. Syslo) **80f:90126a** 90C30  
(with Schoch, Manfred) An algorithm for the solution of a generalized problem with fixed charges. II. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* **1978**, no. 3, 7-12, 86. (M. M. Syslo) **80f:90126b** 90C30
- Ronnalls, A. R.** Difficulties of the Lindley-Savage argument. *Synthese* **37** (1978), no. 3, 369-385. (I. J. Good) **80a:62008** 62A99 (60A05)
- Ruohonen, Keijo** Remarks on locally catenative developmental sequences. (German and Russian summaries) *Elektron. Informatsionnaya. Kybernet.* **14** (1978), no. 4, 171-180. (K. P. Lee) **80g:68104** 68F10 (68C30)
- On the decidability of the OL-DOL equivalence problem. *Inform. and Control* **40** (1979), no. 3, 301-318. (Author's summary) **80e:68197** 68F05 (03D05, 68C30)
- Rupinska, Maria** ★Słownik komputerowy słownictwo. (Polish) [Glossary of computer networks] With an alphabetic index of English terms. With English and Russian summaries. Prace IPI PAN [ICS PAS Reports], 350. *Polskiej Akademii Nauk, Instytut Podstaw Informatyki, Warszawa*, 1979. 100 pp. (Editors) **80j:00010** 00A20 (68-XX)
- Rupp, Werner** Riesz-presentation of additive and  $\alpha$ -additive set-valued measures. *Math. Ann.* **239** (1979), no. 2, 111-118. (Wolfgang Adamski) **80b:28010** 28B20
- Rupys, P.** A method of dynamic programming for deterministic discrete processes of general type. (Russian, Lithuanian and English summaries) *Litovsk. Mat. Sb.* **18** (1978), no. 4, 121-127, 202. (Andrzej W. Olbrot) **80j:49057** 49C20
- Dynamic programming for discrete stochastic systems of general form. (Russian, Lithuanian and English summaries) *Litovsk. Mat. Sb.* **19** (1979), no. 2, 167-177, 214. (Author's summary) **80i:49032** 49C20
- Rus, Teodor** ★Data structures and operating systems. Translated from the Romanian original. A Wiley-Interscience Publication. Wiley Series in Computing. Editura Academiei, Bucharest; John Wiley & Sons, Ltd., Chichester, 1979. xi + 364 pp. ISBN 0-471-99517-7 (Paul Jambor) **80f:68001** 68-01 (68Bxx)
- Rusak, Ju. B.** (with Loginov, B. V.) Generalized Jordan structure in bifurcation theory. (Russian) *Direct and inverse problems for partial differential equations and their applications* (Russian), pp. 133-148, 187, "Fan", Tashkent, 1978. (J. S. Joel) **80i:47026** 47A55 (58E07)
- Some relations between Jordan sets of an analytic operator-valued function and its conjugate. (Russian, Uzbek summary) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* **1978**, no. 2, 15-19, 89. (Author's summary) **80b:47062** 47B99
- Rusanov, V. V.** On mixed gas flows. (Russian) *Problems in mathematical physics and numerical mathematics* (Russian), pp. 279-286, 327-328, "Nauka", Moscow, 1977. (Author's summary) **80j:76046** 76N15
- (with Izvol'skii, V. A.) Construction and study of two-dimensional difference schemes of the third order of accuracy. (Russian, English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 3* (1979), 36 pp. (Authors' summary) **80e:65095** 65N20
- See also Conference: Numerical Methods in Fluid Dynamics, **80g:76002**
- Rushbridge, M. G.** Motion of the spring pendulum. *Amer. J. Phys.* **48** (1980), no. 2, 146-151. (Author's summary) **80b:70030** 70K99
- Rüschendorf, Ludger** On one-sample rank order statistics for dependent random variables. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians* (Tech. Univ. Prague, Prague, 1974), Vol. B, pp. 449-456, Academia, Prague, 1978. (M. Csörgö) **80b:62060** 62G10 (62E20)
- Ruscheweyh, Stephan** Some convexity and convolution theorems for analytic functions. *Math. Ann.* **238** (1978), no. 3, 217-228. (P. T. Mocanu) **80i:30023** 30C45
- (with Singh, Vikramaditya) On a Briot-Bouquet equation related to univalent functions. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 2, 285-290. (P. T. Mocanu) **80i:30022** 30C45 (34A20)
- Russetti, Aldo** The cardinality of classes of 6-5-graphs. (Italian, English summary) *Calcolo* **15** (1978), no. 4, 437-445. (Author's summary) **80m:05070** 05C35
- Some results of Grünbaum and Motzkin: dual versions and new developments. (Italian, English summary) *Riv. Mat. Univ. Parma* (4) **4** (1978), 221-231 (1979). (W. G. Brown) **80g:05042** 05C30 (05C10, 52A25)
- Ruser, P. K.** Analytische Fortsetzung der Laplaceschen Transformation einer Klasse analytischer Funktionen. *C. R. Acad. Bulgare Sci.* **32** (1979), no. 6, 719-720. (V. Ganapathy Iyer) **80j:30056** 30E20
- Rush, David E.** Pic(R) and the R-flattness of  $R[X]/I$ . *J. Pure Appl. Algebra* **14** (1979), no. 3, 307-310. (Stephen McAdam) **80b:13012** 13B25
- Rushforth, Craig K.** (with Yeh, Yern; Tal, Jacob) A state-space formulation of the causal linear prefiltering problem in sampled-data systems. *Inform. Sci.* **14** (1978), no. 1, 75-87. (Tohru Katayama) **80e:93124** 93E11 (94A05)
- Rushing, T. B.** (with Mardešić, Sibe) Shape fibrations. I. *General Topology Appl.* **9** (1978), no. 3, 193-215. (Paul F. Duvall) **80f:55013a** 55P55 (54C56)
- (with Mardešić, Sibe)  $n$ -shape fibrations. Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978), II. *Topology Proc.* **3** (1978), no. 2, 429-459 (1979). (Maria Moszyńska) **80m:54028** 54C56 (55R05)
- Cell-like maps, approximate fibrations and shape fibrations. *Geometric topology* (Proc. Georgia Topology Conf., Athens, Ga., 1977), pp. 631-648, Academic Press, New York, 1979. (Leonard R. Rubin) **80k:55037** 55P55
- (with Venema, Gerard A.) A weak flattening criterion for compacta in 4-space. *Geometric topology* (Proc. Georgia Topology Conf., Athens, Ga., 1977), pp. 649-654, Academic Press, New York, 1979. (John Hempel) **80h:57022** 57N25
- (with Mardešić, Sibe) Shape fibrations. II. *Rocky Mountain J. Math.* **9** (1979), no. 2, 283-298. (Paul F. Duvall) **80f:55013b** 55P55 (54C56)
- Rusin, David J.** What is the probability that two elements of a finite group commute? *Pacific J. Math.* **82** (1979), no. 1, 237-247. (Franco Migliorini) **80m:20024** 20D99
- Ruskey, Frank** Generating  $r$ -ary trees lexicographically. *SIAM J. Comput.* **7** (1978), no. 4, 424-439. (E. M. Reingold) **80f:68033** 68C05 (68E10)
- Rusnak, Joseph G.** (with Trivedi, Kishor S.) Higher radix on-line division. *Proceedings of the 4th IEEE Symposium on Computer Arithmetic* (Santa Monica, Calif., 1978), pp. 164-174, IEEE, Long Beach, Calif., 1978. (Authors' summary) **80g:68042** 68C05
- Rusnak, Zofia** An attempt to solve the location problem with weights on the plane. (Polish, English and Russian summaries) *Przegląd Statyst.* **25** (1978), no. 4, 537-541 (1979). (Author's summary) **80j:90059** 90B05
- Rusnak, I. Bert** See Information linkage between applied mathematics and industry, **80e:00004**
- Russakovskii, E. M.** Operator treatment of a boundary value problem with a spectral parameter that occurs rationally in the boundary conditions. (Russian) *Teor. Funkcii Funktsional. Anal. i Prilozhen.* No. 30 (1978), 120-128, v. (Author's summary) **80d:34030** 34B25
- Russakovskii, R. M.** Operator treatment of a boundary value problem with a spectral parameter that occurs rationally in the boundary conditions. II. (Russian) *Teor. Funkcii Funktsional. Anal. i Prilozhen.* No. 31 (1979), 140-145, 169. (Editors) **80k:47054** 47E05 (34B25)
- Russel, William B.** The low-shear limit of the effective viscosity of a solution of charged macromolecules. *J. Fluid Mech.* **92** (1979), no. 3, 401-419. (Kolumban Hutter) **80h:76049** 76W05 (73B30, 76D99)
- Russell, A. M.** Further results on an integral representation of functions of generalised variation. *Bull. Austral. Math. Soc.* **18** (1978), no. 3, 407-420. (James Foran) **80e:26002** 26A45
- Necessary and sufficient conditions for the existence of a generalized Stieltjes integral. *J. Austral. Math. Soc. Ser. A* **26** (1978), no. 4, 501-510. (Frank N. Huggins) **80f:26007** 26A42
- On a fourth-order singular integral inequality. *Proc. Roy. Soc. Edinburgh Sect. A* **80** (1978), no. 3-4, 249-260. (S. Leela) **80g:26022** 26D10
- Further comments on the variation function. *Amer. Math. Monthly* **86** (1979), no. 6, 480-482. (James Foran) **80i:26013** 26A45
- Russell, D. C.** (with Jakimovski, A.) High indices theorems for Riesz and Abel typical means. Special issue dedicated to Wladyslaw Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* **1** (1978), 133-145. (B. Kuttner) **80c:40003** 40D25 (40C99)
- Russell, David L.** Controllability and stabilizability theory for linear partial differential equations: recent progress and open questions. *SIAM Rev.* **20** (1978), no. 4, 639-739. (Vadim Komkov) **80c:93032** 93B05 (49B99)
- ★Mathematics of finite-dimensional control systems. Theory and design. Lecture Notes in Pure and Applied Mathematics, 43. Marcel Dekker, Inc., New York-Basel, 1979. viii + 553 pp. ISBN 0-8247-6869-8 (Vadim Komkov) **80d:93007** 93-02
- Russell, Peter** Simple Galois extensions of two-dimensional affine rational domains. *Compositio Math.* **38** (1979), no. 3, 253-276. (M. H. Gizatullin) **80j:14049** 14M20 (13F20)
- (with Sathaye, Avinash) On finding and cancelling variables in  $k[X, Y, Z]$ . *J. Algebra* **57** (1979), no. 1, 151-166. (T. Kambayashi) **80j:14030** 14J25 (13B25, 14E25)
- Russell, R. D.** (with Ascher, U.; Christiansen, J.) A collocation solver for mixed order systems of boundary value problems. *Math. Comp.* **33** (1979), no. 146, 659-679. (Steven M. Serbin) **80b:65108** 65L10
- Russell, R. Robert** (with Blackorby, Charles) Indices and subindices of the cost of living and the standard of living. *Internat. Econom. Rev.* **19** (1978), no. 1, 229-240. (Wolfgang Mayer) **80b:90015** 90A10
- Russell, Thomas** The share of top wealth holders: the life cycle, inheritance and efficient markets. *Ann. I.N.S.E.E.* No. 33-34 (1979), 159-180. (From the conclusion) **80e:62075** 62P25
- Russumann, I. V.** Complex estimation of a system and estimates of subsystems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 2, 201-204, 224 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 2, 158-161 (1979). (Kimio Kanai) **80b:49013** 49B10 (93C15)
- Russo, E.** (with Crisci, M. R.) An approximation of Bessel functions. (Italian, English summary) *Calcolo* **14** (1977), no. 3, 243-259. (Wilhelm Sippel) **80i:65022** 65D20 (33A40)
- Russo, Lucio** The infinite cluster method in the two-dimensional Ising model. *Comm. Math. Phys.* **67** (1979), no. 3, 251-266. (Koichiro Matsuno) **80f:82042** 82A55
- Russo, A. F.** Varieties generated by a finite commutative Moufang loop. (Russian) Quasigroups and loops. *Mat. Issled.* No. 51 (1979), 120-129, 165. (N. I. Sandu) **80j:20077** 20N05 (08B99)
- Rust, B. W.** (with Cope, J. E.) Bounds on solutions of linear systems with inaccurate data. *SIAM J. Numer. Anal.* **16** (1979), no. 6, 950-963. (James E. Gentle) **80m:65041** 65F99 (15A39)
- murray-rust, Peter** See Murray-Rust, Peter
- Rustagi, Jagdish S.** See Optimizing methods in statistics, **80d:62003**
- Rustam, B.** (with Velupillai, Kumaraswamy) On the definition and detection of structural change. *Stochastic control theory and stochastic differential systems* (Proc. Workshop, Deutsch. Forschungsgemeinschaft, Univ. Bonn, Bad Honnef, 1979), pp. 539-553, Lecture Notes in Control and Information Sci., 16, Springer, Berlin, 1979. (Authors' introduction) **80b:90054** 90A19 (93E20)
- Rusu, Gh.** Theory of loaded Cosserat elastic cylinders. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **24** (1978), no. 2, 379-388. (K. S. Harinath) **80c:73015** 73C30 (35Q99, 73C40)
- Rusu, Ioan** (with Coţiu, Filia) Sur un problème de programmation linéaire stochastique. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians* (Tech. Univ. Prague, Prague, 1974), Vol. B, pp. 457-463, Academia, Prague, 1978. (Ulrich Rieder) **80a:90105** 90C15
- Ruszczyński, Andrzej** Coordination of nonstationary systems. *IEEE Trans. Automat. Control* **24** (1979), no. 1, 51-62. (O. I. Nwokah) **80f:93010** 93A10
- (with Szymonowski, J.) Convergence analysis for two-level algorithms of mathematical programming. Point-to-set maps and mathematical programming. *Math. Programming Stud.* No. 10 (1979), 158-171. (Norihiko Adachi) **80d:90091** 90C99
- Rutenberg, David P.** (with Rao, Ram C.) Preempting an alert rival: strategic timing of the first plant by analysis of sophisticated rivalry. *Bell J. Econom.* **10** (1979), no. 2, 412-428. (Authors' summary) **80g:90139** 90D40 (90A05)
- Rutickii, Ja. B.** (with Berkolaiko, M. Z.) A class of function spaces. (Russian) *Dokl. Akad. Nauk SSSR* **244** (1979), no. 1, 16-19. (J. Albrecht) **80k:46028** 46E30
- Rutkas, A. G.** Transfer and scattering matrices of  $n$ -port networks. (Russian) *Mathematical modeling and the theory of electrical circuits*, No. 16 (Russian), pp. 3-15, 125, "Naukova Dumka", Kiev, 1978. (Editors) **80k:94033b** 94C15
- Rutkauskas, Pjotr** (with Bistrickas, V.) A multidimensional dichotomous process of dynamic programming. (Russian, Lithuanian and English summaries) *Litovsk. Mat. Sb.*



- 18 (1978), no. 4, 129-137, 202. (I. V. Romanovskii) **80c:90116** 90C39  
Approximation of a discrete process of resource allocation by an optimal continuous analogue. (Russian. Lithuanian and English summaries) *Mat. Metody v Social. Nauk.—Trudy Sem. Processy Optimal. Upravleniya II Sekcija No. 11* (1978), 99-109, 127. (M. Maňas) **80b:90131** 90C39
- Rutkanskas, S. The Dirichlet problem for a system of elliptic equations with a high order of degeneracy. (Russian. Lithuanian and German summaries) *Litovsk. Mat. Sb.* 18 (1978), no. 1, 181-186, 244. (Author's summary) **80c:35034** 35J55
- Rutkovskii, V. Ju. (with Zemljakov, S. D.) Conditions for the functioning of a multi-dimensional self-adjusting control system with a reference model at persistent parametric disturbances. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 2, 301-304. (Andrzej Gościński) **80a:93146** 93D99
- Rutkowski, J. An application of Dirichlet convolution in proving some inequalities from elementary number theory. *Elem. Math.* 34 (1979), no. 3, 59-61. (Kenneth Yocom) **80f:10007** 10A22 (10A20)
- Rutkowski, Marek The optimal stopping problem with incomplete information. *Demonstratio Math.* 11 (1978), no. 4, 959-973 (1979). (S. M. Samuels) **80c:60063** 60G40
- Ruyngaert, F. H. (with Groeneboom, P.; Oosterhoff, J.) Large deviation theorems for empirical probability measures. *Ann. Probab.* 7 (1979), no. 4, 553-586. (P. Révész) **80c:60030** 60F10 (60B10)
- Růžička, Milan (with Bek, Roman) On modelling of large variable systems of higher degree by means of language systems. *Kybernetika (Prague)* 15 (1979), no. 6, 408-428. (Authors' summary) **80m:93003** 93A05 (03B15)
- Růžičková, Helena On the eigenvalue problem from the ordinary differential equation of the fourth order. (Czech and Russian summaries) *Knižnice Odborn. Věd. Spisů Vysoké. Učení Tech. v Brně A* 10 (1976), 125-136 (1978). (Francesco G. Lerda) **80c:65072** 65L15
- Rumetov, E. Solvability of certain systems of partial differential equations. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* 21 (1978), no. 12, 11-14. (J. Girschovitch) **80g:35092** 35N10
- Rusa, I. Z. On the cardinality of  $A + A$  and  $A - A$ . *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 933-938. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (E. C. Milner) **80c:05016** 05A20  
(with Szemerédi, Endre) Triple systems with no six points carrying three triangles. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 939-945. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (W. G. Brown) **80c:05116** 05C99 (05B30)
- On the additive completion of linear recurrence sequences. *Period. Math. Hungar.* 9 (1978), no. 4, 285-291. (S. Stein) **80i:10076** 10L05 (10A35)
- Rusa, Imre A new approach to modal logic. *CL & CL—Comput. Linguist. Comput. Lang.* 12 (1978), 9-29. (S. K. Thomason) **80b:03026** 03B50 (03B45)
- Ruzsa, Walter L. (with Harrison, Michael A.) Monotonic protection systems. *Foundations of secure computation (Workshop, Georgia Inst. Tech., Atlanta, Ga., 1977)*, pp. 337-365. Academic Press, New York, 1978. (From the introduction) **80b:68035** 68B20  
(with Adleman, Leonard; Booth, Kellogg S.; Preparata, Franco P.) Improved time and space bounds for Boolean matrix multiplication. *Acta Inform.* 11 (1978/79), no. 1, 61-70. (N. A. Karpova) **80f:68038** 68C25 (94C10)
- Rvačev, V. A. See Rvačov, V. O.
- Rvačov, V. L. (with Slesarenko, A. P.; Popivščil, V. I.) Solution of a three-dimensional non-steady-state heat conduction problem under boundary conditions that change with time. (Russian) *Čisl. Metody Meh. Splošn. Sredy* 9 (1978), no. 6 *Mat. Modelirovanie*, 125-135. (B. Vujanović) **80m:80009** 80A20  
(with Bobyleva, O. M.) A generalized Taylor formula of difference type. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 1, 26-30, 94. (I. Stamate) **80i:65059** 65H99 (58C15)  
(with Koval', F. F.; Man'ko, G. P.) New constructive means of the R-function method. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 8, 691-695, 767. (G. W. Hedstrom) **80a:65232** 65N30 (35C99)  
(with Bobyleva, O. N.) Construction of a generalized Taylor formula of difference type. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 6, 768-778, 861. (Hans-Jürgen Albrand) **80a:65036** 65D15  
(with Tonica, V. S.; Škljarov, L. Ľ) A set of prime closing functions of three-valued logic. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 2* (1979), 90-94, 155. (V. V. Gorlov) **80j:03093** 03G99 (03B50, 26B40)
- See also **Mathematical methods of cybernetics**, **80d:00013**
- Rvačov, V. O. Atomic functions. (Russian) *Mathematical analysis and probability theory (Russian)*, pp. 143-146, 219. "Naukova Dumka", Kiev, 1978. (M. M. Konstantinov) **80k:34069** 34K05 (41A15, 65D07)
- Ryabko, B. Ya. See Ryabko, B. Ja.
- Ryan, Michael P., Jr. (with Rosenbaum, Marcos; Shepley, L. C.) Space-time homogeneous models with torsion. *J. Math. Phys.* 20 (1979), no. 4, 744-751. (Andrzej Trautman) **80d:83095** 83F05 (53C80)
- Ryan, Patrick J. (with Cecil, Thomas E.) Focal sets, taut embeddings and the cycles of Dupin. *Math. Ann.* 236 (1978), no. 2, 177-190. (M. do Carmo) **80a:53003** 53A05  
(with Cecil, Thomas E.) Focal sets of submanifolds. *Pacific J. Math.* 78 (1978), no. 1, 27-39. (John Bolton) **80a:53059** 53C40  
(with Cecil, Thomas E.) Tight and taut immersions into hyperbolic space. *J. London Math. Soc.* (2) 19 (1979), no. 3, 561-572. (T. J. Willmore) **80f:53034** 53C42  
(with Cecil, Thomas E.) Distance functions and umbilic submanifolds of hyperbolic space. *Nagoya Math. J.* 74 (1979), 67-75. (Yoshio Matsuyama) **80i:53025** 53C40
- Ryan, Raymond A. Dunford-Pettis properties. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 5, 373-379. (Klaus-Dieter Bierstedt) **80m:46018** 46B20 (46G99)
- Ryan, William Gödel's second incompleteness theorem for general recursive arithmetic. *Z. Math. Logik Grundlag. Math.* 24 (1978), no. 5, 457-459. (A. A. Mullin) **80b:03092** 03F35 (03D35, 10J15)
- Ryag, So Yun (with Ryu, Hae Dong) A new method of determining Hamiltonian cycles and spanning partial graphs. (Korean. English summary) *Cho-sŏn In-min Kong-hwa-kuk Kwa-hak-wŏn T'ong-bo* 27 (1979), no. 1, 7-9. (From the summary) **80m:05078** 05C45
- Ryang, Yong Joon (with Mine, Hisashi; Fukushima, Masao) Parametric nonlinear programming for general cases and its application to some problems. *Mem. Fac. Engrg. Kyoto Univ.* 40 (1978), no. 3, 198-211. (Mary W. Cooper) **80a:90133** 90C31
- Ryashko, L. B. See Rjashko, L. B.
- Ryavec, C. (with Newman, Morris; Shure, B. N.) The use of integral operators in number theory. *J. Funct. Anal.* 32 (1979), no. 2, 123-130. (Henri Joris) **80b:10046** 10H05  
A new representation of  $\{i\}$ . *J. Number Theory* 11 (1979), no. 1, 90-94. (H.-J. Bentz) **80f:10051** 10H05  
A nonlinear analogue of the cardinal series. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 118, 223-227. (Karl-Heinz Indlekofer) **80g:10036** 10H05 (30E05)
- Rybak, S. A. (with Lobanov, E. V.) Nonconservative boundary-value problems of wave theory. *Akust. Ž.* 24 (1978), no. 5, 708-715 (Russian); translated as *Soviet Phys. Acoust.* 24 (1978), no. 5, 398-401. (Authors' summary) **80b:76034** 76Q05 (35L20)
- Rybakov, Ju. P. (with Kumar, Ajit; Nisičenko, V. P.) Stability of charged solitons. *Internat. J. Theoret. Phys.* 18 (1979), no. 6, 425-432 (1980). (Authors' summary) **80m:81130** 81M05
- Rybakov, V. N. Invariant quadratic forms and mappings of surfaces. (Russian) *Kaliningrad. Gos. Univ. Differentsial'naja Geom. Mnogobraz. Figur No. 9* (1978), 72-78, 139. (Josef Vala) **80m:53004** 53A05
- Rybakov, V. V. A decidable noncompact extension of the logic S4. (Russian) *Algebra i Logika* 17 (1978), no. 2, 210-213, 242. (Jerzy Perzanowski) **80m:03042** 03B45  
Modal logics with LM-axioms. (Russian) *Algebra i Logika* 17 (1978), no. 4, 455-467, 491. (Wiesław Dziobiak) **80m:03043** 03B45
- Rybakov, Yu. P. See Rybakov, Ju. P.
- Rybakov, Ju. V. The traces of functions of weight classes, defined on a half-space. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 3, 610-623, 693. (P. A. Mišnevskii) **80m:46030** 46E35
- Rybalov, M. V. (with Venec, V. I.) Quasioptimal control of dynamic process statics. *Avtomat. i Telemekh.* 40 (1979), no. 7, 13-19 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 7, part 1, 955-960. (Authors' summary) **80k:93043** 93D15 (49D99, 93C99)
- Rybínski, Henryk A class of algorithms for merging files. (Russian. English and German summaries) *Naučn.-Tehn. Informacija (VINITI) Ser. 2. Informacione Procesy i Sistemy* 1979, no. 8, 26-30, 31-32. (Author's summary) **80i:68016** 68B15
- Rybnikov, K. A. See **History and methodology of the natural sciences**, **80d:01002**
- Rychlik, Z. The order of approximation in the random central limit theorem. *Probability theory on vector spaces (Proc. Conf., Trzebiezowice, 1977)*, pp. 225-236. *Lecture Notes in Math.*, 656, Springer, Berlin, 1978. (Gutti J. Babu) **80d:60029** 60F05  
Martingale random central limit theorems. *Acta Math. Acad. Sci. Hungar.* 34 (1979), no. 1-2, 129-139. (C. C. Heyde) **80k:60061** 60G42 (60F05)  
The rate of convergence in some limit theorems for sums of a random number of random terms. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 1, 25-29, 93. (J. Galambos) **80m:60038** 60F05  
(with Szydal, D.) On the rate of approximation in the random-sum central limit theorem. (Russian summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 3, 614-620. (L. Hahn) **80k:60038** 60F05
- Ryčkov, S. S. (with Stepanov, V. I.) A characterization of the algebraic compactness of abelian groups. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 3(207), 196. (J. Cichoń) **80k:20054** 20K99 (08A45)
- Ryder, Barbara G. Constructing the call graph of a program. *IEEE Trans. Software Engrg.* 5 (1979), no. 3, 216-226. (Author's summary) **80b:68006** 68B10 (68E10)
- Ryder, L. H. Dirac monopoles and the Hopf map  $S^2 \rightarrow S^2$ . *J. Phys. A* 13 (1980), no. 2, 437-447. (Mircea Puta) **80m:81117** 81G99 (57R20, 58A10)
- Ryff, John V. The functional equation  $F(ax) + F(bx + a) = F(bx) + F(ax + b)$ , entire and almost periodic solutions. *J. Reine Angew. Math.* 302 (1978), 116-136. (S. Kurepa) **80f:39007** 39B10
- Ryžik, Z. See Ryčlik, Z.
- Ryžick, Zdeněk (with Mayer, Daniel) On asymptotic stability of linear circuits with lumped parameters. *Acta Tech. ČSAV* 24 (1979), no. 4, 459-465. (Authors' summary) **80j:94033** 94C05
- Rykov, A. S. (with Emel'janov, S. V.; Korovin, S. K.) Principles of construction and the properties of locally optimal simple procedures of direct search. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 3, 570-575. (K. Zimmermann) **80i:90085** 90C30 (90C05)
- Rykov, V. A. (with Macuk, V. A.) The Chapman-Enskog method for reacting gas mixtures with different velocities and temperatures. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1230-1242, 1357. (Nina B. Maslova) **80c:82031** 82A40 (35C20, 45K05)
- Rykoval, L. V. Exact and limit distributions of certain rank statistics connected with samples from finite populations. (Russian) *Learning algorithms in control systems and in data processing systems (Russian)*, pp. 30-35, 126. "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (Dana Vorlíčková) **80c:62026** 62G10  
Estimates of the cardinalities of classes of a set in the case of control of reliability with errors. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 3, 113-121 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 3, 94-103. (Author's summary) **80k:62106** 62N10
- Ryll, Jerzy Interpolating bases for spaces of differentiable functions. *Studia Math.* 63 (1978), no. 2, 125-144. (Carlos A. Berenstein) **80c:46035** 46E15
- Rymarenko, V. V. See Rimarenko, V. V.
- Rymač, Č. (with Zorskil, G.; Rogulja, D.) Nonlocal continuum models of discrete systems. (Russian. English summary) *Adv. in Mech.* 2 (1979), no. 1, 83-108. (W. Kecs) **80i:70001** 70D05 (47H99, 73B20)
- Ryndina, V. V. On the equivalence between an  $n$ th order differential operator with a regular singular point and an Euler operator in the space  $A_R$ . (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 4, 636-649, 764. (M. I. Nagnibida) **80c:47067** 47E05  
The equivalence of an  $n$ th-order differential operator having a regular singular point, and an Euler operator in the space  $A(G)$ . (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 3, 674-678, 695. (N. S. Fal'ko) **80j:47048** 47B38 (34B25)
- Rypka, David J. (with Lucido, Anthony P.) Deadlock detection and avoidance for shared logical resources. *IEEE Trans. Software Engrg.* 5 (1979), no. 5, 465-471. (Authors' summary) **80f:68007** 68A05

- Ryscov, I. K. (with Spivak, M. A.) Study of irreducible sequences of sets. (Russian) *Mathematical theory in computer design* (Russian), pp. 13-27. *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (A. N. Maslov) 80m:68055 68D50
- An estimate of the length of the shortest diagnostic word for a finite automaton. (Russian. English summary) *Kibernetika* (Kiev) 1978, no. 6, 40-45. (V. A. Val'kovskii) 80c:68049 68D50
- Ryškovič, S. S. (with Baranovskii, E. P.) C-types of  $n$ -dimensional lattices and 5-dimensional primitive parallelepipeds (with application to the theory of coverings). Translated by R. M. Erdahl. Cover to cover translation of Trudy Mat. Inst. Steklov 137 (1976). *Proc. Steklov Inst. Math.* 1978, no. 4, 140 pp. (E. S. Barnes) 80f:10036 10E25 (10E30)
- Ryšlinková, Jana On  $m$ -algebraic closures of  $n$ -compact elements. *Comment. Math. Univ. Carolin.* 19 (1978), no. 4, 743-754. (V. R. Chandran) 80b:06004 06A23
- The characterization of  $m$ -compact elements in some lattices. *Czechoslovak Math. J.* 29(104) (1979), no. 2, 252-267. (Terence P. Speed) 80c:06002 06A23
- Rytel, L. (with Lukierski, Jerzy) Renormalized operator form of quantum action principle. *Ann. Physics* 124 (1980), no. 2, 382-400. (R. Delbourgo) 80m:81058 81E15
- Rytov, S. M. Leonid Isaakovich Mandel'stam. Sixteen years from the past. (Russian) *Vestnik Akad. Nauk SSSR* 1978, no. 5, 125-134. (Editors) 80a:01043 01A70
- Ryu, Hae Dong A formula determining all of the Hamiltonian cycles of a graph. (Korean. English summary) *Cho-sin In-min Kong-hwa-kuk Kwa-hak-won T'ong-bo* 26 (1978), no. 5, 254-256. (From the summary) 80f:05087 05C45
- A formula for completely determining an Eulerian spanning path of a graph. (Korean. English summary) *Cho-sin In-min Kong-hwa-kuk Kwa-hak-won T'ong-bo* 26 (1978), no. 6, 289-290. (Editors) 80a:05140 05C45
- (with Ryang, So Yon) A new method of determining Hamiltonian cycles and spanning partial graphs. (Korean. English summary) *Cho-sin In-min Kong-hwa-kuk Kwa-hak-won T'ong-bo* 27 (1979), no. 1, 7-9. (From the summary) 80m:05078 05C45
- On the computation of formulas for deciding cores of  $n$ -genus graphs. (Korean. English summary) *Cho-sin In-min Kong-hwa-kuk Kwa-hak-won T'ong-bo* 27 (1979), no. 2, 72-74. (From the summary) 80m:05024 05C05
- Rytov, Dmitri D. (with Pozzoli, Roberto) Modulational instability produced by Langmuir turbulence in a magnetic field. *Phys. Fluids* 22 (1979), no. 9, 1782-1789. (E. G. Broadbent) 80f:76021 76F99 (35B35)
- Rytkin, A. A. (with Vahutinskii, I. Ja.; Dudkin, L. M.) Iterative aggregation—a new approach to the solution of large-scale problems. *Econometrica* 47 (1979), no. 4, 821-841. (C. B. Garcia) 80f:90151 90C99
- Ryzhkov, A. P. See Ryzkov, A. P.
- Ryzhov, O. S. See Ryzkov, O. S.
- Ryžik, A. D. Asymptotic solution of a linear differential equation with rapidly oscillating coefficient. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst.* No. 357 (1978), 92-94. (M. Tvrdý) 80h:34068 34E05
- Ryžkov, A. P. Methods of solving a problem of weighted coloring of a graph. *Izv. Akad. Nauk SSSR Tekh. Kibernet.* 1978, no. 5, 119-126, 222 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 5, 89-95. (Author's summary) 80c:68054 68E10
- Rylov, O. S. Numerical methods in the dynamics of rarefied gases which have been developed and used at the Computing Center of the Academy of Sciences of the USSR. (Russian) *Numerical methods in the dynamics of rarefied gases*, No. 3 (Russian), pp. 8-36. *Akad. Nauk SSSR, Vychisl. Centr. Moscow*, 1977. (From the text) 80b:76030 76P05 (65-02)
- (with Terent'ev, E. D.) An unsteady boundary layer with self-induced pressure. *Prikl. Mat. Meh.* 41 (1977), no. 6, 1007-1023 (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 6, 1024-1040 (1979). (S. H. Lam) 80c:76035 76N05 (35Q10)
- piróg-Rzepecka, Krystyna See Piróg-Rzepecka, Krystyna
- Rzepecki, Bogdan Some properties of the set of solutions of an operator equation in a Banach space. *Comment. Math. Prace Mat.* 20 (1977/78), no. 2, 467-478. (J. Daneš) 80d:47095 47H15 (58C99)
- A generalization of Banach's contraction theorem. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 7, 603-609. (L. Janos) 80d:54060 54H25 (34G20)
- Note on the differential equation  $F(t, y(t), y(h(t)), y'(t)) = 0$ . *Comment. Math. Univ. Carolin.* 19 (1978), no. 4, 627-637. (R. R. Ahmerov) 80d:34097 34K05
- A functional-differential equation in a Banach space. *Ann. Polon. Math.* 36 (1979), no. 1, 95-100. (István Györfi) 80j:34103 34K30
- On the operator equation in Banach spaces. *Demonstratio Math.* 12 (1979), no. 1, 189-201. (J. Kolomý) 80h:47071 47H15
- On the functional equation  $x(t) = f(t, x(t_0), x(t), x(h(t)))$  in a Banach space. *Funct. Approx. Comment. Math.* 7 (1979), 39-46. (B. Crstici) 80c:39010 39B50
- On some classes of differential equations. *Publ. Inst. Math. (Beograd) (N.S.)* 25(39) (1979), 157-165. (Seppo Heikkilä) 80h:34107 34K30
- Rzewuski, Jan Remarks on the solutions of the equations of unitarity and causality in quantum field theory. II. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 8, 741-748. (M. Seetharaman) 80d:81066 81E05
- (with Ablamowicz, R.; Mozzyrmas, J.; Orziewicz, Z.) Spinor space. *Rep. Math. Phys.* 14 (1978), no. 1, 89-100. (Guido Karrer) 80d:81031 81C40 (15A66, 22E70)
- (with Królikowski, Wojciech) Discontinuous solutions to relativistic equations for two spin-1/2 particles. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Phys. Astronom.* 27(1) (1979), no. 1, 15-19. (R. F. Bijalwal) 80c:81225 81M05
- Rzymowski, Witold Delay effects on the existence problems for differential equations in Banach space. *J. Differential Equations* 32 (1979), no. 1, 91-100. (Russell C. Thompson) 80c:34128 34K30
- marques de Sá, E. See Marques de Sá, E.
- césar de Sá, Eugénia See César de Sá, Eugénia
- Saad, E. A. (with El Wakil, S. A.; Haggag, M. H.) Transmission and reflection coefficients in the slowing down region. *J. Math. Phys.* 20 (1979), no. 11, 2313-2318. (Carlo Cercignani) 80m:82055 82A70
- Saade, Marshall A note on some varieties of point algebras. *Czechoslovak Math. J.* 29(104) (1979), no. 1, 21-26. (Ágnes Szendrei) 80d:08009 08B05 (08B20)
- al-Saadi, S. D. See Al-Saadi, S. D.
- Saakjan, G. S. (with Sarkisian, A. V.) Configurations of degenerated masses according to the bimetric theory of gravitation. (Russian. English summary) *Astrofizika* 14 (1978), no. 3, 489-500. (J. Rosen) 80b:85006 85A15 (83C35)
- Saakjan, L. S. Orientation of a satellite in a specified direction. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* 14 (1979), no. 1, 11-18 (Russian); translated as *Mech. Solids* 14 (1979), no. 1, 8-14. (Ram Krishan Sharma) 80c:93034 93C15 (93D99)
- Saam, W. F. (with Ebrner, C.; Lee, Michael A.) Nonuniform one-dimensional classical fluids: theory versus Monte Carlo experiments. *Phys. Rev. A* (3) 21 (1980), no. 1, 959-967. (From the summary) 80m:82045 82A50
- Saar, E. An asymptotic error estimate in general discriminant analysis. (Russian) *Trudy Vychisl. Centra Tartu. Gos. Univ.* No. 42 (1978), 19-35. (László Györfi) 80a:62091 62H30
- Saari, Donald G. Apportionment methods and the House of Representatives. *Amer. Math. Monthly* 85 (1978), no. 10, 792-802. (M. M. Flood) 80f:90020 90A08
- (with Simon, Carl P.) Effective price mechanisms. *Econometrica* 46 (1978), no. 3, 1097-1125. (J. A. Rickard) 80c:90011 90A12
- Saurinen, Esa Backwards-looking operators in tense logic and in natural language. *Essays on mathematical and philosophical logic* (Proc. Fourth Scandinavian Logic Sympos. and First Soviet-Finnish Logic Conf., Jyväskylä, 1976), pp. 341-367. *Synthese Library*, 122. *Reidel, Dordrecht*, 1979. (Wiesław Dziobiak) 80m:03044 03B45 (03A05, 03B99)
- See also *Essays on mathematical and philosophical logic*, 80f:03006
- Saaty, Thomas L. (with Chen, Kun Yuan) Hoover's problem. *Math. Mag.* 51 (1978), no. 5, 288-292. (Morton Abramson) 80c:05076 05C20
- Erratum: "A scaling method for priorities in hierarchical structures" (*J. Math. Psych.* 15 (1977), no. 3, 234-281). *J. Math. Psych.* 19 (1979), no. 1, 72. (From the text) 80b:92049 92A25
- El Sabaa, F. M. See El Sabaa, F. M.
- Šabab, A. E. (with Serebrennikov, V. B.; Smorodinskii, Ja. A.)  $O_4$ -covariant Hamiltonian formalism for bounded motion in a central field of force. (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 3, 333-358. (Charles L. Hammer) 80d:76032 70H05
- Sabad, O. P. (with Lomsadze, Ju. M.) Nonlocal quantum field theory in the Bogolubov axiomatic approach. I. Necessary classes of generalized functions. (Russian. English summary) *Ukrain. Fiz. Ž.* 23 (1978), no. 4, 568-576, 695. (M. J. Mączyski) 80a:81065 81E05 (46F99)
- (with Lomsadze, Ju. M.) Nonlocal quantum field theory in the Bogolubov axiomatic approach. II. Global axioms and  $\delta$ -functional. (Russian. English summary) *Ukrain. Fiz. Ž.* 23 (1978), no. 4, 577-586, 695. (M. J. Mączyski) 80a:81065 81E05 (46F99)
- Sabadés, V. A. Dynamical stability of rods taking account of displacement bendings and rotary inertia. (Russian) *Prikl. Meh.* 15 (1979), no. 5, 73-78, 111. (Author's summary) 80c:73038 73H10
- Sabaev, E. F. (with Vaplyuskina, V. M.; Vdovin, S. I.) Stability in the large of a class of control systems. *Automat. i Telemekh.* 40 (1979), no. 7, 5-12 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 7, part 1, 949-955. (Author's summary) 80c:93038 93D05
- Sabalaukas, L. The maximal restriction of the basis for the description of the nuclear states. (Russian. Lithuanian and English summaries) *Lietuv. Fiz. Sb.* 19 (1979), no. 1, 5-19, 153. (Author's summary) 80c:81101 81G40 (22E70)
- Šabat, A. B. (with Ibragimov, N. H.) The Korteweg-deVries equation from the group standpoint. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 1, 57-61. (V. V. Ivanov) 80c:58047 58H05 (35Q20, 58F07)
- (with Žiber, A. V.) The Klein-Gordon equation with nontrivial group. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 5, 1103-1107. (V. E. Korepin) 80c:35060 35Q20 (58A15)
- Sabatier, Pierre C. On the solutions of an infinite system of nonlinear equations. *Let. Nuovo Cimento* (2) 21 (1978), no. 2, 41-44. (Mark J. Ablowitz) 80d:58029 58F05
- On extremal solutions of Sturm-Liouville inverse problems. *Inverse and improperly posed problems in differential equations* (Proc. Conf., Math. Numer. Methods, Halle, 1979), pp. 223-231. *Math. Research*, 1. Akademie-Verlag, Berlin, 1979. (Author's summary) 80c:34014 34B25
- De Sabbata, V. See De Sabbata, V.
- Sabbá, Sandra On some properties of Toupin-Rivlin media. (Italian) *Atti Accad. Sci. Ital. Bologna Cl. Sci. Fis. Rend. (3)* 5 (1977/78), no. 1, 141-147. (Author's summary) 80a:78019 78A40 (35Q99, 73B05)
- Sabelfel'd, K. K. (with Tatarskii, V. I.) The approximate calculation of Wiener continual integrals. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 4, 905-908. (B. A. Bondarenko) 80c:65053 65D30 (65C05)
- The application of sweeping and averaging operators for the construction of algorithms of the Monte Carlo method. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 5, 1057-1060. (I. Váduva) 80m:65008 65C20 (35J99)
- The approximate computation of Wiener path integrals by the Monte Carlo method. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 1, 29-43, 267. (I. Váduva) 80c:60111 65C05
- Solution of a boundary value problem for a meta-harmonic equation by the Monte Carlo method. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 961-969, 1083. (I. Váduva) 80m:65006 65C05
- Sabelfel'd, V. K. Äquivalente Transformationen für Flussdiagramme. (English summary) *Acta Inform.* 10 (1978), no. 2, 127-155. (Jerzy Tiuryn) 80a:68019 68B10
- Sabelfel'd, V. P. (with Red'ko, S. F.; Kremutulo, Ju. V.; Uliakov, V. F.; Jakovlev, V. P.) The determination of some parameters of mechanical systems with the aid of sensitivity functions. (Russian) *Complex control systems* (Russian), pp. 82-89. *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (Authors' summary) 80c:93030 93B35
- Sabidussi, Gert Uniforme Räume in der Graphentheorie. 10. Steiermärkisches Mathematisches Symposium (Stift Rein, Graz, 1978). *Ber. Math.-Statist. Sekt. Forsch. Graz* No. 100-105 (1978). *Ber. No. 104*, 5 pp. (W. Dörfler) 80m:05096 05C99 (54Dxx)
- (with Babai, László; Frankl, Péter; Kollár, János) Hamiltonian cubic graphs and centralizers of involutions. *Canad. J. Math.* 31 (1979), no. 3, 458-464. (Hugo S. Sun) 80f:05047 05C25
- Sabirov, A. A boundary value problem for a nonlinear equation of composite type



- (Russian) *Direct and inverse problems for partial differential equations and their applications* (Russian), pp. 20–24, 184, "Fan", Tashkent, 1978. (R. R. Ahmerov) **80j:35072** 35M05
- Sahlin, G. (with Abdulla-Zade, H. F.) The scientific heritage of the 10th century astronomer and mathematician Kūshyār al-Jīlī. (Russian summary) *Izv. Akad. Nauk Tadzhik. SSR Otdel. Fiz.-Mat. i Geol.-Him. Nauk* 1978, no. 3(69), 28–34. (E. S. Kennedy) **80a:01010** 01A30
- Sahlin, I. H. A scheme of successive approximations for immersions of two-dimensional metrics in  $E^3$ . (Russian) *Sibirsk. Mat. Zh.* 19 (1978), no. 6, 1358–1380, 1439. (A. V. Pogorelov) **80a:53074** 53C45
- Sahl-Tougeron, Monique Problème d'évolution parabolique pour une classe d'opérateurs elliptiques et dégénérés. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 9, A703–A706. (Author's summary) **80b:35145** 35R99 (35K25)
- Comportement asymptotique des valeurs propres pour une classe d'opérateurs elliptiques dégénérés. *Tôhoku Math. J. (2)* 30 (1978), no. 4, 583–605. (Ju. I. Ljubič) **80:35142** 35P20
- Sahli, Maciej On iterates of multi-hat functions. (Polish summary) *Uniw. Śląski w Katowicach Prace Nauk.-Prace Mat. No. 8* (1978), 41–44. (A. Climescu) **80c:39002** 39B10 (26A18)
- On proper linearly invariant ideals of sets. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 14(34) (1979), no. 1, 41–50. (T. Neubrunn) **80j:28006** 28A12
- Saboté, P. F. (with Čeban, V. G.; Tihomirov, N. A.) Some homogeneous transient motions of an incompressible fluid caused by the motion of a piston and by the generation of energy. (Russian) *Bul. Akad. Științe RSS Moldoven* 1978, no. 3, 27–32, 93. (Authors' summary) **80d:76054** 76L05
- Saboté, M. Error estimates of cubature formulas for some classes of functions of two variables. (Russian) *Tajiki summary* *Dokl. Akad. Nauk Tadzhik. SSR* 22 (1979), no. 4, 228–231. (Editors) **80h:65015** 65D32
- An error estimate for cubature formulas that are exact for splines on some classes of two-variable functions. (Russian) *Ukrain. Mat. Zh.* 31 (1979), no. 1, 74–82, 111. (George Coman) **80a:41018** 41A55 (65D32)
- Sabra, Abdelhamid ibn al-Haytham's "Treatise on the marks seen on the surface of the moon". (Arabic, English summary) *J. Hist. Arabic Sci. I* (1977), no. 1, 180–166. (B. Rozenfel'd) **80c:01004** 01A30 (78–03)
- Sabry, Hegazi Sur l'estimation non paramétrique des fonctions de régression. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 20, A941–A944. (Author's summary) **80c:62053** 62G05
- Saburi, Yutaka Vanishing theorems of cohomology groups with coefficients in sheaves of holomorphic functions with bounds. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 9, 274–278. (P. Schapira) **80a:32012** 32E35 (32J05)
- Saburkov, A. V. (with Al'tuler, G. V.) Solution of a three-dimensional problem of elasticity theory for a transversally isotropic layer. II. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 12, 72–83. (J. Mazumdar) **80b:73015** 73C30 (73K10)
- Sacharov, W. N. See Zaharov, W. N.
- Sacher, Reinhard (with Fischer, Gerd) ★Einführung in die Algebra. Zweite überarbeitete Auflage. Teubner Studienbücher: Mathematik. B. G. Teubner, Stuttgart, 1978. 240 pp. ISBN 3-519-12053-4 (Z. Papp) **80c:00002** 00A05 (12–01, 16–01, 20–01)
- Sacher, Richard S. (with Cottle, Richard W.; Golub, Gene H.) On the solution of large, structured linear complementarity problems: the block partitioned case. *Appl. Math. Optim.* 4 (1977/78), no. 4, 347–364. (Authors' summary) **80a:90120** 90C30 (90C05)
- Sachl, Vladimír F. (with Bednář, Miroslav) Contribution to the theory of the finite-dimensional representations of the semi-simple graded Lie algebras. Symposium on Mathematical Models in the Theory of Elementary Particles (Liblice, 1978), II. *Czechoslovak J. Phys. B* 29 (1979), no. 3, 265–272. (Philip Huddleston) **80c:17008** 17B70
- (with Bednář, Miroslav) Classification and construction of finite-dimensional irreducible representations of the graded algebras; application to the  $(Sp(2n); 2n)$  algebra. *J. Math. Phys.* 20 (1979), no. 3, 367–371. (Philip Huddleston) **80c:17009** 17B70 (17B10)
- Sachs, Ekkehard Optimal control for a class of integral equations. *Optimization and operations research* (Proc. Workshop, Univ. Bonn, Bonn, 1977), pp. 223–231. *Lecture Notes in Econom. and Math. Systems*, 157, Springer, Berlin, 1978. (Rémi Vaillancourt) **80a:49041** 49B34
- Optimal control of a parabolic boundary value problem. *Optimization techniques* (Proc. 8th IFIP Conf., Würzburg, 1977), Part 1, pp. 353–361. *Lecture Notes in Control and Information Sci.*, 6, Springer, Berlin, 1978. (L. von Wolfersdorf) **80a:49036** 49B22
- A parabolic control problem with a boundary condition of the Stefan-Boltzmann type. (German and Russian summaries) *Z. Angew. Math. Mech.* 58 (1978), no. 10, 443–449. (V. Lakshmikantham) **80a:49037** 49B22 (35K05)
- (with Krabs, Werner) Controllability of distributed parameter systems. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* 59 (1979), no. 3, T103–T105. (B. I. Anan'ev) **80a:49018** 49B27
- Sachs, Hans Über Transversalfächen von Regelflächen. *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* 186 (1978), no. 8–10, 427–439. (Leo Boček) **80d:53004** 53A05 (53A25)
- Lineare Geradenkomplexe im Flaggenraum  $I_2^3$ . *J. Reine Angew. Math.* 311/312 (1979), 263–282. (K. Strubecker) **80h:53021** 53A40 (51N25)
- Sachs, Horst See Festakt und Tagung aus Anlass des 200. Geburtstages von Carl Friedrich Gauss, 80i:01001
- Sachs, Mendel On the philosophy of general relativity theory and ideas of Eastern and Western cultures. *The Tao-Yu Wu Festschrift: Science of matter*, pp. 9–24. Gordon & Breach, New York, 1978. (Lawrence Sklar) **80h:83002** 83–03 (00A25, 01A60)
- Sachs, S. (with Blankenship, G.) Singularity perturbed linear stochastic ordinary differential equations. *SIAM J. Math. Anal.* 10 (1979), no. 2, 306–320. (Werner Kohler) **80c:60058** 60H10 (34E15)
- Sachsanowicz, Wojciech (with Dziobiak, Wiesław) On two notions concerning the structural sentential calculi. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 8 (1979), no. 2, 54–60. (From the summary) **80g:03025** 03B99
- Šackl, V. P. Hyperbolic systems with two planes of singularities. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 1, 56–59. (Alexander Doktor) **80j:35062** 35L40
- Sackin, J. V. ★Wahrscheinlichkeit und Struktur. Translated from the Russian by Ulrich Röseberg. Wissenschaftliche Taschenbücher, Reihe Mathematik/Physik, 243. Akademie-Verlag, Berlin, 1978. 215 pp. (I. Ruzsa) **80h:00019** 00A25 (60A05)
- Sachkov, V. N. ★Вероятностные методы в комбинаторном анализе. (Russian) [Probability methods in combinatorial analysis] "Nauka", Moscow, 1978. 287 pp. (G. I. Ivčenko) **80c:05002** 05–02 (05Axx, 60C05)
- (with Bolotnikov, Ju. V.; Tarakanov, V. E.) Some classes of random variables on cyclic permutations. (Russian) *Mat. Sb. (N.S.)* 108(150) (1979), no. 1, 91–104, 144. (G. I. Ivčenko) **80c:60016** 60C05 (05A05)
- Sacks, Gerald E. See Generalized recursion theory, 80a:03004
- Sacksteder, Richard (with Shub, Michael) Entropy on sphere bundles. *Adv. in Math.* 28 (1978), no. 2, 174–177. (D. Newton) **80c:58032** 58F11 (28D20, 58F25)
- (with Shub, Michael) Entropy of a differentiable map. *Adv. in Math.* 28 (1978), no. 3, 181–185. (Zbigniew Nitecki) **80c:58021** 58F20 (28D20)
- Vibrations in fluid dynamics. *Papers in mathematics*, pp. 78–85. *Ann. New York Acad. Sci.*, 321, New York Acad. Sci., New York, 1979. (D. G. Ebin) **80j:76033** 76E99
- Sacripante, Laura (with Pitaluga, Giovanna) Estimate of the Christoffel constants in the ultraperl case. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 1, 107–113. (Authors' summary) **80g:65019** 65D30
- (with Garetto, Maria) An algorithm for the numerical calculation of Bessel functions of the first kind. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 1, 115–120. (Authors' summary) **80g:65014** 65D20
- Sadakov, O. S. (with Gohfeld, D. A.; Kononov, K. M.; Černjavskii, O. F.) Problems of the structural strength of thermally-stressed construction. (Russian) *Mechanics of solid deformable bodies*, Vol. 12 (Russian), pp. 91–194 (loose summary), VINITI, Moscow, 1978. (Vadim Komkov) **80g:73002** 73–02 (73K99)
- Sadallah, Boubaker Khaled Une équation 2m-parabolique dans un domaine plan singulier. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 15, A1025–A1027. (Author's summary) **80b:35075** 35K35
- Sadanaga, R. (with Ohsumi, K.) Basic theorems of vector symmetry in crystallography. *Acta Cryst. Sect. A* 35 (1979), no. 1, 115–122. (H. W. Guggenheimer) **80h:82034** 82A60 (20H15, 51F15)
- Sade, A. Observations sur l'introduction d'une métrique dans le plan affiné. *Arch. Math. (Brno)* 14 (1978), no. 4, 227–233. (Ion D. Teodorescu) **80d:53008** 53A15
- Sadeh, Eltan (with Koren, Israel) A new approach to the evaluation of the reliability of digital systems. *IEEE Trans. Comput.* 29 (1980), no. 3, 261–267. (Authors' summary) **80m:94014** 94A12 (68A05)
- Sadeh, Willy Z. (with Koper, Chester A., Jr.; Turner, Robert E.) A relation between the Lagrangian and Eulerian turbulent velocity autocorrelations. *AIAA J.* 16 (1978), no. 9, 969–975. (J. D. Atkinson) **80b:76036** 76F99 (00A89)
- Šadimetrov, H. M. Weighted optimal quadratic formulas. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 51 (1978), 169–177, 232. (George Coman) **80d:65039** 65D32
- Sadlaji, D. (with Bestwick, Paul F.) A stage-wise action elimination algorithm for the discounted semi-Markov problem. *J. Oper. Res. Soc.* 30 (1979), no. 7, 633–637. (I. V. Romanovskii) **80i:90098** 90C40
- Sadlaji, Firooz A. (with Hall, Ernest L.) Three-dimensional moment invariants. *Proceedings of the Eleventh Annual Southeastern Symposium on System Theory* (Clemson Univ., Clemson, S. C., 1979), pp. 82–89. *IEEE, New York*, 1979. (Authors' summary) **80m:68081** 68G10
- Sadovnik, Ju. N. Systems of quasilinear first-order hyperbolic equations with linear rarefaction waves. (Russian) *Vestnik Moskov. Univ. Ser. XV Vychisl. Mat. Kibernet.* 1978, no. 4, 97–99. (N. N. Janenko) **80h:35089** 35L67
- Sadokowski, Wawrzyniec Boundedness and stability of solutions of some hyperbolic equations. *Demonstratio Math.* 11 (1978), no. 3, 775–787. (John M. Ball) **80d:35013** 35B35 (35L70)
- Šadmanov, Dž. A generalization of Kolmogorov's theorem on the law of the iterated logarithm. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 5, 7–9. (R. J. Tomkins) **80c:60036** 60F15
- Šadný, V. S. Almost geodesic mappings of Riemannian spaces onto spaces of constant curvature. (Russian) *Mat. Zametki* 25 (1979), no. 2, 293–298, 319. (A. Goetz) **80b:53012** 53B20
- Sadovnik, V. A. (with Il'in, V. A.; Sendov, Blagovest) ★МАТЕМАТИЧЕСКИЙ АНАЛИЗ. (Russian) [Mathematical analysis] "Nauka", Moscow, 1979. 719 pp. (R. P. Boas, Jr.) **80b:26001** 26–01
- Sadovnik, B. I. (with Inozemceva, N. G.) On some asymptotic relations in the Boltzmann-Enskog model. *Phys. A* 94 (1978), no. 3–4, 615–625. (Andrzej Zardecki) **80c:82033** 82A40
- Sadovnikov, Ju. Ju. Recurrent schemes for the mean quadratic approximation of functions of several variables. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 35 (1978), 84–86, 165. (From the summary) **80a:65037** 65D15 (76D05)
- Sadovskii, A. L. A game-theoretic approach to the solution of mathematical programming problems. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 1, 19–23. (V. F. Dem'janov) **80c:90084** 90C25 (90C05)
- Sadovskii, A. P. Formal transformations and the problem of distinguishing the center and focus. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 12, 2185–2189, 2300. (A. A. Reinfelds) **80c:34038** 34C20
- On conditions for a center and focus for nonlinear oscillation equations. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 9, 1716–1719, 1728. (C. E. Langenhop) **80c:34040** 34C05 (34C15)
- A functional method of determining the conditions for a center. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 6, 492–494, 571. (E. S. Čičkin) **80c:34035** 34C05 (58F14)
- Sadovskii, V. M. (with Annin, B. D.) Numerical solution of a problem of elastoplastic torsion of a cylindrical rod of oval cross section. (Russian) *Dinamika Splavn. Sredy* No. 37 *Nestacionarnye Problemy Mekhaniki* (1978), 18–26, 149. (Authors' summary) **80c:73027** 73E10
- Sadovský, Zoltán The problem of long elastic thin plate panel of asymmetrical / cross

- section in pure bending. *Acta Tech. ČSAV* 23 (1978), no. 5, 576-592. (Author's summary) **80c:73052** 73K10 (35J99)
- A theoretical approach to the problem of the most dangerous initial deflection shape in stability type structural problems. (Czech and Russian summaries) *Apl. Mat.* 23 (1978), no. 4, 248-266. (From the introduction) **80c:73055** 73K99 (00A89, 73H99)
- Sadullaev, A.** Valiron defect planes of a holomorphic mapping. (Russian) *Dokl. Akad. Nauk UzSSR* No. 1 (1979), 3-4. (V. P. Petrenko) **80c:32043** 32H30 (30D35)
- Pseudo-algebraic dependence of functions of several variables. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 1, 78-80. (H. Tornehave) **80c:32022** 32J10
- Sadykov, A. È.** (with Kuliev, V. D.) The Riemann problem for two pairs of functions and its application in elasticity theory. (Russian. English and Armenian summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* 32 (1979), no. 2, 26-37, 86. (Authors' summary) **80f:73073** 73M05 (30E25)
- Sadykov, G. G.** (with Abbasov, A. A.) An optimal control problem in heat conductivity theory. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 6, 98-101. (From the summary) **80c:93075** 93C20 (49A99)
- Sadykov, F. R.** (with Petrov, B. N.; Aleksandrov, A. D.; Andreev, V. P.; Bulekov, V. P.; Viktorov, B. V.; Izvol'skij, E. G.; Kudjajev, P. S.; Kuzin, V. P.; Mahan'ko, A. V.; Mihalov, F. A.; Muravlev, G. A.; Nikolaev, Ju. P.; Pobedonoscev, G. V.; Pohvalenskij, V. L.; Serpionov, G. V.; Salikova, I. M.; Ul'jačenko, A. E.; Frolov, P. A.; Červjakov, V. P.; Saturan, K. T.) ★ Многорежимные и нестационарные системы автоматического управления. (Russian) [Multistate and nonstationary automatic control systems] ★ "Majstrovoenie", Moscow, 1978. 240 pp. (Publisher's summary) **80c:93073** 93C40
- Sadykov, H. M.** (with Derkačev, A. A.) The normal reaction to a single impulse, and natural initial conditions for a generalized linear differential equation. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* 21 (1978), no. 4, 15-19. (M. G. Dmitriev) **80c:93107** 93C99
- (with Derkačev, A. A.) A modified integral of convolution type, convenient for numerical realization, that expresses the solution of a linear differential equation. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* 21 (1978), no. 5, 13-17. (M. Otelbaev) **80c:34002** 34A15 (65L05)
- Sadyrasov, R. S.** (with Babayev, A. A.) The quadrature process for a singular integral along an open contour of the real axis, and conditions for its convergence. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 2, 8-16. (M. I. Levin) **80c:65041** 65D30
- Saeiki, Masami** (with Araki, Mitsuhiro; Kondo, Bunji) Stability criteria for multivariable nonlinear feedback systems consisting of low order subsystems. *Internat. J. Control* 29 (1979), no. 5, 733-747. (Authors' summary) **80c:93048** 93D10
- Saeiki, Sadahiro** (with Sato, Enji) Critical points and point derivations on  $M(G)$ . *Michigan Math. J.* 25 (1978), no. 2, 147-161. (Colin C. Graham) **80c:43002b** 43A10
- (with Namioka, Isaac) On lattice isomorphisms of  $C(X)^*$ . *Tokyo J. Math.* 1 (1978), no. 2, 345-368. (Michael J. Canfell) **80d:54011** 54C30
- Saeks, Richard** (with Tung, Leonard J.; DeSantis, Romano M.) Wiener-Hopf filtering in Hilbert resolution space. Special issue on the mathematical foundations of system theory. *IEEE Trans. Circuits and Systems* 25 (1978), no. 9, 702-705. (William A. Porter) **80c:93152** 93E11 (47B35)
- (with DeSantis, Romano M.; Tung, Leonard J.) Basic optimal estimation and control problems in Hilbert space. *Math. Systems Theory* 12 (1978/79), no. 2, 175-203. (R. S. Bucy) **80c:93138** 93E20 (93E10)
- On the decentralized control of interconnected dynamical systems. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 269-271. (Alan Bradshaw) **80c:93039** 93B05
- (with Lu, K. S.) Failure prediction for an on-line maintenance system in a Poisson shock environment. *IEEE Trans. Systems Man Cybernet.* 9 (1979), no. 6, 356-362. (Authors' summary) **80c:90050** 90B25 (62N05, 94C10)
- Saeidi, Steinar** Observability theorems for some linear hyperbolic systems. *Automatica—J. IFAC* 14 (1978), no. 5, 499-503. (Michael Ghil) **80d:80001** 86A10 (93B07)
- Safarevič, I. R.** (with Rudakov, A. N.) Supersingular  $K3$  surfaces over fields of characteristic 2. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 4, 848-869. (Miles Reid) **80c:14015** 14J25 (14J10)
- (with Rudakov, A. N.) Vector fields on elliptic surfaces. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 6(204), 231-232. (P. E. Newstead) **80f:14022** 14J25 (14J10)
- Safarov, D. H.** The dimension of the space of solutions of power growth for a class of elliptic systems. (Russian) *Differencial'nye Uravnenija* 15 (1979), no. 1, 112-115, 189. (D. M. Eidel) **80d:35052** 35J45
- The dimension of the space of solutions of power growth for a class of overdetermined elliptic systems. (Russian) *Differencial'nye Uravnenija* 15 (1979), no. 8, 1526-1528, 1536. (E. M. Saak) **80c:35133** 35N10 (35J45)
- Saff, Edward B.** (with Varga, Richard S.) On incomplete polynomials. *Numerische Methoden der Approximationstheorie, Band 4 (Meeting, Math. Forschungsinstit., Oberwolfach, 1977)*, pp. 281-298. *Internat. Schriftenreihe Numer. Math.*, 42, Birkhäuser, Basel, 1978. (From the text) **80d:41006** 41A10 (65D15)
- (with Varga, Richard S.) Nonuniqueness of best complex rational approximations to real functions on real intervals. *J. Approx. Theory* 23 (1978), no. 1, 78-85. (Myron S. Henry) **80f:41012** 41A20 (30E10, 41A25)
- (with Lachance, Michael; Varga, Richard S.) Inequalities for polynomials with a prescribed zero. *Math. Z.* 168 (1979), no. 2, 105-116. (R. Vermes) **80j:30009** 30C10
- (with Goodman, A. W.) On univalent functions convex in one direction. *Proc. Amer. Math. Soc.* 73 (1979), no. 2, 183-187. (M. S. Robertson) **80c:30006** 30C45
- (with Moak, D. S.; Varga, Richard S.) On the zeros of Jacobi polynomials  $P_n^{(\alpha, \beta)}(x)$ . *Trans. Amer. Math. Soc.* 249 (1979), no. 1, 159-162. (Y. L. Luke) **80g:33021** 33A65
- Saffari, B.** (with Erdős, Paul; Vaughan, R. C.) On the asymptotic density of sets of integers. II. *J. London Math. Soc.* (2) 19 (1979), no. 1, 17-20. (J. B. Kelly) **80i:10074** 10L02
- Saffman, P. G.** Problems and progress in the theory of turbulence. *Structure and mechanisms of turbulence (Proc. Sympos., Tech. Univ. Berlin, Berlin, 1977)*, II, pp. 273-306. *Lecture Notes in Phys.*, 76, Springer, Berlin, 1978. (Elian Moritz) **80h:76022** 76F99
- The approach of a vortex pair to a plane surface in inviscid fluid. *J. Fluid Mech.* 92 (1979), no. 3, 497-503. (L. M. Hocking) **80g:76015** 76C05
- (with Chen, B.) Numerical evidence for the existence of new types of gravity waves of permanent form on deep water. *Stud. Appl. Math.* 62 (1980), no. 1, 1-21. (Authors' summary) **80c:76014** 76B15
- Saifiev, N. K.** Asymptotic behavior with respect to the small parameter of the solution to a mixed problem for a hyperbolic equation that degenerates into a parabolic one. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1978, no. 2, 3-12. (J. Kopáček) **80c:35013** 35B40 (35L35)
- Saifi, M. Naser** Some boundary properties of holomorphic functions of several complex variables. (Russian) *Mat. Zametki* 23 (1978), no. 6, 839-844. (Jan Chmielowski) **80c:32010** 32A40 (32F99)
- Safin, M. Ja.** (with Kerimov, B. K.; Al-Hamis, I. M.) A second-order Coulomb correction in the elastic scattering of electrons by nuclei in the shell model. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* 19 (1978), no. 5, 50-57. (From the summary) **80d:81105** 81F15
- Saifiro, A. A.** (with Sunkov, V. P.) A characterization of an infinite Černikov group, which is not a finite extension of a quasicyclic group. (Russian) *Mat. Sb. (N.S.)* 107(140) (1978), no. 2, 289-303, 318. (Richard E. Phillips) **80b:20041** 20E25
- Safonov, M. V.** (with Krylov, N. V.) An estimate for the probability of a diffusion process hitting a set of positive measure. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 1, 18-20. (B. A. Darling) **80c:60101** 60J60
- Safonov, V. F.** Asymptotic solution of a singularly perturbed nonlinear problem with a zero point of the spectrum of the limit operator. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst. No. 357* (1978), 95-97. (Snežana Hristova) **80c:34088** 34E10
- A regularization method for singularly perturbed systems of nonlinear differential equations. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 3, 628-653, 734. (Frederick A. Howes) **80c:34072** 34E15
- Solvability of a problem in the nonlinear theory of the regularization method in the class of uniformly convergent series. (Russian) *Mat. Zametki* 25 (1979), no. 4, 573-583, 637. (Pavel Doktor) **80c:35020** 35C10
- Safraonov, V. D.** (with Vabičević, P. N.; Degtjarev, L. M.; Pistunovič, V. I.; Pošehonov, Ju. Ju.) Evolution of the equilibrium of a toroidal plasma string in the case of a complex form. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 119* (1978), 33 pp. (V. P. Milant'ev) **80f:82036** 82A45
- Safranski, Ja. M.** (with Gordon, V. S.) The problem of minimizing functions defined on the set of permutations of a partially ordered set. (Russian. English summary) *Vestnik Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 2, 122-124, 143. (Joachim Hirche) **80c:90083** 90C10
- Safriel, Uriel N.** (with Joré, Jacob) Linear and nonlinear diffusion models applied to the behavior of a population of an intertidal snail. *J. Theoret. Biol.* 79 (1979), no. 3, 367-380. (Authors' summary) **80c:92028** 92A15
- Sagadeev, A. V.** National literature on al-Fārabi in the year of the 1100th anniversary of his birth. (Russian) *Narody Azii i Afiki* 1977, no. 6, 190-197. (Editors) **80c:01003** 01A30
- Sagolovič, Ju. L.** Concatenated codes of the states of an automaton. (Russian) *Problemy Peredatki Informacii* 14 (1978), no. 2, 77-85. (A. Ádám) **80g:94055** 94B05
- Asymptotic behavior of the number of types of equivalent binary connection matrices. *Problemy Peredatki Informacii* 15 (1979), no. 2, 97-105 (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 2, 152-158. (Author's summary) **80c:94101** 94C10
- Sagolovič, M. E.** Classes of local topological structures of the equilibrium state. (Russian) *Differencial'nye Uravnenija* 15 (1979), no. 2, 360-362, 383. (A. A. Reinfelds) **80c:34044** 34C99
- Sagolovič, Yu. L.** See Sagolovič, Ju. L.
- Sagan, Bruce** An analog of Schensted's algorithm for shifted Young tableaux. *J. Combin. Theory Ser. A* 27 (1979), no. 1, 10-18. (H. Gupta) **80c:05029** 05B30 (05A17)
- Sagasse, J. P.** (with Gautier, M.; Monsion, Michel) Determination of a Volterra kernels representation for a nonlinear physiological system. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976)*, Part 1, pp. 609-615. North-Holland, Amsterdam, 1978. (Authors' summary) **80c:92009** 92A09 (65R20)
- Sagastume, Marta** (with Bosch, Jorge) Catégories de variétés abstraites. *Cahiers Topologie Géom. Différentielle* 19 (1978), no. 4, 369-385. (M. Craioveanu) **80c:58002** 58A05
- Sage, Martin L.** (with Wali, Kameswar C.) Computation of a class of 3j-coefficients. *J. Math. Phys.* 20 (1979), no. 3, 393-395. (Authors' summary) **80d:81035** 81C40
- Sager, Thomas W.** Estimation of a multivariate mode. *Ann. Statist.* 6 (1978), no. 4, 802-812. (Wolfgang Sandler) **80f:62046** 62G05
- An iterative method for estimating a multivariate mode and isopleth. *J. Amer. Statist. Assoc.* 74 (1979), no. 366, part 1, 329-339. (T. Robertson) **80f:62048** 62H12 (60F15, 62G05)
- Šaginjan, R. S.** Recognition methods by systems of test-like base sets. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 4, 1007-1013, 1069. (W. Greblicki) **80c:68079** 68G10
- Sagiv, Y.** (with Aho, A.; Ullman, Jeffrey D.) Equivalences among relational expressions. *SIAM J. Comput.* 8 (1979), no. 2, 218-246. (Ju. G. Karpov) **80f:68108** 68H05 (68B15)
- Sagraloff, B.** (with Mennicken, R.) Störungstheoretische Untersuchungen über den Semi-Fredholmraum und -operatoren in lokalkonvexen Vektorräumen. II. *J. Reine Angew. Math.* 303/304 (1978), 389-436. (Harro Heuser) **80c:47023** 47A55
- Saguez, Christian** Contrôle optimal d'un système gouverné par une inéquation variationnelle parabolique. Observation du domaine de contact. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 14, A957-A959. (Author's summary) **80c:49018** 49B22
- Saha, Bibhuti Bhushan** Group-theoretic study of certain generating functions of generalized Bessel polynomials. *Math. Balkanica* 6 (1976), 168-175 (1978). (Mineo Ikeda) **80c:33014** 33A40 (33A65)
- Saha, Dines Chandra** (with Rao, Ganti Prasada) Time domain synthesis via Poisson moment functionals. *Internat. J. Control* 30 (1979), no. 3, 417-426. (Authors' introduction) **80h:93044** 93C99
- Saha, G. M.** (with Kageyama, Sanpei; Das, A. D.) Reduction of the number of associate classes of hypercubic association schemes. *Ann. Inst. Statist. Math.* 30 (1978), no. 1,



- 115-123. (D. V. Chopra) **80c:62095** 62K15  
(with Das, A. D.) An infinite class of PBIB designs. (French summary) *Canad. J. Statist.* **6** (1978), no. 1, 25-32. (K. Vijayan) **80b:62059** 62K10 (5Bxx)  
A note on combining two partially balanced incomplete block designs. *Utilitas Math.* **13** (1978), 27-32. (S. K. Tharthare) **80j:05019** 05B05 (62K10)
- Saha, N. G. On sets under certain linear transformation. *Indian J. Mech. Math.* **15** (1977), no. 1-2, 82-90 (1979). (Ion Chitescu) **80m:28010** 28A75
- Sahai, Ashok An efficient variant of the product and ratio estimators. *Statist. Neerlandica* **33** (1979), no. 1, 27-35. (Mankal N. Murthy) **80k:62020** 62D05
- Sahai, Hardeo (with Ramirez Martinez, Alcedo A.) Formal Bayesian estimators in the general two-way random model with cross classification. (Spanish) *Trabajos Estadist. Investigación Oper.* **29** (1978), no. 2, 88-93. (Authors' summary) **80f:62067** 62J05 (62F15)  
A supplement to: "A chronological and classified bibliography on random number generation and testing" [*Internat. Statist. Rev.* **40** (1972), no. 3, 355-371; MR **54** #1728] by E. R. Sowe. *J. Statist. Comput. Simulation* **10** (1979/80), no. 1, 31-52. (From the introduction) **80f:65008** 65C10 (65-02)
- Sahai, Devendra A theory of progress functions. *AIIE Trans.* **11** (1979), no. 1, 23-29. (Author's summary) **80e:92043** 92A20
- Sahay, Surendran N. (with Nagar, Anirudh L.) The bias and mean squared error of forecasts from partially restricted reduced form. *J. Econometrics* **7** (1978), no. 2, 227-243. (Authors' summary) **80m:62107** 62P20 (62J05)
- Sahel-Djahromi, N. Probabilistic LCF. *Mathematical foundations of computer science*, 1978 (Proc. Seventh Sympos., Zakopane, 1978), pp. 442-451, *Lecture Notes in Comput. Sci.*, **64**, Springer, Berlin, 1978. (D. Vaida) **80f:68067** 68F15
- Sahin, İzzet Moment inequalities for a class of stochastic systems. *Stochastic Process. Appl.* **7** (1978), no. 2, 123-130. (U. Narayan Bhat) **80c:60120** 60K99 (62P05)  
On the stationary analysis of continuous review (s, S) inventory systems with constant lead times. *Oper. Res.* **27** (1979), no. 4, 717-729. (R. Jagannathan) **80f:90050** 90B05  
(with Balcer, Yves) Stochastic models for pensionable service. *Oper. Res.* **27** (1979), no. 5, 888-903. (Authors' summary) **80b:90055** 90A30 (90A19)
- Sahni, M. M. A boundary value problem in a class of discontinuous functions and the calculus of variations. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 10, 1905-1906, 1920. (Ju. A. Melencova) **80g:49024** 49A50 (34B25)
- Sahmurov, V. B. Coercive solvability of general boundary value problems for partial operator-differential equations. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidzan. SSR Dokl.* **34** (1978), no. 6, 3-7. (L. G. Mihailov) **80f:35120** 35R20
- Sahney, Badri N. (with Holland, A. S. B.; Kuttner, Brian) Approximation by interpolating polynomials. *J. Approx. Theory* **22** (1978), no. 1, 27-32. (A. Meir) **80g:42003** 42A10  
(with Holland, A. S. B.; McCabe, J. H.; Phillips, G. M.) Best simultaneous  $L_1$  approximations. *J. Approx. Theory* **24** (1978), no. 4, 361-365. (Geetha S. Rao) **80j:41028** 41A28  
(with Holland, A. S. B.) The general problem of approximation and spline functions. *Robert E. Krieger Publishing Co., Huntington, N.Y.*, 1979. 344 pp. ISBN 0-88275-598-6 (E. W. Cheney) **80j:41001** 41-01  
See also *Polynomial and spline approximation*, **80f:41001**
- Sahni, Paramdeep S. (with José, Jorge V.) Duality, solitons and dilute-gas approximation in the one-dimensional X-Y model with symmetry-breaking fields. *Phys. Rev. Lett.* **43** (1979), no. 1, 78-81. (Authors' summary) **80d:82062** 82A67
- Sahni, Sartaj (with Cho, Yookun) Nearly on line scheduling of a uniform processor system with release times. *SIAM J. Comput.* **8** (1979), no. 2, 275-285. (Eugene Levner) **80d:68046** 68C15 (90B35)
- Sahnouk, L. A. Equations with a difference kernel on a finite segment. (Russian) *Asymptotic methods in systems theory* (Russian), pp. 217-222, *Irkutsk. Gos. Univ., Irkutsk*, 1977. (Editors) **80g:76017** 76C99 (45E05)
- Sahoo, B. (with Parida, J.) An existence theorem for the generalized complementarity problem. *Bull. Austral. Math. Soc.* **19** (1978), no. 1, 51-58. (B. Mond) **80a:90137** 90C33
- Sahnoud, S. (with Rebiere, J. P.) Parametric resonance by combined frequencies of cantilever bars under periodic axial load by the elastic-joint-method. *Mech. Res. Comm.* **5** (1978), no. 1, 39-44. (Editors) **80d:73076** 73H10 (49G05)
- Sahtaria, B. I. (with Kriščenko, A. P.) Investigation of a third-order piecewise-linear system. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 6, 178-185 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 6, 149-156. (Authors' summary) **80k:93026** 93C10  
(with Morozova, V. D.) Approximate study of piecewise linear system. (Russian. English summary) With a loose English translation. *Problems Comput. Inform. Theory / Problemy Upravlen. Teor. Inform.* **8** (1979), no. 5-6, 453-465. (Authors' summary) **80j:93054** 93C10
- Sahverdjan, A. Ju. Hyperbolic capacity and rate of decrease of meromorphic functions in a disk. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* **68** (1979), no. 2, 88-94. (A. E. Erömenko) **80j:30037** 30D30
- Saibel, E. A. (with Chow, P. L.) Analysis of a stochastic Reynolds equation and related problems. *Transactions of the Twenty-Fourth Conference of Army Mathematicians* (Univ. Virginia, Charlottesville, Va., 1978), pp. 413-420, *ARO Rep.*, **79.1**, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Authors' summary) **80d:76028** 76D99
- Saiker, A. I. On statistics of longitudinal nonlinear random waves in an elastic body. *Prikl. Mat. Meh.* **41** (1977), no. 6, 1107-1113 (Russian); translated as *J. Appl. Math. Mech.* **41** (1977), no. 6, 1125-1131 (1979). (Author's summary) **80f:73020** 73D99  
The possibility of the use of the apparatus of Kolmogorov-Feller equations for statistical analysis of systems subject to Poisson processes with symmetric pulses. (Russian) *Izv. Vysš. Učebn. Zaved. Radiofizika* **22** (1979), no. 4, 506-508. (From the introduction) **80f:78010** 78A99
- Saidenko, A. V. On the question of mappings of families of cones. (Russian) *Sibirsk. Mat. Z.* **20** (1979), no. 1, 164-174, 206. (E. J. F. Primrose) **80f:51005** 51G05
- Saidurov, V. V. (with Fage, D. M.) A direct method of solution of systems of equations with a block three-diagonal matrix. (Russian) *Computational methods in linear algebra* (Proc. Fourth All-Union Conf., Acad. Sci. USSR, Novosibirsk, 1976), pp. 117-122, *Akad. Nauk SSSR Sibirsk. Otdel., Vyčisl. Centr. Novosibirsk*, 1977. (Zdeněk Dostál) **80m:65019** 65F05  
(with Bagaev, B. M.) Amélioration de la précision des schémas aux différences-variationnelles pour les équations différentielles avec singularités. *Étude numérique des grands systèmes* (Proc. Sympos., Novosibirsk, 1976), pp. 110-123, *Méthodes Math. de l'Informatique*, **7**, Dunod, Paris, 1978. (V. Thomée) **80d:65086** 65L05 (65L30, 65N30)  
(with Bagaev, B. M.) Increasing the exactness of variational-difference solutions of differential problems with singularities. (Russian) *Numerical methods in mathematical physics, geophysics and optimal control* (Sympos., Novosibirsk, 1976) (Russian), pp. 216-228, 237, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (R. Kodnár) **80g:65060** 65J05 (65L99)
- Saigal, R. (with Todd, Michael J.) Efficient acceleration techniques for fixed point algorithms. *SIAM J. Numer. Anal.* **15** (1978), no. 5, 997-1007. (Authors' summary) **80c:65013** 65B99 (54H25, 90C48)  
(with Shin, Y. S.) Perturbations in fixed point algorithms. *Functional differential equations and approximation of fixed points* (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978), pp. 434-441, *Lecture Notes in Math.*, **730**, Springer, Berlin, 1979. (Norihiko Adachi) **80f:65020** 65H05 (55M20, 58C15)  
On piecewise linear approximations to smooth mappings. *Math. Oper. Res.* **4** (1979), no. 2, 153-161. (Wilhelm Singhof) **80j:55002** 55M20 (90C99)  
(with Kojima, Masakazu) On the number of solutions to a class of linear complementarity problems. *Math. Programming* **17** (1979), no. 2, 136-139. (Ikuyo Kaneko) **80j:90139** 90C33
- Saigo, Megumi A remark on integral operators involving the Gauss hypergeometric functions. *Math. Rep. Kyushu Univ.* **11** (1977/78), no. 2, 135-143. (S. D. Bajpai) **80g:44008** 44A20
- Sainte-Beuve, Marie-France Nougues See Nougues-Sainte-Beuve, Marie-France
- Saint-Pierre, J. Points exposés d'une multiaapplication à valeurs convexes de  $\mathbb{R}^n$ . *Travaux Sémin. Anal. Convexe* **8** (1978), no. 2, exp. no. 7, 32 pp. (C. Olech) **80g:54025** 54C60 (28B20)
- Saint-Raymond, Jean Sur une conjecture de G. Godefroy. *Séminaire Choquet, 17e année* (1977/78), *Initiation à l'analyse*, Fasc. 2, *Comm. No. 12*, 2 pp., *Secrétariat Math., Paris*, 1978. (Editors) **80d:46065** 46E99  
Fonctions convexes sur un convexe borné complet. (English summary) *Bull. Sci. Math.* (2) **102** (1978), no. 4, 331-336. (Benno Fuchssteiner) **80d:46016** 46A55  
La structure borélienne d'effros est-elle standard? *Fund. Math.* **100** (1978), no. 3, 201-210. (V. V. Milkin) **80g:54044** 54H05 (54E45)  
Sur les fonctions munies de dérivées partielles. (English summary) *Bull. Sci. Math.* (2) **103** (1979), no. 4, 375-378. (Author's summary) **80b:26009** 26B05
- Saito, Hiroshi Automorphic forms and algebraic extensions of number fields. II. *J. Math. Kyoto Univ.* **19** (1979), no. 1, 105-123. (Stephen Gelbart) **80k:10033** 10D15 (12A67)
- Saitō, Kazuyuki  $AW^*$ -algebras with monotone convergence property and examples by Takenouchi and Dyer. *Tōhoku Math. J.* (2) **31** (1979), no. 1, 31-40. (J. D. Maitland Wright) **80d:46094** 46L05
- Saito, Kichi-Suke (with McAsey, Michael; Muhly, Paul S.) Nonselfadjoint crossed products. *Hilbert space operators* (Proc. Conf., Calif. State Univ., Long Beach, Calif., 1977), pp. 121-124, *Lecture Notes in Math.*, **673**, Springer, Berlin, 1978. (William Paschke) **80j:46101a** 46L10  
(with McAsey, Michael; Muhly, Paul S.) Nonselfadjoint crossed products (invariant subspaces and maximality). *Trans. Amer. Math. Soc.* **248** (1979), no. 2, 381-409. (William Paschke) **80j:46101b** 46L10
- Saito, Masahiko On the non-standard representation of linear mappings from a function space. *Comment. Math. Univ. St. Paul.* **26** (1977/78), no. 2, 165-185. (P. A. Loeb) **80a:30091** 03H05 (28B05, 46E27, 47B99)
- Saitō, Nobuhiko (with Ichimura, Atsushi) Ergodic components in the stochastic region in a Hamiltonian system. *Stochastic behavior in classical and quantum Hamiltonian systems* (Volta Memorial Conf., Como, 1977), pp. 137-144, *Lecture Notes in Phys.*, **93**, Springer, Berlin, 1979. (Richard C. Churchill) **80k:58048** 58F05 (58F11, 70H99)
- Saito, Nobuji (with Nishizeki, Takao; Takamizawa, Kazuhiko) Computational complexities of obtaining programs with minimum number of GO TO statements from flow charts. *Systems-Comput.-Controls* **8** (1977), no. 2, 11-18 (1978). (Steven S. Muchnick) **80c:68032** 68C25 (68B05)  
(with Asano, Takao; Nishizeki, Takao) NP-complete problems of finding a maximum cutset and of reducing graphs to bipartite graphs. *Systems-Comput.-Controls* **8** (1977), no. 4, 45-52 (1979). (Authors' summary) **80c:68164** 68E10 (68C25)
- Saito, Nobuo Forcing logic and semaphore systems. *Keio Math. Sem. Rep. No. 4* (1979), 69-78. (G. Louchard) **80m:68029** 68B20
- Saito, Sadao (with Hayasaka, Takanori) The Langford (4, n)-sequence: a trigonometric approach. *Discrete Math.* **28** (1979), no. 1, 81-88. (D. P. Roselle) **80f:05004** 05A05  
(with Hayasaka, Takanori) A perfect (sn)-sequence based on the quadratic  $F(k, i)$ . *Res. Rep. Miyagi Tech. College No. 15* (1979), 201-205. (Jau-Shyong Shue) **80f:10013** 10A40
- Saitō, T. See Shah, N. C.; et al., **80a:47037**
- Saitoh, Saburoo The weighted periods of analytic functions and the kernel functions of Szegő type for some closed subspaces. *Karachi Math. Assoc. Ruzi (Souvenir)* **1978**, 8-26. (Jacob Burbea) **80f:30008** 30C40  
Some inequalities for analytic functions with a finite Dirichlet integral on the unit disc. *Math. Ann.* **246** (1979/80), no. 1, 69-77. (Jacob Burbea) **80j:30005** 30A10  
The Bergman norm and the Szegő norm. *Trans. Amer. Math. Soc.* **249** (1979), no. 2, 261-279. (I. P. Ramadanov) **80b:30011** 30C40  
The Dirichlet norm and the norm of Szegő type. *Trans. Amer. Math. Soc.* **254** (1979), 355-364. (Thomas McCoy) **80j:30068** 30F30 (30C40)
- Saizew, G. A. See Zaicev, G. A.
- Salz, Zaido, F. (with Arrate Peña, M.) A characterization of the quasi-analytic classes. (Spanish) *Rev. Mat. Hsp.-Am.* (4) **38** (1978), no. 4-5, 177-180. (R. P. Boas, Jr.) **80f:26014** 26E10 (26E20, 28A20)
- Saka, Kōichi A generalization of Cauchy-Riemann equations on a Riemannian symmetric space and the  $H^p$  space theory. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 7,

- 255-260. (Norman J. Weiss) **80i:32007** 32A35 (43A85, 58G05)
- Sakaguchi, Minoru** A bilateral sequential game for sums of bivariate random variables. (Japanese summary) *J. Oper. Res. Soc. Japan* **21** (1978), no. 4, 486-508. (J.-F. Mertens) **80a:90177** 90D20
- Correction to: "Marksmanship contents—non-zero-sum game of timing" [Math. Japon. **22** (1977/78), no. 5, 585-596; MR **58** #4371]. *Math. Japon.* **23** (1978/79), no. 5, 579. (Editors) **80i:90040** 90D05
- A generalized secretary problem with uncertain employment. *Math. Japon.* **23** (1978/79), no. 6, 647-653. (G. S. Davies) **80d:90108** 90D35
- Dowry problems and OLA policies. *Rep. Statist. Appl. Res. Un. Japan. Sci. Engrs.* **25** (1978), no. 3, 24-28. (From the introduction) **80g:62061** 62L15
- Sakaguchi, Toshio** On generalized  $K$ -curvature tensors on some Kählerian manifolds. *Mem. Defense Acad.* **18** (1978), no. 3, 115-120. (Koichi Ogiue) **80e:53028** 53B35
- Sakai, Eiichi** (with Harita, Mitsuru) On the continuability of holomorphic functions with real parameters. *Sci. Rep. Kanazawa Univ.* **23** (1978), no. 2, 69-75. (H. B. Laufer) **80g:32026** 32D15
- Sakai, Hidesaki** (with Soeda, Takashi; Tokumaru, Hidekatsu) Optimal linear coding schemes for feedback communication with noisy side information. *IEEE Trans. Inform. Theory* **24** (1978), no. 3, 381-384. (Michele Elia) **80a:94021** 94A24
- (with Soeda, Takashi; Tokumaru, Hidekatsu) On the relation between fitting autoregression and periodogram with applications. *Ann. Statist.* **7** (1979), no. 1, 96-107. (E. J. Hannan) **80b:62106** 62M10
- Sakai, Katsuro** Some properties of MAR and MANR. *Tôhoku Math. J. (2)* **30** (1978), no. 3, 351-366. (Y. Kodama) **80e:55018** 55P55 (54C55, 57N25)
- Sakai, Kiyoshi** (with Noguchi, Akira; Watanabe, Hideaki) Solitons of the nonlinear self-dual network with saturable property. *J. Phys. Soc. Japan* **45** (1978), no. 6, 2009-2013. (Authors' summary) **80a:35106** 35Q20 (34A99, 78A40)
- Sakai, Kôichirô** On indecomposable unitary representations of locally compact abelian groups in  $\Pi_\infty$ -spaces. *Sci. Rep. Kagoshima Univ.* No. 27 (1978), 1-20. (G. L. Litvinov) **80g:22004** 22D10 (22D12)
- On quasipositive definite functions and unitary representations of groups in Pontryagin spaces. *J. Math. Kyoto Univ.* **19** (1979), no. 1, 71-90. (Helmut Boseck) **80i:22004** 22A10 (22A25)
- Sakai, Makoto** Analytic functions with finite Dirichlet integrals on Riemann surfaces. *Acta Math.* **142** (1979), no. 3-4, 199-220. (Tadashi Kuroda) **80d:30042** 30F20 (30C40)
- Sakai, Manabu** Spline interpolation and two-sided approximate methods for two-point boundary value problems. *Rep. Fac. Sci. Kagoshima Univ.* No. 11 (1978), 1-19. (G. H. Meyer) **80i:65093** 65L10
- Cubic spline interpolation and chopping procedure for two-point boundary value problems. *Rep. Fac. Sci. Kagoshima Univ.* No. 11 (1978), 21-24. (G. H. Meyer) **80i:65094** 65L10
- Sakai, Shôichirô** Developments in the theory of derivations in  $C^*$ -algebras. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics (Leipzig, 1977)*, pp. 234-240. Teubner, Leipzig, 1978. (G. Arsene) **80b:46095** 46L05
- Sakai, Takashi** The manifold of the Lagrange subspaces of a symplectic vector space. *J. Differential Geom.* **12** (1977), no. 4, 555-564. (1978). (A. Crumeyrolle) **80b:58028** 58E10 (58G99)
- Sakakibara, Susumu** The role of gauge ambiguity in the vacuum tunneling in Yang-Mills theories. *Hadronic J.* **1** (1978), no. 5, 1466-1496. (C. J. Eliezer) **80i:81065** 81E15
- Sakakura, A. Y.** (with Brittin, W. E.; Girardeau, M. D.) Bound states, plane waves, and orthogonalization. *Phys. Rev. A (3)* **18** (1978), no. 6, 2412-2420. (Gisèle Hadinger) **80a:81093** 81F10 (46N05)
- Sakamaki, Kazuo** (with Takahashi, Wataru) Systems of convex inequalities and their applications. *J. Math. Anal. Appl.* **70** (1979), no. 2, 445-459. (Y. I. Kannai) **80j:46075** 46G99 (15A51, 46A55)
- Sakamoto, Ryuji** (with Kondo, Eiji; Sunaga, Teruo) Design of linear functional filters for linear stochastic systems. *Internat. J. Control* **29** (1979), no. 1, 133-143. (R. S. Bucy) **80e:93122** 93E11
- Sakamoto, Takeshi** (with Kurano, Masami) Stochastic game models for the determination of the optimal continuous sampling inspection plans. *Bull. Math. Statist.* **18** (1978/79), no. 1-2, 9-19. (C. Mohan) **80e:90183** 90D40 (62N10)
- Sakamoto, Yoshiyuki** (with Akaike, Hirotugu) Analysis of cross classified data by AIC. *Ann. Inst. Statist. Math.* **30** (1978), no. 1, 185-197. (H. T. Amundsen) **80e:62072** 62H17
- Sakanjan, M. A.** Existence of a hypersurface with a given sum of principal radii of curvature in the Lobachevskii space  $A^n$ . (Russian) *Geometry*, No. 6 (Russian), pp. 87-93. Leningrad. Gos. Ped. Inst., Leningrad, 1977. (Valentin Boju) **80b:53064b** 53C45
- Expression of the sum of principal radii of curvature of a hypersurface in terms of its support function in the Lobachevskii space  $A^n$ . (Russian) *Geometry*, No. 6 (Russian), pp. 94-101. Leningrad. Gos. Ped. Inst., Leningrad, 1977. (Valentin Boju) **80b:53064a** 53C45 (53C50)
- Sakarovich, M.** Quelques théorèmes de dualité combinatoire. (English summary) *Discrete Math.* **21** (1978), no. 2, 201-212. (Michael J. Todd) **80i:90103** 90C99 (05B35)
- Sakasegawa, Hirotsuka** On a generation of normal pseudo-random numbers. *Ann. Inst. Statist. Math.* **30** (1978), no. 2, 271-279. (Harald Niederreiter) **80a:65023** 65C10
- Sakashita, Hideo** Adventitious angles. (Japanese. English summary) *Bull. Kyoto Univ. Ed. Ser. B No. 52* (1978), 1-11. (S. Hitotumatu) **80a:51012** 51M15
- Sakata, Shôjirô** General theory of doubly periodic arrays over an arbitrary finite field and its applications. *IEEE Trans. Inform. Theory* **24** (1978), no. 6, 719-730. (Author's summary) **80d:94020** 94B15 (68D20)
- Sakharov, V. E.** See **Zakharov, V. E.**
- Sakita, B.** (with de Vega, H. J.; Gervais, Jean-Loup) Real-time approach to instanton phenomena. I. Multidimensional potentials with degenerate absolute minima. *Nuclear Phys. B* **139** (1978), no. 1-2, 20-36. (Authors' summary) **80e:81037a** 81C99 (35C99, 81E99)
- (with de Vega, H. J.; Gervais, Jean-Loup) Real-time approach to instanton phenomena. II. Multidimensional potential with continuous symmetry. *Nuclear Phys. B* **143** (1978), no. 1, 125-147. (Authors' summary) **80e:81037b** 81C99 (35C99, 81E99)
- (with Mohapatra, R. N.)  $SO(2N)$  grand unification in an  $SU(N)$  basis. *Phys. Rev. D (3)* **21** (1980), no. 4, 1062-1066. (Authors' summary) **80m:81033** 81C40
- Sakla, Adel A.** (with Trick, Timothy N.; Mayeda, Wataru) Calculation of parameter values from node voltage measurements. Special issue on automatic analog fault diagnosis. *IEEE Trans. Circuits and Systems* **26** (1979), no. 7, 466-474. (Authors' summary) **80b:94049** 94C05
- Sakmar, I. A.** Conditions on the uniqueness of the solution of the elastic unitarity equation. *J. Math. Phys.* **19** (1978), no. 10, 2124-2125. (Author's summary) **80a:81045** 81C99 (00A89)
- An angle-dependent lower bound on the solution of the elastic unitarity integral and a new uniqueness condition resulting from it. *J. Math. Phys.* **20** (1979), no. 1, 11-12. (Author's summary) **80b:81099** 81F99
- (with Chan, S. K.) Unitarity sufficiency condition in some concrete cases. *Prog. Theoret. Phys.* **61** (1979), no. 5, 1357-1366. (Authors' summary) **80e:81029** 81C99 (81F20)
- Sakr, M.** (with Fahmy, Moustafa M.; Hanafy, A. A. R.) Comments on: "Linear function observer for linear discrete-time systems" (IEEE Trans. Automat. Control **AC-20** (1975), 401-407) by A. Nagata, T. Nishimura and M. Ikeda. *IEEE Trans. Automat. Control* **24** (1979), no. 2, 378-380. (Authors' summary) **80b:93033** 93B07
- Saks, Michael** (with Edelman, Paul H.) Group labelings of graphs. *J. Graph Theory* **3** (1979), no. 2, 135-140. (C. R. J. Clapham) **80j:05071** 05C25
- Saks, Victor** Ultrafilter invariants in topological spaces. *Trans. Amer. Math. Soc.* **241** (1978), 79-97. (Anne K. Steiner) **80b:54003** 54A20 (54A25, 54D20)
- Saksena, V. N.** Discrete time analysis of a deteriorating structure—a Markovian model. *Sankhyā Ser. A* **40** (1978), no. 1, 61-75. (Gh. Oprisan) **80m:60079** 60J20 (60K20, 90B25)
- Saksonov, E. A.** (with Zdanov, V. S.) Conditions of existence of steady-state modes in cyclic queueing systems. *Avtomat. i Telemekh.* **1979**, no. 2, 29-38. (Russian); translated as *Automat. Remote Control* **40** (1979), no. 2, part 1, 176-184. (K. Balagopal) **80m:60103** 60K25
- Saksonov, M. T.** (with Arkin, V. I.) Necessary optimality conditions in problems of the control of stochastic differential equations. (Russian) *Dokl. Akad. Nauk SSSR* **244** (1979), no. 1, 11-15. (From the text) **80b:93076** 93C20 (49B60)
- Sakurai, J. J.** Neutral currents and gauge theories—past, present, and future. *Current trends in the theory of fields (Sympos., Florida State Univ., Tallahassee, Fla., 1978)*, pp. 38-80. *AIP Conf. Proc.*, **48**, Amer. Inst. Physics, New York, 1978. (Don Weingarten) **80i:81060** 81E05 (01A65)
- Salahy, Mohamed** (with Bhat, U. Narayan; Fischer, Martin J.) Approximation techniques in the solution of queueing problems. *Naval Res. Logist. Quart.* **26** (1979), no. 2, 311-326. (Dietrich Stoyan) **80i:60127** 60K25 (90B22)
- Salaev, V. V.** (with Musaev, B. I.) Conjugate functions of several variables. I. (Russian) *Azerbaij. Gos. Univ. Uchen. Zap.* **1978**, no. 4, 5-18. (R. L. Cooke) **80j:42035** 42B99
- Salavskii, O. V.** A large deviation theorem for the generalized Student ratio. (Russian. English summary) *Studies in statistical estimation theory, II. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **79** (1978), 82-96, 99, 103. (S. A. Book) **80m:62021** 62E20 (60F10)
- Large deviation theorems in a scheme of smoothing observations with unknown weights. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 3, 565-569. (S. A. Book) **80m:62022** 62E20 (60F10)
- Salakhitdinov, M. S.** (with Nagornyi, A. M.) A boundary value problem for the equation  $(\partial/\partial x)(\text{sgn } y|y|^{n-1}u_x + u_y) = 0$ . (Russian) *Direct and inverse problems for partial differential equations and their applications (Russian)*, pp. 3-20, "Fan", Tashkent, 1978. (M. A. Atahodjaev) **80i:35132** 35M05
- See also **Direct and inverse problems for partial differential equations and their applications**, **80d:35002**
- Salakhitdinov, R. Z.** A refinement of the remainder term in the central limit theorem. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **23** (1978), no. 3, 688-691. (Dominik Szybal) **80b:60039** 60F05
- Salam, Abdus** (with Strathdee, J.) Remarks on high-energy stability and renormalizability of gravity theory. *Phys. Rev. D (3)* **18** (1978), no. 12, 4480-4485. (Authors' summary) **80a:83008** 83C05 (44A40)
- (with Strathdee, J.) Confinement through tensor gauge fields. *Phys. Rev. D (3)* **18** (1978), no. 12, 4596-4609. (Authors' summary) **80b:81127** 81M05
- (with Baaklini, N. S.) Nonmetrical supergravity for a spin-two nonet. *Nuclear Phys. B* **153** (1979), no. 1-2, 237-243. (Marcos D. Maia) **80i:83019** 83C45 (22E65, 22E70)
- al-Salam, Nadhla A.** See **Al-Salam, Nadhla A.**
- al-Salam, Waleed A.** See **Al-Salam, Waleed A.**
- Salamó, S.** (with Rasmussen, W. O.) An algebraic approach to Coulomb scattering in  $N$  dimensions. *J. Math. Phys.* **20** (1979), no. 6, 1064-1067. (A. O. Barut) **80d:81102** 81F05 (47A40)
- (with Gambini, R.) Null-plane analysis of electromagnetism with magnetic charges. (Italian summary) *Nuovo Cimento A (11)* **49** (1979), no. 2, 276-288. (Authors' summary) **80i:81042** 81C99 (78A25)
- Salamon, N. J.** (with Walter, G. G.) Limits of Lipschitz-Hankel integrals. *J. Inst. Math. Appl.* **24** (1979), no. 3, 237-254. (Authors' summary) **80b:65011** 65D30
- Salas Fumas, Vicente** (with Whinston, Andrew B.) Flexible contracting, theory and case examples. *European J. Oper. Res.* **3** (1979), no. 5, 368-378. (Authors' summary) **80f:90010** 90A05 (90A11)
- Salát, Tibor** On nowhere density of the class of somewhat continuous functions in  $M(X)$ . *Casopis Pěst. Mat.* **103** (1978), no. 2, 157-158. (From the introduction) **80b:54012** 54C05 (54C30)
- On the sums and products of consecutive elements from a sequence. *Nieuw Arch. Wisk. (3)* **26** (1978), no. 3, 441-453. (O. H. Körner) **80d:10072** 10J20 (10L15)
- On Pompeiu functions and functions of the type  $P_1$ . *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 7, 1123-1128. (A. M. Bruckner) **80b:26007** 26A24
- Salauinov, V. A.** A problem with a small parameter for second order elliptic equations. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 2(200), 207-208. (J. D. Atkinson) **80a:35034** 35J25 (60J60)
- Salazar, Tomas Eufrazio** An abstract matrix model: the column model. *Linear and*



- Multilinear Algebra** 8 (1979/80), no. 2, 153–170. (Marvin Marcus) **80k:15029** 15A48 (06F25, 15A03)
- Salmay, Sergio** (with Abian, Alexander) Dyadic matrices and Wallman compactification. *Acta Math. Acad. Sci. Hungar.* 34 (1979), no. 1-2, 63–66. (Marvin Marcus) **80k:15023** 15A36 (15A99, 54D35)
- (with Abian, Alexander) Wallman compactification and matrices of zeroes and ones. *J. Math. Anal. Appl.* 69 (1979), no. 2, 436–442. (N. Hindman) **80f:54016** 54D35 (05B20)
- Salmay, L.** (with Fuchs, Laszlo) On almost totally injective  $p$ -groups and cotorsion groups. *J. Algebra* 58 (1979), no. 1, 176–188. (Frans Loonstra) **80k:20030** 20K40
- Saldanha, J. S. V.** (with Jain, M. K.) Higher order difference methods for second order two-point boundary-value problems. *J. Comput. Appl. Math.* 4 (1978), no. 3, 199–206. (Authors' summary) **80a:65174** 65L10
- Sale, N.** (with Maier, V.) On the general relativistic phenomenological theory of superconductivity. (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 3, 408–416. (Authors' summary) **80k:81117** 81J05 (83C99)
- Saleem, S. D.** (with Lloyd, E. H.) A note on seasonal Markov chains with gamma or gamma-like distributions. *J. Appl. Probab.* 16 (1979), no. 1, 117–128. (Terence P. Speed) **80b:60130** 60K30
- Saleev, V. M.** (with Antonov, I. A.) An effective method for the computation of  $\lambda_P$ -sequences. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 1, 243–245, 271. (Authors' summary) **80f:65006** 65C05 (65C20)
- Saleh, A. K. M.** Eshenah-Behrens-Fisher problem for the exponential distribution in censored and uncensored samples. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974), Vol. B*, pp. 465–472, *Academia, Prague*, 1978. (M. M. Siddiqui) **80k:62018** 62E15
- (with Sen, Pranab Kumar) Nonparametric estimation of location parameter after a preliminary test on regression in the multivariate case. *J. Multivariate Anal.* 9 (1979), no. 2, 322–331. (Vijaya Prakash Gupta) **80k:62066** 62G20 (62H99)
- Saleh, Ahmed Salwat Abd el-Radi** Diffraction of waves by a discontinuity line in the curvature of a boundary surface. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 6, 15–24. (Author's summary) **80b:76036** 76Q05 (76C99)
- Saleh, Bahaa E. A.** Quantum fluctuations and adaptive spatial interactions in the visual system. *IEEE Trans. Systems Man Cybernet.* 8 (1978), no. 12, 875–879. (Author's summary) **80a:92032** 92A09
- (with Hentze, Toma) Image restoration utilizing spatial masking of the visual system. *IEEE Trans. Systems Man Cybernet.* 8 (1978), no. 12, 883–888. (Authors' summary) **80a:92026** 92A09 (68G10)
- Optical bilinear transformations: general properties. (German summary) *Optica Acta* 26 (1979), no. 6, 777–799. (Andrzej Zardecki) **80k:78005** 78A10 (78A55)
- Salehi, H.** (with Miamer, A. G.) A note on the product of operator-valued measures. *Bol. Soc. Mat. Mexicana* (2) 22 (1977), no. 1, 23–24. (Przemysław Kranz) **80k:28005** 28A35
- (with Miamer, A. G.) On minimality of infinite-dimensional stationary stochastic processes. *Probability theory on vector spaces (Proc. Conf., Trzebiezowice, 1977)*, pp. 119–128, *Lecture Notes in Math.*, 656, Springer, Berlin, 1978. (A. I. Ponomarenko) **80d:60052** 60G25
- (with Miamer, A. G.) On the factorization of a nonnegative operator valued function. *Probability theory on vector spaces (Proc. Conf., Trzebiezowice, 1977)*, pp. 129–137, *Lecture Notes in Math.*, 656, Springer, Berlin, 1978. (Jürgen Leiterer) **80k:47022** 47A68 (60G10)
- Algorithms for linear interpolator and interpolation error for minimal stationary stochastic processes. *Ann. Probab.* 7 (1979), no. 5, 840–846. (A. L. Makagon) **80i:60053** 60G25
- (with Miamer, A. G.) On the bilateral prediction error matrix of a multivariate stationary stochastic process. *SIAM J. Math. Anal.* 10 (1979), no. 2, 247–252. (A. L. Makagon) **80j:60059** 60G25
- Salehi, S. V.** On finding the transmittance between any two points in a composite system. *Internat. J. Control* 30 (1979), no. 5, 885–894. (Devendra P. Garg) **80j:93013** 93A15 (05C40)
- Salei, S. V.** Global solvability of a Stefan problem. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 6 (1979), 424–428, 493. (L. I. Rubinstein) **80k:35088** 35K05 (35R35)
- ben Salem, Moncef** See Ben Salem, Moncef
- Sales, André** (with Guy, Jean) Résolution numérique de certaines équations intégrales singulières, par un emploi itératif de la transformée de Fourier rapide. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 2, A169–A171. (Authors' summary) **80c:65248** 65R20
- Salek, Alan** On mixing and entropy. *J. Math. Anal. Appl.* 67 (1979), no. 2, 426–430. (R. L. Adler) **80c:28032** 28D20
- Saletan, E. J.** (with Marmo, G.; Simoni, A.) A general setting for reduction of dynamical systems. *J. Math. Phys.* 20 (1979), no. 5, 856–860. (Mark Adler) **80c:58021** 58F05 (34C05, 70H10)
- (with Marmo, G.; Simoni, A.) Reduction of symplectic manifolds through constants of the motion. (Italian and Russian summaries) *Nuovo Cimento B* (11) 50 (1979), no. 1, 21–36. (Richard C. Swanson) **80f:70020** 70H99 (58F05)
- Salas, George** Computational techniques in a set of late medieval astronomical tables. *J. Hist. Arabic Sci.* 1 (1977), no. 1, 24–32. (A. G. Mollard) **80d:01009a** 01A30
- The planetary tables of Cyriacus. *J. Hist. Arabic Sci.* 2 (1978), no. 1, 53–65. (E. S. Kennedy) **80f:01007** 01A30
- See also Tee, Garry J., **80d:01009b**
- Salleras López, Graciela** (with Vázquez, R.) Connection and disconnection. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 326–344, *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (V. Kannan) **80m:54015** 54B30 (18B99)
- (with Herrlich, Horst; Vázquez, R.) Dispersed factorization structures. *Canad. J. Math.* 31 (1979), no. 5, 1059–1071. (H. Gonsior) **80j:18006** 18A99 (54B30)
- Sallé, Nikolaus** Ein neues Verfahren zur Ableitung der Kompatibilitätsrelationen in der allgemein-relativistischen Elastomechanik. *Wiss. Z. Friedrich-Schiller-Universität Jena*
- Math.-Natur. Reihe* 27 (1978), no. 2-3, 311–313. (From the summary) **80a:33053** 83C99 (53A05, 73A05)
- Sallhor, G. N.** (with Žamalo, Z. Ž.; Šaripov, T. H.) Approximate integration of smooth functions. (Russian) *Mathematical analysis and related mathematical questions (Russian)*, pp. 37–60, 351, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (Authors' summary) **80m:41020** 41A55 (65D32)
- Sallhor, N. P.** Convergence of the Seidel method for the solution of a system of linear algebraic equations. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 1, 223–228, 271. (Author's summary) **80b:65048** 65F10
- Sallhor, V. H.** Estimates of the measures of linear independence and transcendence for the values of some  $E$ -functions in rational points. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 3, 9–18. (John H. Loxton) **80m:10026** 10F37
- Salli, V. N.** See Ordered sets and lattices, **80f:06001**
- Sallja, R. N.** The dependence of the choice of the form of operation of a queueing system on the number of constituent subsystems. (Russian) *Ekonom. i Mat. Metody* 14 (1978), no. 3, 562–570. (E. A. Danieljan) **80k:60122** 60K25
- Sallkora, I. M.** (with Petrov, B. N.; Alekandrov, A. D.; Andreev, V. P.; Bulekov, V. P.; Viktorov, B. V.; Izvol'skii, E. G.; Kudrjavcev, P. S.; Kuzin, V. P.; Mahan'ko, A. V.; Mihalov, F. A.; Muravlev, G. A.; Nikolaev, Ju. P.; Pobodonosov, G. V.; Pohvalenskii, V. L.; Sadykov, F. R.; Serpionov, G. V.; Ul'jalchenko, A. E.; Frolov, P. A.; Červjakov, V. P.; Caturjan, K. T.) Многомерные и неstationарные системы автоматического управления. (Russian) [Multistate and nonstationary automatic control systems] "Mashinostroenie", Moscow, 1978. 240 pp. (Publisher's summary) **80c:93073** 93C40
- Sallus, J. M.** (with Novello, M.) Nonlinear photons in the universe. *Phys. Rev. D* (3) 20 (1979), no. 2, 377–383. (M. Sachs) **80j:83029** 83E05 (83F05)
- Sallma, V. N.** (with Bobkov, V. V.) Explicit  $A$ -stable methods for second-order differential equations. (Russian. Lithuanian and English summaries) *Diferencial'nye Uravnenija i Primenen.—Trudy Sem. Protsessy Optimal. Upravlenija i Sekcija No. 21* (1978), 21–30, 103. (V. R. Ibragimov) **80b:65095** 65L05
- Numerical solution of the Cauchy problem for higher-order differential equations by single-step methods. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1979, no. 2, 55–59, 87. (Author's summary) **80c:65076** 65L05
- (with Bobkov, V. V.) Nonlinear methods of numerical solution of the Cauchy problem for ordinary second-order differential equations. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1979, no. 2, 79–80, 89. (Authors' summary) **80d:65087** 65L05
- Sallinas, Norberto** A classification problem for essentially  $n$ -normal operators. *Hilbert space operators (Proc. Conf., Calif. State Univ., Long Beach, Calif., 1977)*, pp. 145–156, *Lecture Notes in Math.*, 693, Springer, Berlin, 1978. (Robert L. Moore) **80c:47021** 47B15
- Hypoconvexity and essentially  $n$ -normal operators. *Trans. Amer. Math. Soc.* 256 (1979), 325–351. (P. A. Fillmore) **80j:47033** 47B15 (46M20)
- Sallmetti, Gabriela** (with Wets, Roger J.-B.) Erratum: "On the relations between two types of convergence for convex functions" (*J. Math. Anal. Appl.* 60 (1977), no. 1, 211–226). *J. Math. Anal. Appl.* 66 (1978), no. 3, 689. (Editors) **80a:90114** 90C25 (46G99)
- (with Wets, Roger J.-B.) On the convergence of sequences of convex sets in finite dimensions. *SIAM Rev.* 21 (1979), no. 1, 18–33. (Hans-Jürgen Albrand) **80b:52007** 52A20 (90C25)
- Sallngaros, Nikos** (with Dresden, Max) Properties of an associative algebra of tensor fields. Duality and Dirac identities. *Phys. Rev. Lett.* 43 (1979), no. 1, 1–4. (Authors' summary) **80d:81045** 81C99 (15A90)
- Sallu, L.** (with Gherman, O.) Singular orbits for the complexified SU(5) algebra. *Rev. Roumaine Phys.* 23 (1978), no. 7-8, 749–755. (M. E. Mayer) **80d:81120** 81G20 (22E70)
- Salljukov, Viktor N.** A contribution to universal solutions of the boundary layer theory. (German and Serbo-Croatian summaries) *Teor. Primen. Meh.* No. 4 (1978), 139–163. (William H. H. Banks) **80c:76014** 76D10 (65P05)
- Salkauskas, K.** Almost-interpolatory Chebyshev quadrature. II. *Proceedings of the Sixth Manitoba Conference on Numerical Mathematics (Univ. Manitoba, Winnipeg, Man., 1976)*, pp. 381–388, *Congress. Numer., XVIII, Utilitas Math., Winnipeg, Man., 1977*. (Author's summary) **80b:65016** 65D32
- Salle, Patrick** Une extension de la théorie des types en  $\lambda$ -calcul. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978)*, pp. 398–410, *Lecture Notes in Comput. Sci.*, 62, Springer, Berlin, 1978. (G. Berry) **80b:03019** 03B40
- Saller, H.** (with Dürr, H.-P.) Too many flavours? Dynamical generation of effective degrees of freedom. (Italian and Russian summaries) *Nuovo Cimento A* (11) 48 (1978), no. 4, 505–560. (Authors' summary) **80d:81129** 81G35 (22E70)
- (with Dürr, H.-P.) Gauge-invariant rearrangement and theory of the Cabibbo angle. (Italian and Russian summaries) *Nuovo Cimento A* (11) 48 (1978), no. 4, 561–607. (Don Weingarten) **80f:81106** 81G20
- Sallhofer, Hans** Elementare Herleitung der Dirac-Gleichung. (English summary) *Z. Naturforsch. A* 33 (1978), no. 11, 1378–1379. (Author's summary) **80a:81021** 81C05 (35Q20)
- Elementare Herleitung der Dirac-Gleichung. II. (English summary) *Z. Naturforsch. A* 34 (1979), no. 6, 772. (Author's summary) **80m:81044** 81D25
- Elementare Herleitung der Dirac-Gleichung. III. (English summary) *Z. Naturforsch. A* 34 (1979), no. 9, 1145–1146. (Author's summary) **80b:81014** 81C05
- Sally, Judith D.** Cohen-Macaulay local rings of maximal embedding dimension. *J. Algebra* 56 (1979), no. 1, 168–183. (Jonathan M. Wahl) **80e:14022** 14M05 (14B05)
- Stretched Gorenstein rings. *J. London Math. Soc.* (2) 20 (1979), no. 1, 19–26. (Jonathan M. Wahl) **80k:14006** 14B05 (13H10)
- Sally, P. J., Jr.** (with Herb, Rebecca A.) Singular invariant eigendistributions as characters in the Fourier transform of invariant distributions. *J. Funct. Anal.* 33 (1979), no. 2, 195–210. (J. Szmidt) **80j:22016** 22E46
- Salman, M. A.** (with Cruz, J. B., Jr.) Well-posedness of linear closed-loop Stackelberg strategies for singularly perturbed systems. *J. Franklin Inst.* 308 (1979), no. 1, 25–37. (Milan Mareš) **80c:90145** 90D25
- Salmanova, D. G.** A mixed problem for a second-order hyperbolic equation in an unbounded domain. (Russian) *Functional analysis and its applications*, No. 3 (Russian),

- pp. 149-159, "Eim", Baku, 1978. (From the text) **80g:35036** 35L20
- Salmistraro, Franco** (with Catenacci, Roberto) Almost-structures and structures in Lorentzian manifolds. I. Almost-Hermitic and almost-product-( $2 \times 2$ )-structures. *J. Math. Phys.* **19** (1978), no. 10, 2047-2051. (J. R. Vanstone) **80f:83032** 83C99 (53C15)
- (with Calvani, M.; de Felice, F.; Muchotrzeb, B.) Errata: "Time machine and geodesic motion in Kerr metric" [General Relativity and Gravitation **9** (1978), no. 2, 155-163; MR **58** #9053]. *Gen. Relativity Gravitation* **10** (1979), no. 10, 881. (Editors) **80g:83010** 83C20
- Salogub, V. A.** (with Sokur, L. P.) The group properties of a system of first-order Poincaré-invariant differential equations. (Russian. English summary) *Group theoretic methods in mathematical physics* (Russian), pp. 134-138, 192, 200, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (J. S. Joel) **80h:35002** 35A30 (81M05)
- The group properties of Lévy-Leblond equations. (Russian. English summary) *Group theoretic methods in mathematical physics* (Russian), pp. 181-183, 196, 204, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (From the summary) **80g:81030** 81C40 (35A30)
- (with Fulčić, V. I.; Nikitin, A. G.) On the non-relativistic motion equations in the Hamiltonian form. *Rep. Math. Phys.* **13** (1978), no. 2, 175-185. (Authors' summary) **80g:81129** 81G40 (58G35)
- Saloman, Arto K.** (with Rozenberg, Grzegorz) New squeezing mechanisms for L systems. *Inform. Sci.* **12** (1977), no. 3, 187-201. (Authors' summary) **80e:68205** 68F10
- ★ *Formale Sprachen*. Translated from English by E.-W. Dieterich. Springer-Verlag, Berlin-New York, 1978. xi+314 pp. ISBN 3-540-09030-4 (Editors) **80g:68059** 68F05
- Equality set for homomorphisms of free monoids. *Acta Cybernet.* **4** (1978/79), no. 1, 127-139. (Author's review) **80d:68096** 68F05 (20M05)
- (with Culik, Karel, II) On the decidability of homomorphism equivalence for languages. *J. Comput. System Sci.* **17** (1978), no. 2, 163-175. (Johnson M. Hart) **80g:68093** 68F05 (68C30)
- (with Maurer, Hermann; Wood, Derick) Relative goodness of EOL forms. *RAIRO Inform. Theor.* **12** (1978), no. 4, 291-304. (K. P. Lee) **80g:68092** 68F05
- (with Maurer, Hermann; Wood, Derick) Context-dependent L forms. *Inform. and Control* **42** (1979), no. 1, 97-118. (Authors' summary) **80g:68188** 68F05
- (with Maurer, Hermann; Penttonen, Martti; Wood, Derick) On non-context-free grammar forms. *Math. Systems Theory* **12** (1979), no. 4, 297-324. (S. Ginsburg) **80g:68062** 68F05
- Salomonson, Per** Supersymmetric actions for spinning particles. *Phys. Rev. D* **3** (1978), no. 6, 1868-1880. (P. Pascual) **80g:81077** 81G20
- Saltanov, M. V.** The variational principle for multicomponent magnetic hydrodynamics based on a generalization of the Clebsch transformation. (Russian) *Asymptotic methods in systems theory* (Russian), pp. 126-146, *Irkutsk. Gos. Univ., Irkutsk*, 1977. (Ilija Lukečević) **80g:76053** 76W05 (49A99, 76A02, 76Q05)
- Saltavarez, P.** (with Connor, M. A.) The application of augmented penalty functions to optimal control problems. With discussion. *Recent theoretical developments in control* (Proc. Conf., Univ. Leicester; Leicester, 1976), pp. 281-299, *Academic Press, London*, 1978. (Hsi-han Yeh) **80c:49024** 49D29
- Salter, Richard** Small-time limit theorems for stationary independent increment processes. *Stochastics* **2**, no. 4, 227-241 (1979). (T. Pitcher) **80m:60039** 60F05 (60J30, 62M02)
- Saltiel, Léon** Propagation acoustique dans un chenal sous-marin profond. (English summary) *Rev. CETHEDC Cahier* **1978**, no. 4, 1-55. (From the summary) **80d:76081** 76Q05
- Saltman, David J.** Azumaya algebras with involution. *J. Algebra* **52** (1978), no. 2, 526-539. (Lindsay N. Childs) **80a:16013** 16A16 (16A28)
- Indecomposable division algebras. *Comm. Algebra* **7** (1979), no. 8, 791-817. (S. Elliger) **80g:16021** 16A39
- Saltykova, N. M.** A boundary value problem for an equation of mixed type of the second kind with displacement. (Russian) *Differentsial'nye Uravneniya* (Nizhny Novgorod) **12** (1978), 113-123. **80a:35087** 35M05
- Salugub, V. A.** (with Sokur, L. P.) The group properties of some Galilei-invariant systems of differential equations. (Russian. English summary) *Group theoretic methods in mathematical physics* (Russian), pp. 125-133, 192, 200, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (J. S. Joel) **80h:35005** 35A30 (81C05)
- Saluja, Kewal K.** (with Ong, E. H.) Minimization of Reed-Muller canonic expansion. *IEEE Trans. Comput.* **28** (1979), no. 7, 535-537. (Authors' summary) **80g:94050** 94C10
- Sahak, M. I.** Finite groups with normalizer properties of their subgroups. (Russian) *Finite groups* (Proc. Gomel Sem., Gomel, 1975-1977) (Russian), pp. 130-143, 175, "Nauka i Tekhnika", Minsk, 1978. (M. Herzog) **80c:20042** 20E07
- Salut, G.** (with Aguilar-Martin, J.; Lefebvre, S.) New results on optimal joint parameter and state estimation of linear stochastic systems. *Trans. ASME Ser. G: J. Dynamic Systems Measurement Control* **102** (1980), no. 1, 28-34. (Authors' summary) **80m:93085** 93E10
- Salvadort, Anna** (with Boni, Mauro) Convergence in length and variation in the generalized sense with a weight. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* **26** (1977), no. 1, 49-69 (1978). (S. Cincinini) **80a:49014** 49A99 (28A75)
- Various concepts of "quasi-additivity". (Italian) *Atti Sem. Mat. Fis. Univ. Modena* **26** (1977), no. 2, 222-243 (1979). (S. D. Chatterji) **80g:28011** 28B99 (26A39)
- On convergence in length in the generalized sense with weight for a sequence of parametric curves. (Italian) *Rend. Circ. Mat. Palermo* (2) **26** (1977), no. 1-3, 195-228 (1978). (Author's summary) **80g:49035** 49F99
- Salvadort, Luigi** The use of two indices in the stability problem. (Italian) *Confer. Sem. Mat. Univ. Bari* No. 46 (1977), 36 pp. (Wolfgang Hahn) **80a:34077** 34D20 (34G20)
- (with Negrini, P.) Attractivity and Hopf bifurcation. *Nonlinear Anal.* **3** (1979), no. 1, 87-99 (1978). (Charles C. Conley) **80b:58045** 58F14 (34C05)
- Salvi, Rodolfo** A generalization of the notion of spectral capacity. (Italian) *Istit. Lombardo Accad. Sci. Lett. Rend. A* **112** (1978), no. 1, 3-11 (1979). (F.-H. Vasilescu) **80m:47032** 47B40
- Salwach, Chester J.** (with Mezzaroba, Joseph A.) The four known biplanes with  $k=11$ . *Internat. J. Math. Math. Sci.* **2** (1979), no. 2, 251-260. (J. H. van Lint) **80g:05014a** 05B05 (05B25, 94B05)
- (with Assmus, E. F., Jr.) The (16, 6, 2) designs. *Internat. J. Math. Math. Sci.* **2** (1979), no. 2, 261-281. (J. H. van Lint) **80g:05014b** 05B05 (05B25, 94B05)
- Salwicki, Andrzej** On algorithmic theory of stacks. *Mathematical foundations of computer science*, 1978 (Proc. Seventh Sympos., Zakopane, 1978), pp. 452-461, *Lecture Notes in Comput. Sci.*, **64**, Springer, Berlin, 1978. (Author's summary) **80e:68068** 68C01 (68B15)
- Salychev, O. S.** (with Kuzovkov, N. T.; Karabanov, S. V.) ★ Непрерывные и дискретные системы управления и методы идентификации. (Russian) [Continuous and discrete control systems and identification methods] "Mašinostroenie", Moscow, 1978. 222 pp. (Vadim Komkov) **80c:93083** 93C99
- Salyer, Č.** (with Seisov, Ju. B.) Convexity conditions of sets of attainability. (Russian. Turkmen and English summaries) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* **1978**, no. 6, 3-8. (Authors' summary) **80c:49009** 49A50 (93B99)
- Salyga, B. O.** Analogue of a multipoint problem for a nonstrictly hyperbolic operator with coefficients that are variable with respect to  $t$ . (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 9 (1979), 9-14, 130. (Author's summary) **80c:35063** 35L25
- Salz, Werner** Eine topologische Eigenschaft der effizienten Punkte konvexer Mengen. VIII. Oberwolfach-Tagung über Operations Research (1976), pp. 197-202, *Operations Research Verfahren, XXIII*, Hain, Königstein, 1977. (Peter Brucker) **80b:90124** 90C31
- Salzborn, Franz J. M.** (with Bhaskaran, Sita) Optimal diameter assignment for gas pipeline networks. *J. Austral. Math. Soc. Ser. B* **21** (1979/80), no. 2, 129-144. (Authors' summary) **80h:90059** 90B10 (90C50)
- Salzer, K.** Bestimmung des Abschirmtensors der magnetischen Kernresonanz und des Tensors der magnetischen Suszeptibilität durch numerische Berechnung der Stromdichte in der Ladungsverteilung diamagnetischer Moleküle. (English summary) *Ann. Physik* (7) **36** (1979), no. 2, 91-102. (Author's introduction) **80k:78014** 78A25
- Salzman, H.** Über ein Differentialgleichungssystem vom elliptisch-hyperbolischen Typ in  $R^2$ . I. *Math. Nachr.* **83** (1978), 93-100. (Genowefa Majcher) **80a:35088** 35M05
- Salzman, Helmut** Compact 8-dimensional projective planes with large collineation groups. *Geom. Dedicata* **8** (1979), no. 2, 139-161. (Rainer Löwen) **80i:51020** 51H10
- Automorphismengruppen 8-dimensionaler Ternärkörper. *Math. Z.* **166** (1979), no. 3, 265-275. (F. van der Blij) **80i:51004** 51A35 (20N10, 55P45)
- Saman, Jacob E.** (with Tracy, Derrick S.) Properties of some estimators for the simple queue  $M/M/1$ . *Third Symposium on Operations Research* (Univ. Mannheim, Mannheim, 1978), Section 3, pp. 377-387, *Operations Research Verfahren*, **33**, Hain, Meisenheim, 1979. (Carl M. Harris) **80b:60117** 60K25
- Samaeva, I. M.** Stability of local Lie algebras on compact manifolds. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 2(206), 217-218. (A. Verona) **80h:58030** 58F06
- Samaga, Hans-Joachim** ( $B_n^2, G_n, S_n$ )-Geometrien. (English summary) *J. Geom.* **12** (1979), no. 1, 69-87. (W. R. Heise) **80e:51003** 51B05 (51B20)
- Samal, G.** (with Pratihari, D.) Strong result for real zeros of random polynomials. II. *J. Indian Math. Soc. (N.S.)* **41** (1977), no. 3-4, 395-403 (1978). (A. C. Offord) **80i:60002** 60G99 (26C10)
- Samanta, S. K.** Fixed-point theorems in a Banach space satisfying Opial's condition. *Proceedings of the Conference on Mathematical Analysis and its Applications* (Inst. Engrs. Mysore, 1977), pp. M17-M36, *Mathematics Rep.*, **91**, Inst. Math. Sci., Madras, 1978. (K. Goebel) **80c:47046** 47H10
- On asymptotic commutativity and common fixed point theorems. *Indian J. Pure Appl. Math.* **10** (1979), no. 11, 1327-1336. (Mo Tak Kiang) **80j:47073** 47H10
- Samardžiski, Aleksandar** A class of  $2-(\Sigma_{n-1}^k, p^k+1, 1)$  block designs which are not projective spaces. (Macedonian. German summary) *Mat. Bilten* **27** (1977), no. 1, 29-32. (Author's summary) **80i:05019** 05B05
- A construction of  $2-(n, 4, 1)$  designs. (Macedonian. English summary) *Prirod.-Mat. Fak. Univ. Kiril Metodij Skopje Godišen Zb.* **28** (1977), 39-49. (Author's summary) **80j:05028** 05B25 (05B05)
- Samarov, A. M.** (with Levit, B. Ja.) A remark on the estimation of a spectral function. (Russian) *Problemy Peredachi Informacii* **14** (1978), no. 2, 61-66. (M. A. Mirzakhmedov) **80a:62152** 62M15
- Samarskii, A. A.** (with Nikolaev, E. S.) Direct and iteration methods for solving difference equations. (Russian) *Problems in mathematical physics and numerical mathematics* (Russian), pp. 239-254, 327, "Nauka", Moscow, 1977. (Authors' summary) **80c:65194** 65N20 (65Q05)
- (with Gordeziani, D. G.) Some problems of the thermoelasticity of plates and shells and the method of summation approximation. (Russian) *Complex analysis and its applications* (Russian), pp. 173-186, 666, "Nauka", Moscow, 1978. (Authors' summary) **80a:73050** 73K10 (35J99)
- (with Goloviznin, V. M.; Koršija, T. K.; Favorskii, A. P.) Two-dimensional variational difference schemes of magnetic fluid dynamics with three components of the velocity and of the magnetic field. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 41 (1978), 36 pp. (M. Drăganu) **80g:76060** 76W05
- New results in the theory of difference schemes. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 87 (1978), 34 pp. (R. Kodnár) **80a:65263** 65Q05 (65P05)
- Numerical methods in plasma physics. *Computing methods in applied sciences and engineering* (Proc. Third Internat. Sympos., Versailles, 1977), II, pp. 235-247, *Lecture Notes in Phys.*, **91**, Springer, Berlin, 1979. (Vladimir L. Savell'ev) **80j:82021** 82A45
- On numerical simulation in fluid dynamics. *Sixth International Conference on Numerical Methods in Fluid Dynamics* (Proc. Conf., Tbilisi, 1978), pp. 26-33, *Lecture Notes in Phys.*, **90**, Springer, Berlin, 1979. (V. Girault) **80h:76001** 76-02 (65C20, 76W05)
- (with Galaktionov, V. A.; Kudrjumov, S. P.; Mihalov, A. P.) The effect of boundary modes with aggravation on a medium with constant heat conduction. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 28 (1979), 76 pp. (From the summary) **80i:80004** 80A20
- (with Goloviznin, V. M.; Favorskii, A. P.) The use of the least action principle for the construction of discrete mathematical models in magnetohydrodynamics. (Russian) *Dokl. Akad. Nauk SSSR* **246** (1979), no. 5, 1083-1087. (Authors' summary) **80i:76046** 76W05 (49B99)
- Mathematical modelling and numerical experiment. (Russian) *Vestnik Akad. Nauk SSSR* **1979**, no. 5, 38-49. (L. G. Chambers) **80f:00011** 00A69
- See also Kalitkin, N. N., **80b:65001**
- Samarskii, V. G.** The construction of an operator ideal by means of Bernstein's  $s$ -numbers



- (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, *exp.* 1, 77-80, 156. (Robert S. Doran) **80c:47036** 47D30 (46B20)
- ( $\mu$ )-similar operators in Banach spaces. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, *exp.* 3, 46-52, 156. (Werner Linde) **80d:47033** 47B10 (47D30)
- Sambandham, M.** On a random trigonometric polynomial. *Indian J. Pure Appl. Math.* 7 (1976), no. 9, 993-998. (Author's summary) **80c:42001** 42A05
- On the real roots of the random algebraic equation. *Indian J. Pure Appl. Math.* 7 (1976), no. 9, 1062-1070. (Author's summary) **80c:60071** 60G99
- On the average number of real zeros of a class of random algebraic curves. *Pacific J. Math.* 81 (1979), no. 1, 207-215. (J. E. A. Dunnage) **80b:60055** 60G17
- Sambin, Giovanni** Fixed points through the finite model property. *Studia Logica* 37 (1978), no. 3, 287-289. (Wiesław Dziobiak) **80b:03107** 03G25
- Samborski, S. M.** General solutions of overdetermined systems of partial differential equations. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 8* (1978), 24 pp. (I. Kolář) **80b:58062** 58H99 (35N10)
- Sambucetti, Patrizia** (with Rossi, Anna Maria) The existence of a local solution of an evolution equation in Banach spaces. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 1, 348-363. (A. Corduneanu) **80i:34111** 34G99 (45G10, 47B44)
- Samedor, N. I.** A boundary value problem for a fourth-order quasilinear degenerate equation of composite type. (Russian) *Dinamika Splošn. Sredy No. 34 Nekotorye Problemy Uprugosti i Plastichnosti* (1978), 134-138, 145. (Editors) **80i:35086** 35M05 (73C99)
- (with Meredov, M. M.) A boundary value problem for a fourth-order quasilinear equation of mixed type. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 1, 92-95, 188. (A. Haimovici) **80c:35073** 35M05
- Samel, Ahmed** (with Larson, John) Efficient calculation of the effects of roundoff errors. *ACM Trans. Math. Software* 4 (1978), no. 3, 228-236. (Authors' summary) **80a:65092a** 65G05
- (with Chen, S. C.; Kuck, D. J.) Practical parallel band triangular system solvers. *ACM Trans. Math. Software* 4 (1978), no. 3, 270-277. (Authors' summary) **80a:65065** 65F05 (65-04)
- See also Larson, John, **80c:65092b**
- Sambon, Hans** Note on the Lefschetz-Hodge operators. *Linear and Multilinear Algebra* 6 (1978/79), no. 4, 253-255. (A. Aepli) **80j:58002** 58A10 (15A69)
- Sampsonov, N. K.** On perfect images of feathered spaces. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 9(196), 97-101. (Teodor Przymusiński) **80g:54013** 54C10 (54E18)
- rahmat-Samii, V.** See Rahmat-Samii, V.
- Samilo, A. H.** (with Maksudov, F. G.; Mardanov, I. D.) A special boundary value problem for nonlinear differential equations with deviating argument of neutral type. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 6, 13-17. (Š. Schwabik) **80i:34061** 34K10
- An approach to the solvability of special boundary value problems. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 12, 3-8. (M. K. Grammatikopoulos) **80j:34091** 34K10
- (with Mardanov, I. D.) Sufficient solvability conditions of a boundary value problem for nonlinear differential equations with a deviating argument of neutral type. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 5, 46-51. (József Kalinowski) **80c:34051** 34K10
- Samko, S. G.** The Fourier transform of the functions  $\gamma_n(x)/|x|^\mu$ . (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 7(194), 73-78. (A. L. Brodskii) **80c:42008** 42B10
- (with Kilbas, A. A.) The smoothness of functions that are representable by logarithmic integrals. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1978, no. 1, 73-75. (Editors) **80c:45006** 45E05
- de Sam Lazaro, J.** See Yor, Marc, **80m:60060**
- Samodurov, A. A.** Formal integrals of nonautonomous second order systems. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1978, no. 2, 68-69, 95. (M. Ráb) **80a:34005** 34A25
- Samoilenko, V. N.** Generalized solutions of the problem on the continuation of the boundary layer of a pseudoplastic fluid. (Russian) *Trudy Sem. Petrovsk.* No. 3 (1978), 161-175. (V. P. Kalašnikov) **80a:35113** 35Q99 (76N05)
- Samoilenko, K. F.** Axiomatic representation of empirical theories. (Russian) *Vychisl. Sistemy* No. 76 (1978), 15-25, 154. (Author's summary) **80b:03012** 03A05 (03B30)
- Samoilenko, A. M.** (with Kulik, V. L.) Continuity of the Green function of the problem of the invariant torus. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 6, 779-788, 861. (L. Reizig) **80b:34051** 34C30
- (with Ronto, N. I.) ★Numerical-analytic methods of investigating periodic solutions. Translated from the Russian by Vladimir Shokurov [Vladimir Šokurov]. With a foreword by Yu. A. Mitropolsky [Yu. A. Mitropol'skiĭ]. "Mir", Moscow, 1979. 183 pp. (Editors) **80c:65075** 65L99 (34C25)
- (with Kulik, V. L.) Exponential dichotomy of an invariant torus of dynamical systems. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 8, 1434-1443, 1533. (Wolfgang Hahn) **80i:34066** 34C30
- (with Mitropol'skiĭ, Ju. O.) On the question of asymptotic expansions of nonlinear mechanics. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 1, 42-53, 111. (G. Bojadziev) **80c:34043** 34C29
- (with Le Lyong Tai) A numerical analytic method for independent systems with small perturbation. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 2, 214-220, 224. (L. Pinter) **80c:34025** 34C25
- Samoilenko, Ju. S.** (with Kondrat'ev, Ju. G.) The spaces of trial and generalized functions of infinite number of variables. *Rep. Math. Phys.* 14 (1978), no. 3, 325-350. (Gerhard Hegerfeldt) **80b:46060** 46F25 (81C99)
- (with Kolomeiev, V. I.) A countable set of commuting selfadjoint operators and the algebra of local observables. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 4, 365-371, 476. (K. Veselić) **80m:81024** 81C10 (47D45)
- (with Kosjak, A. V.) Families of commuting selfadjoint operators. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 5, 555-558, 620. (R. A. Minlos) **80m:47023** 47B25 (47A10)
- Samoilenko, V. G.** Study of a system of two weakly connected equations of van der Pol type. (Russian) *Mat. Fiz. No. 24* (1978), 52-58, 122. (Frederick A. Howes) **80a:34040** 34C15 (34C29)
- Šamojan, F. A.** A factorization theorem of M. M. Džrbajian and the characteristic of zeros of functions analytic in the circle with a majorant of finite growth. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* 13 (1978), no. 5-6, 405-422, 541. (V. Kabaila) **80i:30054** 30D50 (30C15)
- A class of Toeplitz operators that are connected with the divisibility of analytic functions. (Russian) *Funktsional. Anal. i Prilozhen.* 13 (1979), no. 1, 83. (V. Kabaila) **80j:30049** 30D55 (47B35)
- Samovol, V. S.** The equivalence of systems of differential equations with reducing contraction. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 8, 1400-1413, 1530. (E. Barvinek) **80g:34037** 34C20 (34D20)
- Samoyleva, Yu. S.** See Samoilenko, Ju. S.
- Sampao, R.** (with Williams, W. O.) Thermodynamics of diffusing mixtures. (French summary) *J. Mécanique* 18 (1979), no. 1, 19-45. (Authors' summary) **80b:80015** 80A99 (35Q99)
- Sampath, S.** (with Bhanu Murthy, B. S.) An application of linear feedback shift registers in the computation of polynomial arithmetic. *Internat. J. Electron.* 45 (1978), no. 2, 177-185. (Editors) **80a:94052** 94C10
- Sampathkumar, E.** (with Neeralagi, Prabha S.; Venkatachalam, C. V.) A generalization of the chromatic and line chromatic numbers of a graph. *J. Karnatak Univ. Sci.* 22 (1977), 44-49. (M. Plantholt) **80j:05064** 05C15
- (with Devadas, M. V.) On reconstruction of a graph from its  $\alpha$ -partition graphs. *Proceedings of the Symposium on Graph Theory (Indian Statist. Inst., Calcutta, 1976)*, pp. 281-285. *ISI Lecture Notes, 4, Macmillan of India, New Delhi, 1979.* (Authors' summary) **80m:05085** 05C60
- Sampford, M. R.** Predictive estimation and internal congruency. *Contributions to survey sampling and applied statistics*, pp. 29-39. Academic Press, New York, 1978. (David Bellhouse) **80a:62017** 62D05
- Sampson, Allan R.** (with Kimeldorf, George) Monotone dependence. *Ann. Statist.* 6 (1978), no. 4, 895-903. (I. I. Kotlarski) **80f:62057** 62H20
- (with Abdel-Hameed, M.) Positive dependence of the bivariate and trivariate absolute normal  $t$ ,  $\chi^2$  and  $F$  distributions. *Ann. Statist.* 6 (1978), no. 6, 1360-1368. (Donald R. Jensen) **80f:62054** 62H05
- Sampson, J. H.** Some properties and applications of harmonic mappings. *Ann. Sci. École Norm. Sup. (4)* 11 (1978), no. 2, 211-228. (Samuel I. Goldberg) **80b:58031** 58E20 (53C20)
- Foliations from quadratic and Hermitian differential forms. *Arch. Rational Mech. Anal.* 70 (1979), no. 1, 91-99. (Shūkichi Tanno) **80a:58042** 58G25 (53C20, 53C55)
- Sampson, J. R.** (with Trofanenko, S. C.) Aspects of shape. (French summary) *INFOR-Canad. J. Oper. Res. Inform. Process.* 17 (1979), no. 2, 138-150. (Fred L. Bookstein) **80a:52003** 52A37 (05B50, 62H25, 92A25)
- el Samra, N.** See El Samra, N.
- Samsiev, T. G.** (with Bekmuratov, T. F.; Musaev, M. M.; Nasyrov, M. Š.) ★Гибридные средства моделирования и управления. (Russian) [Hybrid modeling and control devices] *Izdat. "Fan", Uzbek. SSR, Tashkent, 1978.* 138 pp. (Vadim Komkov) **80b:93092** 93C99
- Samsky, Stanley R.** Finite covers and modules of functions. *Math. Ann.* 236 (1978), no. 2, 117-123. (H. B. Laufer) **80g:32029** 32E10 (57M10)
- Samoenja, Z. V.** (with Mirianashvili, M. G.) The quasiconformal mapping of a simply connected domain onto a plane with a straight-line cut. (Russian) *Sakharth. SSR Mech. Akad. Gamotol. Centr. Šrom.* 18 (1978), no. 1 *Čist. Resenja Granitnyh Zadač*, 103-108. (E. Reich) **80c:30014** 30C60
- Samsonov, V. A.** On the quasi-steady-state motions of mechanical systems. *Izv. Akad. Nauk SSSR Meh. Toerd. Tela* 13 (1978), no. 1, 32-35. (Russian); translated as *Mech. Solids* 13 (1978), no. 1, 28-32. (T. K. Caughey) **80c:70017** 70F25 (34D99)
- (with Vasenin, V. A.) Some properties of the impact-impulse control of a linear system. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* No. 2 (1979), 97-100, 105. (Authors' summary) **80b:93013** 93A15 (34H05, 93C15)
- Samuel, C.** Primarité des produits d'espaces de suites. *Colloq. Math.* 39 (1978), no. 1, 123-132. (N. De Grande-De Kimpe) **80c:46016** 46A45 (46B20)
- Samuel, J.** A phase space approach to generalized Hamilton-Jacobi theory. *J. Math. Phys.* 21 (1980), no. 1, 55-59. (Author's summary) **80k:70026** 70H20 (58F05)
- Samuel, S.** (with Bardakci, K.) Local field theory for solitons. *Phys. Rep. D* (3) 18 (1978), no. 8, 2849-2860. (K. T. Mahanthappa) **80c:81075** 81E15 (35Q99)
- Samuel-Cahn, Ester** (with Mertens, Jean-François; Zamir, Shmuel) Necessary and sufficient conditions for recurrence and transience of Markov chains, in terms of inequalities. *J. Appl. Probab.* 15 (1978), no. 4, 848-851. (Richard Madsen) **80a:60088** 60J10
- Samuëlides, Manuel** Mesures de Haar et  $W^*$ -couple d'un groupoïde mesuré. (English summary) *Bull. Soc. Math. France* 106 (1978), no. 3, 261-278. (G. Arsene) **80a:46079** 46L55 (28C10, 43A05)
- Samuels, S. M.** The exact solution to the two-stage group-testing problem. *Technometrics* 20 (1978), no. 4, part 1, 497-500. (Frank K. Hwang) **80c:62039** 62F10 (62N10)
- Samuelsson, A.** The global constant strain condition and the patch test. *Energy methods in finite element analysis*, pp. 47-58. Wiley, Chichester, 1979. (G. D. Maistravskii) **80g:73054** 73K25 (49G10, 65N30)
- Samusenko, A. V.** Increase of the rate of convergence at the expense of the choice of parameters of the scheme. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1978, no. 1, 24-28. (From the introduction) **80a:65239** 65P05
- Samylovskii, A. I.** (with Suklov, B. G.) Piecewise linear approximation of a nonconvex set by a polyhedron. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 878-888, 1081. (Authors' summary) **80g:65012** 65D10 (57Q55, 90C25)
- Samanin, A. A.** Dynamic games with a hierarchical vector of interests. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 912-920, 1082. (Hans Keiding) **80i:90109** 90D10 (90D40)
- Sanchez, Elie** Resolution of eigen fuzzy sets equations. *Fuzzy Sets and Systems* 1 (1978), no. 1, 69-74. (T. G. Hallam) **80g:03056** 03E72
- On possibility qualification in natural languages. *Inform. Sci.* 15 (1978), no. 1,

- 45-76. (Author's summary) **80i:60068** 68F30  
Inverses of fuzzy relations. Application to possibility distributions and medical diagnosis. *Fuzzy Sets and Systems* 2 (1979), no. 1, 75-86. (Siegfried Gottwald) **80i:63070** 03E72 (03B50, 04A05, 92A07)
- Sanchez, Enrique** (with Lobo Hidalgo, Miguel) Sur certaines propriétés spectrales des perturbations du domaine dans les problèmes aux limites. *Comm. Partial Differential Equations* 4 (1979), no. 10, 1085-1098. (L. E. Bobisud) **80i:35106** 35P99 (35J99)
- Sanchez, Luis A.** A note on a differentiable equation of the dynamics of wires. (French summary) *Boll. Un. Mat. Ital. A (5)* 16 (1979), no. 2, 391-397. (K. Schmütt) **80i:34027** 34B15 (58F99)
- Sánchez-Dehesa, Jesús** The spectrum of Jacobi matrices in terms of its associated weight function. *J. Comput. Appl. Math.* 4 (1978), no. 4, 275-283. (H. Werner) **80i:65080** 65F15
- Zeros of orthogonal polynomials related to birth-death processes. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T397-T399. (Daniel P. Maki) **80i:43069** 42C05 (60J80)
- On a general system of orthogonal  $q$ -polynomials. *J. Comput. Appl. Math.* 5 (1979), no. 1, 37-45. (Author's summary) **80i:65023** 65D20 (33A65)
- Sanchez-Palencia, Enrique** Méthode d'homogénéisation pour l'étude de matériaux hétérogènes. Phénomènes de mémoire. *Rend. Sem. Mat. Univ. Politec. Torino* 36 (1977/78), 15-25 (1979). (C. Bardos) **80i:78002** 78A25 (35Q20)
- Sancho, Luis E.** Reducibilities in two models for combinatory logic. *J. Symbolic Logic* 44 (1979), no. 2, 221-234. (John W. Berry) **80i:03044** 03D30 (03B40)
- Sancho, J. M.** (with San Miguel, M.) External nonwhite noise and nonequilibrium phase transitions. *Z. Phys. B* 36 (1979/80), no. 4, 357-364. (Authors' summary) **80i:82022** 82A25
- Sandak, N. N.** Games on systems with competing elements. (Russian) *Sb. Trudov Inst. Problem Upravlen. No. 7* (1975), 28-33, 108-109. (Author's summary) **80i:90175** 90D99
- Sandarin, S. F.** (with Doroshevič, A. G.; Kotok, È. V.; Novikov, I. D.; Poljudov, A. N.; Sigov, Ju. S.) A two-dimensional model for the formation of the large-scale structure of the universe. (Russian, English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 83* (1978), 22 pp. (N. V. Mickević) **80i:83057** 83F05 (65F05)
- Evolution of perturbations in Friedman's models of the universe. (Russian, English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 82* (1979), 18 pp. (Author's summary) **80i:83053** 83F05 (58F40)
- Sandberg, Irwin W.** A note on the properties of compartmental systems. 1978 *IEEE International Symposium on Circuits and Systems* (New York, 1978), pp. 500-502, IEEE, New York, 1978. (Author's summary) **80i:93012** 93A15
- A criterion for the global stability of a price adjustment process. *J. Econom. Theory* 19 (1978), no. 1, 192-199. (J. A. Rickard) **80i:90015** 90A12
- A characterization of the invariance of positivity for functional-differential equations. *Bell System Tech. J.* 58 (1979), no. 8, 1885-1894. (T. Canturia) **80i:34124** 34K15
- The zero-input response of digital filters using saturation arithmetic. *IEEE Trans. Circuits and Systems* 26 (1979), no. 11, 911-915. (Author's summary) **80i:93118** 93E11
- On competition, regulation, and market structures. *IEEE Trans. Systems Man Cybernet.* 9 (1979), no. 12, 824-828. (From the summary) **80i:90032** 90A15
- Correction to: "A note on market equilibrium with fixed supply" [*J. Econom. Theory* 11 (1975), no. 3, 456-461; MR 55 #9879]. *J. Econom. Theory* 20 (1979), no. 1, 124. (Editors) **80i:90010** 90A14
- Sandberg, S.** (with Anderson, David H.; Eisenfeld, Jerome) On identification of compartmental systems. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 439-448, Academic Press, New York, 1979. (From the text) **80i:93012** 93A15 (92A05)
- Sandberg, Vernon D.** Tensor spherical harmonics on  $S^2$  and  $S^3$  as eigenvalue problems. *J. Math. Phys.* 19 (1978), no. 12, 2441-2446. (R. A. Askey) **80i:33012** 33A45
- (with Matzner, Richard A.; Zamorano, Nelson) Instability of the Cauchy horizon of Reissner-Nordström black holes. *Phys. Rev. D* (3) 19 (1979), no. 10, 2821-2826. (Authors' summary) **80i:83048** 83D05
- Sandefur, James T., Jr.** (with Goldstein, Jerome A.) Abstract equipartition of energy theorems. *J. Math. Anal. Appl.* 67 (1979), no. 1, 58-74. (Lawrence E. Thomas) **80i:47006** 47A35 (34C20)
- Sandell, Nils R., Jr.** (with Baram, Yoram) Consistent estimation on finite parameter sets with application to linear systems identification. *IEEE Trans. Automat. Control* 23 (1978), no. 3, 451-454. (Authors' summary) **80i:93149** 93E10
- (with Nuzman, Dwayne W.) An inequality arising in robustness analysis of multivariable systems. *IEEE Trans. Automat. Control* 24 (1979), no. 3, 492-493. (Authors' summary) **80i:93107** 93D15
- Sandén, Bo** Verification of a program complex. *BIT* 19 (1979), no. 2, 244-255. (Author's summary) **80i:68039** 68B10 (68B15)
- Sander, Wolfgang** Verallgemeinerte Cauchy-Funktionalgleichungen. *Aequationes Math.* 18 (1978), no. 3, 357-369. (Hiroshi Haruki) **80i:39017** 39B70
- Reguläreigenschaften von Funktionalgleichungen. (English and Serbo-Croatian summaries) *Glas. Mat. Ser. III* 13(33) (1978), no. 2, 237-247. (R. A. Rosenbaum) **80i:39018** 39C05 (26A51)
- (with Sipek, K.) A generalization of a theorem of Banach. (Italian summary) *Boll. Un. Mat. Ital. A (5)* 16 (1979), no. 2, 382-384. (A. Appert) **80i:54036** 54E52
- A generalization of a theorem of S. Picard. *Proc. Amer. Math. Soc.* 73 (1979), no. 2, 281-282. (J. C. Oxtoby) **80i:54010** 54C50
- Sanders, J. W.** (with Loxton, J. H.) The kernel of a rule of approximate integration. *J. Austral. Math. Soc. Ser. B* 21 (1979/80), no. 3, 257-267. (Thomas A. Atchison) **80i:65016** 65D30 (41A55)
- Sandler, E. A.** (with Evitshiev, N. N.) Message-source models and their applications. *Problemy Peredachi Informacii* 14 (1978), no. 4, 24-31 (Russian); translated as *Problems Inform. Transmission* 14 (1978), no. 4, 254-259 (1979). (Authors' summary) **80i:94018** 94A29
- Sandler, R. L.** Solutions of infinite order homogeneous differential equations. (Russian, Lithuanian and English summaries) *Litovsk. Mat. Sb.* 18 (1978), no. 2, 117-128, 217-218. (Author's summary) **80i:34010** 34A35
- Sandler, Todd** (with Swimmer, A.) The properties and generation of homothetic production functions: a synthesis. *J. Econom. Theory* 18 (1978), no. 2, 349-361. (Diethard Pallaschke) **80i:90020** 90A11 (90B30)
- Sandling, Robert** (with Tahara, Ken-ichi) Augmentation quotients of group rings and symmetric powers. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 2, 247-252. (Gerald O. Losey) **80i:20014** 20C07
- Sandlöb, Hedwig** (with Schoenwaelder, Ulrich) The core-free groups of Sylow-2-type  $M_{24}$ . *Math. Z.* 167 (1979), no. 1, 15-23. (George Glauberman) **80i:20021** 20D05
- Sandovici, Profira** (with Enghis, Pavel; Tarină, M.) Espaces  $A_2$ -récurrents. *Mathematica (Cluj)* 16(39) (1974), no. 2, 299-303 (1977). (Bernard Roussel) **80i:53012** 53B05
- Rules for differentiating the recurrent curvature in a vector bundle. (Romanian, French summary) *Studia Univ. Babeş-Bolyai Math.* 23 (1978), no. 1, 16-20. (R. Miron) **80i:53033** 53C05
- Sandru, Nicolae** (with Camenschi, Galina) A model of a viscous fluid motion through an axisymmetrical deformable pipe with thin linear elastic wall. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 5, 719-724. (L. N. Tao) **80i:76037** 76D99
- Sands, Arthur D.** On generalised Catalan numbers. *Discrete Math.* 21 (1978), no. 2, 219-221. (Louis Shapiro) **80i:05010** 05A15 (10A04)
- Obituary: Henry Jack. *Proc. Edinburgh Math. Soc.* (2) 22 (1979), no. 1, 61-62. (Editors) **80i:01036** 01A70
- Sands, Bill** (with Rival, Ivan) A note on the congruence lattice of a finitely generated algebra. *Proc. Amer. Math. Soc.* 72 (1978), no. 3, 451-455. (P. Goralčík) **80i:08007** 08A30
- (with Ginsburg, John) Minimal infinite topological spaces. *Amer. Math. Monthly* 86 (1979), no. 7, 574-576. (From the text) **80i:54007** 54B05 (54A10)
- Sandu, N. I.** Complex associators of a commutative Moufang loop. (Russian) Quasigroups and loops. *Mat. Issled. No. 51* (1979), 130-144, 165. (Tomáš Kepka) **80i:20058** 20N05
- Centrally nilpotent commutative Moufang loops. (Russian) Quasigroups and loops. *Mat. Issled. No. 51* (1979), 145-155, 165-166. (Tomáš Kepka) **80i:20058** 20N05
- Sandvik, Leiv** Erratum: "Inverse, multiple and sequential sample censuses" (*Biometrics* 4 (1952), 286-306) by D. G. Chapman. *Biometrics* 34 (1978), no. 3, 523. (Editor) **80i:62014** 62D05
- Sane, S. S.** (with Limaye, B. V.) On partial designs and  $m$ -uniform projective Hjelmslev planes. *J. Combin. Inform. System Sci.* 3 (1978), no. 4, 223-237. (Stanley E. Payne) **80i:05043** 05B25
- Sang Ajang, Gerard J. M.** (with Teer, Frank) An efficient algorithm for detection of combined occurrences. *Inform. Process. Lett.* 8 (1979), no. 3, 137-140. (A. Aiello) **80i:68241** 68H05 (68B15, 68C05)
- Sanghvi, Arun P.** Stochastic reaction functions in  $2 \times 2$  duopoly. *J. Econom. Theory* 18 (1978), no. 2, 362-367. (M. B. Suryanarayana) **80i:90033** 90D40 (90A14, 90D05)
- Convergence of successive approximations to a stochastic fixed point. *J. Appl. Probab.* 17 (1980), no. 1, 297-299. (D. Kannan) **80i:60067** 60J99 (54Hxx)
- Sanginov, A.** (with Mulloev, S.) A boundary value problem for a system of equations of composite type with multiple characteristics. (Russian, Tajiki summary) *Dokl. Akad. Nauk Tadzhik. SSR* 21 (1978), no. 3, 11-17. (S. A. Tersenov) **80i:35069** 35M05 (30E25)
- (with Mulloev, S.) On the boundary value problem with a derivative for a system of equations of composite type with multiple characteristics. (Russian, Tajiki summary) *Izv. Akad. Nauk Tadzhik. SSR Otdel. Fiz.-Mat. i Geol.-Him. Nauk* 1978, no. 3(69), 13-19. (M. S. Agranovič) **80i:35087** 35M05
- Sangiovanni-Vincentelli, Alberto** (with Goto, S.) A new shortest path updating algorithm. *Networks* 8 (1978), no. 4, 341-372. (Jacques A. Ferland) **80i:90035** 90B10 (05C38, 90C35)
- (with Rabbat, Naguib B.; Hsieh, Hueh Y.) A multilevel Newton algorithm with macromodeling and latency for the analysis of large-scale nonlinear circuits in the time domain. *IEEE Trans. Circuits and Systems* 26 (1979), no. 9, 733-741. (Authors' summary) **80i:94047** 94C05
- (with Polak, Elijah) Theoretical and computational aspects of the optimal design centering, tolerancing, and tuning problem. *IEEE Trans. Circuits and Systems* 26 (1979), no. 9, 795-813. (Authors' summary) **80i:94045** 94C05
- (with Bickart, Theodore A.) Bipartite graphs and an optimal bordered triangular form of a matrix. *IEEE Trans. Circuits and Systems* 26 (1979), no. 10, 880-889. (Authors' summary) **80i:94052** 94C15 (68C25, 93A15)
- Sanguas, A. G.** The law of large numbers in a Banach space. (Russian, Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* 91 (1978), no. 1, 17-20. (W. A. Woyczyński) **80i:60020** 60B12
- Laws of large numbers in a Banach space. (Russian, Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* 92 (1978), no. 2, 297-300. (Jerzy Szulpi) **80i:60015** 60B12 (46B20)
- Sankappanavar, H. P.** Congruence lattices of pseudocomplemented semilattices. *Algebra Universalis* 9 (1979), no. 3, 304-316. (O. Frink) **80i:06006** 06A12 (06D15)
- Principal congruences of pseudocomplemented semilattices and congruence extension property. *Proc. Amer. Math. Soc.* 73 (1979), no. 3, 308-312. (T. S. Fofanov) **80i:06003** 06A12
- Sankaran, Jaishankar** (with Barmish, B. Ross; Lin, Yuan Hao) Reachability of targets subject to disturbances bounded by convex sets. *Internat. J. Control* 28 (1978), no. 5, 771-783. (Djordjija Petkovski) **80i:93068** 93C05
- (with Barmish, B. Ross) The propagation of parametric uncertainty via polytopes. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 346-349. (Authors' summary) **80i:93078** 93C50
- Sankaran, N.** (with Avtar, Ram) Higher ramification in Hensel fields. *J. Reine Angew. Math.* 306 (1979), 185-191. (J. Browkin) **80i:12009** 12B10
- Sankaran, Subramanian** Hochschild-Tannaka duality theorem for homogeneous spaces. (Italian summary) *Rend. Sem. Mat. Univ. Politec. Torino* 36 (1977/78), 59-85 (1979). (G. L. Litvinov) **80i:22007** 22D35
- Sanku, I. M.** (with Gavriljuk, I. P.; Elenin, G. G.; Zdenenko, Ju. I.; Zmitrenko, N. V.; Makarov, V. L.) A difference scheme with an exact spectrum for a quasilinear heat equation. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 97* (1979), 26 pp. (Authors' summary) **80i:65066** 65N05 (80A20)



- Sankoff, David (with Rousseau, Pascale) Singularities in the analysis of binomial data. *Biometrika* 65 (1978), no. 3, 603-608. (Authors' summary) 80a:62042 62F11
- Sankov, D. P. (with Kurbatov, A. M.) A property of asymptotic commutativity in statistical mechanics. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 2, 316-319. (Vladimir Šipa) 80d:82031 82A15
- San Miguel, M. (with Garrido, L.) Operator formalism for continuous Markov processes. Stochastic processes in nonequilibrium systems (Lectures, Fifth Stigies Internat. School Statist. Mech., Stigies, 1978), pp. 287-299. *Lecture Notes in Phys.*, 84, Springer, Berlin, 1978. (G. Papanicolaou) 80g:82008 82A05
- (with Garrido, L.) On the Fokker-Planck Lagrangian. *Feynman path integrals* (Proc. Internat. Colloq., Marseille, 1978), pp. 423-428. *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (Koichiro Matsuno) 80k:81040 81C35 (82A05)
- (with Garrido, L.; Lurié, D.) Stochastic quantization and detailed balance in Fokker-Planck dynamics. *J. Statist. Phys.* 21 (1979), no. 3, 313-335. (P. D. F. Ion) 80j:82001 82A05 (82A77)
- A class of exactly solvable Fokker-Planck equations. *Z. Phys. B* 33 (1979), no. 3, 307-312. (G. Papanicolaou) 80e:82011 82A05 (58F40)
- (with Sancho, J. M.) External nonwhite noise and nonequilibrium phase transitions. *Z. Phys. B* 36 (1979/80), no. 4, 357-364. (Authors' summary) 80m:82022 82A25
- Sankov, S. S. Equations for fields with complex spin. (Russian. English summary) *Teoret. Mat. Fiz.* 34 (1978), no. 1, 34-47. (C. A. Hurst) 80a:81057 81D25 (22E70)
- Sannuti, P. (with Puri, N. N.) Generation of symbolic network functions via exterior algebra. 1978 IEEE International Symposium on Circuits and Systems (New York, 1978), pp. 190-194. *IEEE, New York*, 1978. (Authors' summary) 80c:94056 94C99
- On the controllability of some singularly perturbed nonlinear systems. *J. Math. Anal. Appl.* 64 (1978), no. 3, 579-591. (James A. Heinen) 80c:93044 93B05
- Sano, Akira (with N-Nagy, Frank L.) Suboptimal regulator design of linear systems with quantized controls. *IEEE Trans. Automat. Control* 24 (1979), no. 1, 97-100. (Authors' summary) 80b:93069 93C05
- Semenov-Tjan-Sankil, M. A. See Semenov-Tjan-Sankil, M. A.
- Sansone, Emilia Derivation of the theory of Maxwellian fluids within the framework of thermodynamics of continua. (Italian) *Rend. Sem. Mat. Univ. Padova* 57 (1977), 39-52 (1978). (Carlo Cercignani) 80d:76002 76A05 (35Q20)
- A new formulation of the theory of continua with director fields. (Italian summary) *Ricerche Mat.* 27 (1978), no. 2, 253-263. (Author's summary) 80b:73002 73B05 (35Q99)
- Sansone, G. The Minorsky stroboscopic method applied to the Mathieu-Van der Pol oscillator. (Russian summary) *Complex analysis and its applications* (Russian), pp. 531-533, 671, "Nauka", Moscow, 1978. (A. I. Perov) 80c:34059 34D20 (34C25)
- Sanne, Jean-Jacques (with Colliot-Thélène, Jean-Louis) Cohomologie des groupes de type multiplicatif sur les schémas réguliers. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 6, A449-A452. (Authors' summary) 80a:14010 14F20 (14G99)
- Santagati, G. (with Pulvirenti, G.) On the uniqueness of the solution to a minimum problem for a control process with distributed parameters. *J. Optim. Theory Appl.* 28 (1979), no. 1, 109-124. (Klaus Glaschoff) 80h:49011 49B22 (93C20)
- Santalo, L. A. Sets of segments on surfaces. (Spanish. English summary) *Math. Notae* 26 (1977/78), 63-72. (Dumitru Filipescu) 80e:52004 52A22 (53C65, 60D05)
- Random processes of linear segments and graphs. *Geometrical probability and biological structure. Buffon's 200th anniversary* (Proc. Buffon Bicentenary Symp., Paris, 1977), pp. 279-294. *Lecture Notes in Biomath.*, 23, Springer, Berlin, 1978. (Rodney Coleman) 80d:60020 60D05
- Santamarina, J. SU(4) Yang-Mills field solution. *Acta Phys. Polon. B* 10 (1979), no. 6, 533-535. (F. R. Halpern) 80b:81052 81E10
- Santamato, E. (with Lavenda, B. H.) Symmetry in past and future and generalized thermodynamic potentials for Markov processes. *Lett. Nuovo Cimento* (2) 26 (1979), no. 1, 27-32. (Steven M. Moore) 80g:82012 82A05
- Santander, Mariano (with Carifena, José F.) Representation groups for semiunitary projective representations of finite groups. (Spanish. English summary) *J. Math. Phys.* 20 (1979), no. 11, 2168-2177. (Nigel B. Backhouse) 80j:20013 20C25 (81C40)
- Sant'Anna, A. P. Birthing Markov processes at random rates. *Z. Wahrsch. Verw. Gebiete* 44 (1978), no. 2, 145-154. (Michael Sharpe) 80a:60094 60J25
- Santhakumari, C. (with Ramakotiah, D.) On right quasi-regular elements in a near-ring. *Arch. Math. (Basel)* 31 (1978/79), no. 5, 451-456. (Howard E. Bell) 80d:16024 16A76
- (with Ramakotiah, D.) On loop near-rings. *Bull. Austral. Math. Soc.* 19 (1978), no. 3, 417-435. (Steve Light) 80g:16046a 16A78 (16A26)
- The density theorem for loop near-rings. *Bull. Austral. Math. Soc.* 19 (1978), no. 3, 467-474. (Steve Light) 80g:16046b 16A78 (16A76)
- Santilli, Ruggero Maria ★ Foundations of theoretical mechanics. I. The inverse problem in Newtonian mechanics. Texts and Monographs in Physics. Springer-Verlag New York, New York-Heidelberg, 1978. xix + 266 pp. ISBN 0-387-08874-1 (Vadim Komkov) 80d:70002 70-02 (58F05, 70H30)
- Santini, P. M. Asymptotic behaviour (in  $r$ ) of solutions of the boomerang equation. (Italian and Russian summaries) *Nuovo Cimento B* (11) 47 (1978), no. 2, 228-243. (Author's summary) 80f:81090 81E99
- Santner, Thomas J. (with Hooper, Jeffrey H.) Design of experiments for selection from ordered families of distributions. *Ann. Statist.* 7 (1979), no. 3, 615-643. (Bruce W. Turnbull) 80f:62029 62F07
- Santoro, Nicola Conditions for the efficiency of generalized parking functions. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing* (Univ. Manitoba, Winnipeg, Man., 1977), pp. 535-542. *Congress. Numer., XX, Utilitas Math., Winnipeg, Man., 1978*. (Witold Lipski) 80j:68002 68H05 (68B15, 68E99)
- Santo Santos, Concepción See Romo Santos, Concepción
- Santos, Emilio Stochastic differential equations with non-Markov processes. *Stochastic processes in nonequilibrium systems* (Lectures, Fifth Stigies Internat. School Statist. Mech., Stigies, 1978), pp. 24-52. *Lecture Notes in Phys.*, 84, Springer, Berlin, 1978. (Koichiro Matsuno) 80g:82018 82A05 (60H10)
- (with Pesquera, L.) Errata: "Path integrals in stochastic electrodynamics" [Lett. Nuovo Cimento (2) 20 (1977), no. 9, 308-312; MR 56 #10626]. *Lett. Nuovo Cimento* (2) 25 (1979), no. 9, 287-288. (M. J. Goovaerts) 80k:81045 81C35 (28C20)
- Santos, Eugene S. Abstract families of relations. *Inform. Sci.* 19 (1979), no. 2, 155-177. (S. Ginsburg) 80k:68064 68F10
- Probabilistic machines and languages. *J. Cybernet.* 9 (1979), no. 2, 185-204. (K. S. Fu) 80b:68102 68F10 (68D25)
- Lopes dos Santos, L. H. See Lopes Dos Santos, L. H.
- Santos, N. O. (with Som, M. M.) Long-range scalar field in conformally flat space-time. *Internat. J. Theoret. Phys.* 17 (1978), no. 8, 631-634. (From the text) 80d:83017 83C05
- Sanz, J. L. (with Martin, Jesús) Slow motion approximation in predictive relativistic mechanics. II. A noninteraction theorem for interactions derived from the classical field theory. *J. Math. Phys.* 20 (1979), no. 1, 25-34. (From the summary) 80c:83002 83A05
- On the Lorentz-Dirac equation. *J. Math. Phys.* 20 (1979), no. 11, 2334-2338. (Author's summary) 80m:78014 78A35
- Closed-form solutions for some metric perturbations from a closed Friedmann model and the distortion of the universe. *Phys. Rev. D* (3) 20 (1979), no. 8, 1791-1794. (Beverly K. Berger) 80h:83010 83C15 (58F05)
- Sanz Serna, Jesús M. (with López Fernández-Asenjo, Félix) Local convergence of filters in locally convex spaces. (Spanish) *Collect. Math.* 28 (1977), no. 3, 185-190. (M. Valdivia) 80d:46002 46A05
- ★ Espacios de sucesiones vectoriales acotadas. (Spanish) [Spaces of bounded vector sequences] With an English summary. *Dissertation. Colección de Monografías y Memorias de Matemáticas* [Collection of Monographs and Memoirs in Mathematics], XVII. Instituto "Jorge Juan" de Matemáticas, Madrid, 1978. iv + 95 pp. (M. Valdivia) 80c:46006 46A45
- (with Marquina, A.) Barreledness conditions on  $c_0(E)$ . *Arch. Math. (Basel)* 31 (1978/79), no. 6, 589-596. (K. Floret) 80c:46010 46A45 (46A07)
- Sapagova, Milofodijus The alternately-triangular method for the solution of problems with a nonlinear or nonselfadjoint operator. (Russian. Lithuanian and English summaries) *Differencial'nye Uravnenija i Primenen.—Trudy Sem. Protsessy Optimal. Upravlenija I Sekcija No. 21* (1978), 61-89, 107. (Editors) 80b:65081 65J15 (47H17)
- An error estimate of derivatives in the difference method in the solution of mixed boundary value problems. (Russian. Lithuanian and English summaries) *Differencial'nye Uravnenija i Primenen.—Trudy Sem. Protsessy Optimal. Upravlenija I Sekcija No. 22* (1978), 37-66, 77. (E. L. Albasini) 80b:65104 65N15
- Saparov, M. S. (with Plesnevič, G. S.) The average number of exact coverings. (Russian. English summary) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* 1979, no. 2, 9-16. (I. E. Strazdžis) 80k:05040 05B40 (60D05, 68C25)
- Šapeev, V. P. (with Raspopov, V. E.; Janenko, N. N.) D-properties of a system of equations of symmetric gas flows. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 2, 308-311. (From the text) 80f:76030 76N15
- Saphar, P. Sur les sous-espaces des espaces de Banach à base inconditionnelle d'après Feder. *Séminaire sur la Géométrie des Espaces de Banach* (1977-1978), Exp. No. 15, 5, pp. 5, École Polytech., Palaiseau, 1978. (K. Sundaresan) 80d:46024 46B15
- Sapilidi, T. M. A correlation between moduli of continuity. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 155-157, 220, "Naukova Dumka", Kiev, 1978. (Author's summary) 80k:26003 26A15
- Sapir, Martiya Hirschhorn (with Reiss, Edward L.) Dynamic buckling of a nonlinear Timoshenko beam. *SIAM J. Appl. Math.* 37 (1979), no. 2, 290-301. (Authors' summary) 80f:73051a 73H05
- (with Reiss, Edward L.) Erratum: "Dynamic buckling of a nonlinear Timoshenko beam" (SIAM J. Appl. Math. 37 (1979), no. 2, 290-301). *SIAM J. Appl. Math.* 37 (1979), no. 3, 713. (Authors' summary) 80f:73051b 73H05
- Šapiro, A. V. (with Allahverdiev, Dž. È.) The controllability of systems described by differential equations in Banach spaces. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl. 34* (1978), no. 5, 12-15. (Authors' summary) 80a:93023 93B05
- Properties of the accessibility domains of a class of quasilinear controlled systems in a Banach space. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 6, 54-58. (From the summary) 80b:49032 49E05
- (with Allahverdiev, Dž. È.) Controllability and observability of systems in Banach spaces. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl. 35* (1979), no. 5, 17-20. (Authors' summary) 80j:93018 93B05 (93B07)
- Šapiro, G. S. (with Reitman, M. I.) Optimal design of solid deformable bodies. (Russian) *Mechanics of solid deformable bodies*, Vol. 12 (Russian), pp. 5-90 (loose summary), VINITI, Moscow, 1978. (Vadim Komkov) 80g:73004 73-02 (49H05, 73K99)
- Šapiro, L. B. On the space of probability measures. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 2(206), 219-220. (V. M. Klimkin) 80h:54017 54C30 (28A12, 54A25)
- Šapiro, M. F. (with Gaponov-Grehov, A. V.; Rabinovič, M. I.) A possible mechanism for the stochasticization of pulsations of the radiation intensity of OQG. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* 19 (1978), no. 4, 125-136. (L. A. Buzimovich) 80b:78005 78A40
- Šapiro, Z. Ja. (with Gelfand, I. M.; Gindikin, S. G.) A local problem of integral geometry in a space of curves. (Russian) *Funkcional. Anal. i Prilozhen.* 13 (1979), no. 2, 11-31, 96. (Rolf Sulanke) 80k:53100 53C65 (43A85, 44A15)
- Šapkarev, Ilja A. Polynome vom Grad  $n$  als vollständige Integrale der allgemeinen linearen partiellen Differentialgleichungen der Ordnung  $n$ . (Macedonian summary) *Makedon. Akad. Nauk. Umet. Oddel. Prirod.-Mat. Nauk. Prilozi* 9 (1977), no. 1, 19-24. (Editors) 80c:35016 35C05
- Sapogin, L. G. On unitary quantum mechanics. (Italian and Russian summaries) *Nuovo Cimento A* (11) 53 (1979), no. 2, 251-266. (James D. Fabrey) 80h:81136 81E99 (81C99)
- Šapošnikova, S. A. (with Bogdanova, M. S.; Kučerov, A. B.; Nikolaev, E. S.; Taran, M. D.; Tikhin, V. F.; Favorskii, A. P.; Šaikov, M. Ju.) Some implicit iteration methods. Analysis and comparison. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 115* (1978), 35 pp. (Authors' summary) 80c:65117 65J05
- Šapošnikova, T. O. Crisp approximation of the solutions of second-order degenerate ordinary differential equations. (Russian) *Mat. Zametki* 24 (1978), no. 1, 95-101, 143. (P. C. Sikkema) 80h:34010 34A45

- (with Maz'ja, V. G.) Multipliers in spaces of functions with fractional derivatives. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 5, 1065–1067. (V. S. Rabinovič) 80j:46057 46E35
- (with Maz'ja, V. G.) Traces and extensions of the multipliers in the space  $w_1^s$ . (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 2(206), 205–206. (Ja. A. Roitberg) 80j:46058 46E35
- Šapovalov, A. V. Finite-dimensional irreducible representations of Hamiltonian Lie superalgebras. (Russian) *Mat. Sb. (N.S.)* 107(149) (1978), no. 2, 259–274, 318. (H. de Vries) 80h:17016 17B70 (17B10)
- Šapovalov, N. E. (with Dombrovskii, Ju. A.; Bogomaz, Ju. P.) On the analysis of the optimal policies for the exploitation of biological resources. (Russian) *Izv. Severo-Kavkaz. Nauch. Centra Vysš. Školy Ser. Estestv. Nauk* 1978, no. 4, 9–14, 120. (G. S. Ladde) 80m:92010 92A15 (90A17)
- Šapovalov, V. N. Symmetry and the separation of variables in the Hamilton-Jacobi equation. I, II. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1978, no. 9, 18–24; 25–27. (Rolf Klötzler) 80b:70025 70H20 (58F05, 58H05)
- Sapožnikov, V. V. See Sapožnikov, V. V.
- Sapožnikov, V. V. See Sapožnikov, V. V.
- Sapožnikov, B. D. (with Bakel'man, I. Ja.) Existence of a support function of a closed hypersurface with a given sum of conditional radii of curvature. (Russian) *Geometry, No. 6 (Russian)*, pp. 4–14, Leningrad. Gos. Ped. Inst., Leningrad, 1977. (Leo Boček) 80h:53061 53C45 (53A05, 53C42)
- Sapožnikov, P. N. Minimax and uniformly best unbiased estimates based on a finite statistical structure with quadratic loss. (Russian. English summary) *Teor. Verojatnost. i Primenen.* 23 (1978), no. 4, 836–842. (A. M. Kagan) 80b:62023 62F10 (62C20)
- Sapožnikov, V. V. (with Sapožnikov, V. V.; Šumakov, V. M.) Contact circuit monitoring. *Automat. i Telemekh.* 1978, no. 11, 175–182. (Russian); translated as *Automat. Remote Control* 39 (1978), no. 11(2), 1723–1728 (1979). (Authors' summary) 80g:94091 94C10
- (with Sapožnikov, V. V.) Synthesis of totally self-checking asynchronous automata. *Automat. i Telemekh.* 1979, no. 1, 154–166. (Russian); translated as *Automat. Remote Control* 40 (1979), no. 1, part 2, 124–134. (Authors' summary) 80g:94112 94C30 (68D25)
- Sapožnikov, V. V. (with Sapožnikov, V. V.; Šumakov, V. M.) Contact circuit monitoring. *Automat. i Telemekh.* 1978, no. 11, 175–182. (Russian); translated as *Automat. Remote Control* 39 (1978), no. 11(2), 1723–1728 (1979). (Authors' summary) 80g:94091 94C10
- (with Sapožnikov, V. V.) Synthesis of totally self-checking asynchronous automata. *Automat. i Telemekh.* 1979, no. 1, 154–166. (Russian); translated as *Automat. Remote Control* 40 (1979), no. 1, part 2, 124–134. (Authors' summary) 80g:94112 94C30 (68D25)
- Sarabia, José (with Ahmad, Shair) On nonwandering continuous flows. *Funkcial. Ekvac.* 21 (1978), no. 3, 193–201. (E. Hemmingsen) 80a:54054 54H20 (58F25)
- Šaraburova, L. G. (with Šalkin, Ju. A.) Helly theorems for convex cones. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 11(198), 104–107. (N. Poláková) 80b:52009 52A35
- (with Šalkin, Ju. A.) Intersections of convex cones. (Russian) *Mat. Zametki* 24 (1978), no. 3, 391–402, 447. (E. Jucovič) 80b:52009 52A20
- Sarachik, P. E. (with Özgüner, Ümit) Stabilizing feedback gains for priority-ordered multichannel linear systems. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 104–106. (Authors' summary) 80m:93064 93D15
- Saracino, Dan (with Wood, Carol) Periodic existentially closed nilpotent groups. *J. Algebra* 58 (1979), no. 1, 189–207. (Piero Mangani) 80m:03071 03C60 (20A15, 20F18)
- Sarafjan, R. G. (with Sarafjan, V. V.; Freidlin, M. I.) Degenerate diffusion processes and differential equations with a small parameter. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 6(204), 233–234. (Constantin Tudor) 80g:60083 60J60
- Sarafjan, V. V. (with Sarafjan, R. G.; Freidlin, M. I.) Degenerate diffusion processes and differential equations with a small parameter. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 6(204), 233–234. (Constantin Tudor) 80g:60083 60J60
- Sarafova, G. (with Bainov, D. D.) Application of a method of two-sided approximations for the estimation of periodic solutions of a system of integro-differential equations of Volterra type. (Russian. Bulgarian and English summaries) *Mechanics (Third Congress, Varna, 1977). Godišnik Visš. Učebn. Zaved. Tehn. Meh.* 12 (1977), no. 1, 79–84. (Editors) 80h:45021 45L10
- Sarafyan, Džan (with Derr, Leroy; Outlaw, Curtis) Generalizations of the Euler-Maclaurin formula. *J. Math. Anal. Appl.* 67 (1979), no. 2, 542–548. (Thomas A. Atchison) 80c:65063 65D32
- Saran, Jagdish (with Sen, Kanwar) Joint distributions based on runs and on the number of sojourns and intersections. *Studia Sci. Math. Hungar.* 11 (1976), no. 1–2, 121–129 (1978). (S. G. Mohanty) 80i:60095 60J15 (60C05, 62G10)
- (with Sen, Kanwar) On some joint distributions in fluctuation theory. *J. Statist. Plann. Inference* 3 (1979), no. 3, 215–223. (I. Vincze) 80m:60078 60J15
- (with Sen, Kanwar) On the fluctuations of partial sums. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 2, 291–298. (I. Vincze) 80m:60078 60J15
- Sarason, Jukka A generalized plate equation with an exterior boundary value problem. *Ber. Univ. Jyväskylä Math. Inst. No. 17* (1977), 8 pp. (S. P. Gavelja) 80d:73095 73K10 (35J40)
- Sarangi, S. M. (with Patil, S. J.) On modified deficiencies of meromorphic functions. *Indian J. Pure Appl. Math.* 10 (1979), no. 1, 6–13. (N. Toda) 80d:30028 30D35
- Sarangov, C. S. See History and methodology of the natural sciences, 80d:01001
- Sarantis, Nicholas C. Uncertainty, dynamic conditions and optimal investment, employment and inventory policies. *Z. Nationalökonom.* 39 (1979), no. 3–4, 275–298. (From the introduction) 80j:90051 90A16
- Sarason, Donald ★Function theory on the unit circle. Notes for lectures given at a Conference at Virginia Polytechnic Institute and State University, Blacksburg, Va., June 19–23, 1978, Virginia Polytechnic Institute and State University, Department of Mathematics, Blacksburg, Va., 1978. iv + 138 pp. (David A. Stegenga) 80d:30035 30D55 (42A50, 46J15, 47B35)
- (with Axler, Sheldon; Chang, Sun Yung A.) Products of Toeplitz operators. *Integral Equations Operator Theory* 1 (1978), no. 3, 285–309. (R. G. Douglas) 80d:47034 47B35 (46J15)
- Saraswati, Dīpak K. (with Primas, H.) A system theoretic representation of mechanical systems. I. Decomposition of a mechanical system into a hierarchy of orthogonal stationary linear dynamical systems. *J. Math. Phys.* 19 (1978), no. 12, 2646–2654. (Authors' summary) 80b:82018a 82A15 (47A99)
- (with Primas, H.) A system theoretic representation of mechanical systems. II. Stochastic interpretation. *J. Math. Phys.* 19 (1978), no. 12, 2655–2658. (From the summary) 80b:82018b 82A15 (47A99)
- Sarath, B. (with Varadarajan, K.) Dual Goldie dimension. II. *Comm. Algebra* 7 (1979), no. 17, 1885–1899. (E.-A. Behrens) 80k:16021 16A34
- Sarbach, Stéphane (with Vuilleumot, Pierre-A.) Phase transitions in quantum XY- and Heisenberg models: critique of N. Szabo's discussion. *Helv. Phys. Acta* 52 (1979), no. 2, 230–237. (Authors' summary) 80m:82023 82A25 (82A15)
- Saricimelija, R. A. Representation of integral solutions in a discrete programming problem. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* 94 (1979), no. 2, 309–312. (Author's summary) 80m:90070 90C10
- The problem of establishing the form of the extrapolation function. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* 95 (1979), no. 2, 477–480. (Author's summary) 80m:90040 90A99
- Saretsko, Ljuri On prediction and mean-estimation for a Hilbert space valued time series. *Ann. Univ. Turku. Ser. A I No. 175* (1978), 46–50. (Andrej Pázmán) 80i:62083 62M20 (60G12)
- Saridis, George N. (with Lee, Chun Sing G.) An approximation theory of optimal control for trainable manipulators. *IEEE Trans. Systems Man Cybernet.* 9 (1979), no. 3, 152–159. (Seihaku Higuchi) 80b:93070 93C10
- Šarilbaev, Ja. S. A problem for a third-order equation with a heat operator in the principal part. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 48 (1977), 28–38, 192. (Author's summary) 80d:35110 35M05 (35K99)
- Boundary value problems for a third-order equation with a heat operator in the principal part. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 6, 14–16. (V. B. Dybin) 80i:35100 35K35
- Sarin, Rakesh K. (with Dyer, James S.) On the relationship between additive conjoint and difference measurement. *J. Math. Psych.* 18 (1978), no. 3, 270–272. (V. S. Krishnan) 80a:92061 92A25
- (with Dyer, James S.) Measurable multiattribute value functions. *Oper. Res.* 27 (1979), no. 4, 810–822. (Diethard Pallaschke) 80m:90006 90A06
- (with Kirkwood, Craig W.) Preference conditions for multiattribute value functions. *Oper. Res.* 28 (1980), no. 1, 225–232. (Authors' summary) 80m:90009 90A06
- Sario, Leo (with Nakai, Mitsuru) A strict inclusion related to biharmonic Green's functions of clamped and simply supported bodies. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 3 (1977), no. 1, 53–57. (Lung Ock Chung) 80c:31005 31C12
- (with Nakai, Mitsuru) Existence of negative quasiharmonic functions. (Russian summary) *Complex analysis and its applications (Russian)*, pp. 413–417, 669, "Nauka", Moscow, 1978. (From the text) 80c:31004 31C99
- (with Nakai, Mitsuru) Banach spaces of harmonic functions in  $L_p$ . *Bull. Inst. Math. Acad. Sinica* 6 (1978), no. 2, part 2, 415–417. (Joel H. Shapiro) 80b:30040 30F15 (46E15)
- Šaripodžieva, F. Cubature formulas on the sphere of a five-dimensional space that are invariant in transformations of a group of a regular hexahedron. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 48 (1977), 52–62, 192–193. (Editors) 80c:65064 65D32
- Cubature formulas of 9th and 11th order of accuracy for the sphere of  $n$ -dimensional space. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 1033–1036, 1084. (Author's summary) 80g:65026 65D32
- Šaripodžieva, Z. The asymptotic solution of a boundary value problem for a second-order differential equation with a small parameter. (Russian) *Taškent. Gos. Univ. Sb. Nauk. Trudov* No. 522 Prikl. Mat. i Meh. (1976), 104–108. (Editors) 80d:34073 34E05
- Šaripov, N. Regularity of boundary points for second-order linear elliptic equations in relation to the Dirichlet problem. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1978, no. 2, 39–45. (V. G. Kravčenko) 80j:35037 35J67
- Šaripov, S. R. (with Raisov, M. R.) Periodic trajectories of a generalized homogeneous differential system. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 11, 9–11. (E. S. Čičkin) 80b:34026 34C05
- (with Raisov, M. R.) Stability of a singular point  $O(0, 0)$  of a special differential system. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 3, 35–42, 92–93. (D. Bobrowski) 80i:34072 34D05
- Šaripov, T. H. (with Zamalov, Z. Ž.; Salihov, G. N.) Approximate integration of smooth functions. (Russian) *Mathematical analysis and related mathematical questions (Russian)*, pp. 37–60, 351, "Nauka", Sibirsk. Otdel., Novosibirsk, 1978. (Authors' summary) 80m:41020 41A55 (65D32)
- Lattice and nonlattice cubature formulas over the space  $L_p^m(T_n)$ . (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 51 (1978), 165–168, 232. (J. B. Butler, Jr.) 80i:65031 65D32
- Sarje, Anil K. (with Biswas, Nripendra N.) A new approach to 2-assumability testing. *IEEE Trans. Comput.* 28 (1979), no. 10, 798–801. (Authors' summary) 80b:94057 94C10
- Sarkar, H. S. (with Mukherjee, T. K.; Sarkar, Mira) On sum theorems. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 24 (1978), no. 1, 47–50. (R. Hodel) 80d:54008 54B99
- Sarkar, Mira (with Mukherjee, T. K.; Sarkar, H. S.) On sum theorems. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 24 (1978), no. 1, 47–50. (R. Hodel) 80d:54008 54B99
- Sarkaria, K. S. A finiteness theorem for foliated manifolds. *J. Math. Soc. Japan* 30 (1978), no. 4, 687–696. (Ph. Tondeur) 80a:57014 57R30
- Sarkisjan, A. V. (with Saakjan, G. S.) Configurations of degenerated masses according to the bimetric theory of gravitation. (Russian. English summary) *Astrofizika* 14 (1978), no. 3, 489–500. (J. Rosen) 80b:85006 85A15 (83C35)
- Sarkisjan, G. Z. Effective computability of arithmetic predicates and functions on the basis of schemes of functional elements. (Russian. Armenian and English summaries) *Int.*



- Akad. Nauk Armjan. SSR Ser. Mat.** 13 (1978), no. 2, 128–139, 172. (Author's summary) 80a:68947 68C30 (03D15)
- Sarkisjan, Ju. S.** Profinitely generated  $\Gamma$ -modules. (Russian) Algebraic numbers and finite groups. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 86 (1979), 157–161, 191. (Daniel Coray) 80j:12012 12B20
- Sarkisjan, O. A.** Some relations between word problems and divisibility problems in groups and semigroups. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 4, 909–921, 968. (André Lentin) 80a:20056 20M05
- Sarkisjan, R. A.** An occurrence problem for adèle groups. (Russian) *Mat. Zametki* 25 (1979), no. 1, 37–50, 157. (V. L. Popov) 80b:20065 20G35 (12A85)
- The conjugacy problem for collections of integral matrices. (Russian) *Mat. Zametki* 25 (1979), no. 6, 811–824, 956. (A. A. Mahnev) 80b:20046 20G25 (15A36)
- Sarkisjan, O. M.** Functional-differential equations with a finite group of argument transformations. (Russian) *Asymptotic behavior of solutions of functional-differential equations* (Russian), pp. 118–142, 157. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (A. Halanay) 80m:34071 34K15
- See also *Asymptotic behavior of solutions of functional-differential equations*, 80j:34001
- Sarkisjan, Andris** Some remarks concerning irregularities of distribution of sequences of integers in arithmetic progressions. II. *Studia Sci. Math. Hungar.* 11 (1976), no. 1–2, 79–103 (1978). (H. L. Montgomery) 80m:10033 10H20
- On difference sets of sequences of integers. III. *Acta Math. Acad. Sci. Hungar.* 31 (1978), no. 3–4, 355–386. (L. D. Baumert) 80j:10062b 10L05 (10J10)
- (with Erdős, Paul) On products of integers. II. *Acta Sci. Math. (Szeged)* 40 (1978), no. 3–4, 243–259. (Donald L. Goldsmith) 80a:10006 10A21
- On difference sets of sequences of integers. II. *Ann. Univ. Sci. Budapest. Eötvös Sect. Math.* 21 (1978), 45–53 (1979). (L. D. Baumert) 80j:10062a 10L05 (10J10)
- (with Erdős, Paul) Some solved and unsolved problems in combinatorial number theory. *Math. Slovaca* 28 (1978), no. 4, 407–421. (A. L. Whiteman) 80i:10001 10–02 (05–02)
- Sariet, Willy** On a common derivation of the averaging method and the two-timescale method. *Celestial Mech.* 17 (1978), no. 3, 299–311. (Author's summary) 80a:34050 34C29
- (with Cantrijn, Frans) On some aspects of the inverse problem for general first-order systems. *Hadronic J.* 1 (1978), no. 1, 101–133. (Robert L. Devaney) 80b:70022 70H15 (49A21)
- (with Cantrijn, Frans) Canonical transformations and the Hamilton-Jacobi problem for general first-order systems derivable from a variational principle. *Hadronic J.* 1 (1978), no. 5, 1497–1521. (C. S. Sharma) 80a:49055 49C10
- Asymptotic convergence of averaging methods. Comparative study of different proofs and results. *Simon Stevin* 52 (1978), no. 4, 161–186. (A. C. Garibaldi) 80j:34052 34C29 (34E15)
- On the structure and classification of matrices characterizing jointly Lie-admissible brackets and symplectic-admissible two-forms. *Hadronic J.* 2 (1979), no. 1, 91–134. (M. Craioveanu) 80b:58031 58F06
- On the transition between second-order and first-order systems within the context of the inverse problem of Newtonian mechanics. *Hadronic J.* 2 (1979), no. 2, 407–432. (Jouko Mickelsson) 80i:70023 70H99 (34A99)
- Silva Rama Sarma, A.** See *Silva Rama Sarma, A.*
- Sarma, P. V. L. N.** (with Martens, X. M.; Reklaitis, G. V.; Rijckaert, M. J.) A comparison of computational strategies for geometric programs. *J. Optim. Theory Appl.* 26 (1978), no. 2, 185–203. (Authors' summary) 80c:90139 90C30
- Sarma, V. V. S.** (with Dante, Henry M.) Automatic speaker identification for a large population. *IEEE Trans. Acoust. Speech Signal Process.* 27 (1979), no. 3, 255–263. (Authors' summary) 80c:68109 68G10
- Särndal, Carl-Erik** See *Hoem, Jan M.* 80c:62011
- Saroglazov, V. S.** The branching of eigenvalues of a boundary value problem for a class of linear vector-differential equations. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 249–259, 321. *Irkutsk. Gos. Univ., Irkutsk*, 1976. (B. V. Loginov) 80a:45001 45C05 (47G05)
- Sarason, T. N.** Congruences on semigroups of linear operators. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1979, no. 1, 17–19, 78. (P. Javor) 80i:20059 20M20
- Sarav, A. A.** Interpretability of signs and the theory of classification. (Russian) *Semiotics and information science*, No. 11 (Russian), pp. 37–51 (errata insert), *Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn. Informacii, Moscow*, 1979. (Jerzy Jaroń) 80b:68000 68G10 (93A99)
- Sarov, V. G.** Integral method of calculating a turbulent boundary layer in a uniform gas stream. *Ind.-Fiz. Ž.* 34 (1978), no. 3, 500–506. (Russian. English summary) *Int. J. Engng. Phys.* 34 (1978), no. 3, 339–344. (Author's summary) 80b:76016 76F05 (65P05, 76N05)
- Sarry, M. F.** On perturbation theory for a degenerate level. (Russian. English summary) *Teoret. Mat. Fiz.* 41 (1979), no. 2, 285–288. (Author's summary) 80m:81027 81C12
- Saric, Z.** Decomposition and synthesis of near-optimum regulators in linear slow and fast mode control systems. (Russian) *Izv. Akad. Nauk Kirgiz. SSR* 1979, no. 5, 18–24, 94. (Author's summary) 80m:93031 93C05
- Sartaburov, Z. A.** Propagation of the idea of the Poincaré method to the case of pseudoperiodic functions. (Russian) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1979, no. 1, 84–86, 94. (B. A. Ščerbakov) 80j:34047 34C28
- Sarton, George** See *Hamareh, Saml*, 80a:01055
- Sarubhanjan, A. G.** (with Agajan, S. S.) Plotkin's conjecture. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 66 (1978), no. 5, 267–271. (J. L. Brenner) 80a:05037 05B20
- Sarvanov, V. I.** The mean value of the functional in sampling problems. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1978, no. 3, 51–54, 139. (Author's summary) 80a:65134 65K05 (90C50)
- On optimization of permutations. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 4, 9–11, 139. (Koriolan Gilezan) 80a:94051 94C10 (20B30)
- Sarwate, Dillip V.** (with Hirschberg, D. S.; Chandra, Ashok K.) Computing connected components on parallel computers. *Comm. ACM* 22 (1979), no. 8, 461–464. (Authors' summary) 80b:68041 68C25 (68B20, 68E10)
- (with Shedd, Dennis A.) Construction of sequences with good correlation properties. *IEEE Trans. Inform. Theory* 25 (1979), no. 1, 94–97. (Authors' summary) 80b:94003 94A05 (94B05)
- Bounds on crosscorrelation and autocorrelation of sequences. *IEEE Trans. Inform. Theory* 25 (1979), no. 6, 720–724. (Author's summary) 80m:94024 94A15
- A note on: "Universal classes of hash functions" [J. Comput. System Sci. 18 (1979), no. 2, 143–154; MR 80f:68110a] by J. L. Carter and M. N. Wegman. *Inform. Process. Lett.* 10 (1980), no. 1, 41–45. (From the introduction) 80f:68110b 68H05
- Saryev, V. A.** (with Sazonov, V. V.; Mel'nik, N. V.) Spatial periodic oscillations of a satellite relative to the center of mass. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 118* (1978), 53 pp. (Authors' summary) 80b:70050 70M05 (65L05)
- Saryev, A.** A topology in the lattice of subgroups of a topological group. (Russian. Turkmen and English summaries) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* 1979, no. 6, 3–8. (K. A. Ross) 80m:22001 22A05 (22D05)
- Saryev, M. A.** A selfadjoint boundary value problem for a two-parameter Hamiltonian equation. (Russian. Turkmen summary) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* 1979, no. 3, 6–13. (Alexander Alenicyan) 80m:34021 34B25 (47E05)
- Sarymsakov, B. T.** (with Mironov, A. V.) Some properties of positive mappings of topological semi-ordered groups and vector spaces. (Russian) *Taškent. Gos. Univ. Sb. Nauchn. Trudov No. 573 Funktsional. Anal.* (1978), 42–50, 109–110. (Authors' summary) 80k:47039 47B55 (46A99)
- A  $K$ -space of continuous selfadjoint endomorphisms in a Hilbert module over the semifield  $\mathbb{R}^+$ . (Russian) *Taškent. Gos. Univ. Sb. Nauchn. Trudov No. 573 Funktsional. Anal.* (1978), 76–79, 111. (Author's summary) 80j:47051 47B99 (46C99)
- Sarymsakov, T. A.** (with Čilin, V. I.) Measures on topological Boolean algebras. *Proceedings of the Conference Topology and Measure, I* (Zimnitskiy, 1974), Part 2, pp. 315–332. *Ernst-Moritz-Arndt Univ., Greifswald*, 1978. (Authors' summary) 80k:28010 28A60 (46N05)
- (with Ajupov, Š. A.) Regularity of Markov chains on  $O^*$ -algebras. (Russian) *Dokl. Akad. Nauk UzSSR No. 4* (1979), 3–5. (Konrad Schmüdgen) 80b:46112 46L50 (60J05)
- Sasagawa, T.** On the stability of stochastic systems dependent on the past history. VII. *Internationale Konferenz über nichtlineare Schwingungen (Berlin, 1975), Band II*, 2, pp. 319–325. *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977, 6, Akademie-Verlag, Berlin, 1978. (G. S. Ladde) 80g:60062 60H15
- Sasai, Hitoshi** Approximation of optimal control problems governed by non-linear evolution equations. *Internat. J. Control* 28 (1978), no. 2, 313–324. (L. von Wolfersdorff) 80a:49066 49D15 (34K05, 49A27)
- Sasai, Takao** The Cauchy problem for Tricomi's equation and the relations between generating functions and entire functions. *J. Math. Anal. Appl.* 69 (1979), no. 2, 563–570. (A. P. Soldatov) 80b:35099 35M05 (35C99)
- Sasaki, Hiroshi** A new approach to the reduction of matrices to Jordan normal form. *Electron. Comm. Japan* 60 (1977), no. 6, 50–57. (D. B. Hunter) 80b:15005 15A21 (65F35)
- Sasaki, Kenji** (with Nōno, Kiyoharu; Sugawara, Noriko) Continuation and quotient representation of meromorphic functions. *Bull. Fukuoka Univ. Ed. III* 28 (1978), 17–27. (W. R. Zame) 80b:32018 32E10
- Sasaki, Morio** Commutative semigroups obtained by an abelian group and a generalized  $S$ -function. *Annual Rep. Fac. Ed. Iwate Univ.* 38 (1978), no. 3, 1–6. (P. R. Jones) 80d:20056 20M10
- Sasaki, R.** Some classical solutions of the sourceless  $SO(4, 1)$  gauge field equations. *Nuclear Phys. B* 142 (1978), no. 4, 463–476. (M. Hongoh) 80g:81055 81E15 (22E70, 53C05, 58G35, 83C99)
- Exact classical solutions of the massless  $\sigma$ -model with gauge fields in Minkowski space. *Phys. Lett. B* 80 (1978/79), no. 1–2, 61–64. (Author's summary) 80b:81126 81M05 (53C10)
- Soliton equations and pseudospherical surfaces. *Nuclear Phys. B* 154 (1979), no. 2, 343–357. (H. Rund) 80b:35168 35Q20 (53A35, 81C05)
- Sasaki, Takeshi** (with Shiga, Kiyoshi) Remarks on the curvature of hypersurfaces in  $C^n$ . *Nagoya Math. J.* 71 (1978), 91–95. (B. Smyth) 80j:53063 53C55 (32C10)
- Some examples of stochastically stable homeomorphisms. *Nagoya Math. J.* 71 (1978), 97–105. (Clark Robinson) 80c:58014 58F10
- Sasaki, Takeshi** Multidimensional Monte Carlo integration based on factorized approximation functions. *SIAM J. Numer. Anal.* 15 (1978), no. 5, 938–952. (James E. Gentle) 80c:65017 65C05 (65D30)
- Sasaki, Yoshinari** (with Hamada, Nozomu; Takahashi, Shin-ichi) Criteria for relative stability and aperiodic damping based on systems with complex coefficients. *Systems-Comput.-Controls* 9 (1978), no. 1, 62–68 (1979). (From the summary) 80j:93106 93D99
- Sasao, Setsyu** (with Takahashi, Hideo) Highly connected Poincaré complexes. *Kodai Math. J.* 2 (1979), no. 2, 139–147. (Norman Levitt) 80b:57035 57P10
- Sasao, Tsutomu** (with Terada, Hiroaki) Multiple-valued logic and the design of programmable logic arrays with decoders. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979), pp. 27–37, IEEE, Long Beach, Calif.*, 1979. (Authors' summary) 80m:94115 94C99 (03B50)
- (with Kinoshita, Kozo) On the number of fanout-free functions and unate cascade functions. *IEEE Trans. Comput.* 28 (1979), no. 1, 66–72. (Abraham Kandel) 80b:94044 94C10 (05A10)
- Šaškin, M. A.** Optimal stopping of continuous time random processes and stochastic differential representations for the values. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 1, 191–212, 232. (H.-J. Engelbert) 80a:60056 60C40 (60H05, 93E20)
- Šaškin, Mame** Some solutions of the fluid flow equations. *Z. Angew. Math. Mech.* 38 (1978), no. 7, T340–T342. (T. Yao-tsu Wu) 80j:76029 76D99
- Application of analytical complex functions for the investigation of some classes of vortex flows. *Zb. Rad. Math. Inst. Beograd. (N.S.)* 3(11) (1979), 137–142. (L. N. Tao) 80k:76029 76C05
- Šaškin, Ju. A.** (with Šaraburova, L. G.) Helly theorems for convex cones. (Russian) *Izv.*

- Vysl. Ucheb. Zaved. Matematika* 1978, no. 11(198), 104–107. (N. Poláková) **80c:52009** 52A35
- (with Šaraburova, L. G.) Intersections of convex cones. (Russian) *Mat. Zametki* 24 (1978), no. 3, 391–402, 447. (E. Jucović) **80c:52009** 52A20
- Šaškov, M. Ju. (with Gasilov, V. A.; Golovizin, V. M.; Taran, M. D.; Tilkin, V. F.; Turina, N. N.; Favorukii, A. P.) Application of Newton's method for the solution of difference equations in hydrodynamics. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 100* (1978), 41 pp. (Authors' summary) **80b:76007** 76D05 (65P05)
- (with Bogdanova, M. S.; Kučerov, A. B.; Nikolaev, E. S.; Taran, M. D.; Tilkin, V. F.; Favorukii, A. P.; Šapovalnikova, S. A.) Some implicit iteration methods. Analysis and comparison. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 115* (1978), 35 pp. (Authors' summary) **80c:65117** 65J05
- (with Koršija, T. K.; Tilkin, V. F.; Favorukii, A. P.) A variational approach to the construction of difference schemes for the heat equation on curvilinear grids. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 1* (1979), 60 pp. (Authors' summary) **80c:65091** 65N05 (80A10)
- Difference schemes for the equation of heat conduction on moving curvilinear walls. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 46* (1979), 14 pp. (Author's summary) **80c:65118** 65P05 (65N20)
- (with Tilkin, V. F.; Favorukii, A. P.) Variational-difference schemes for the heat equation on nonregular networks. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 6, 1342–1346. (From the text) **80m:65086** 65P05
- Sastry, William C. Galaxy clustering and thermodynamics. *Astrophys. J.* 235 (1980), no. 2, part 1, 299–306. (Author's summary) **80j:85005** 85A05
- Sastry, A. M. (with Mordukhovich, B. Š.) On the theory of duality in control systems. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 8, 1371–1380, 1529. (L. von Wolfersdorf) **80c:49005** 49A10 (49E30, 93B05)
- Saunders, Helmut M. Approximation of irregular surfaces. *Transactions of the Twenty-Third Conference of Army Mathematicians* (Langley Res. Center, Hampton, Va., 1977), pp. 447–465, *ARO Rep. 78, 1, U. S. Army Res. Office, Research Triangle Park, N.C.*, 1978. (Author's summary) **80c:65042** 65D15 (65N30)
- Saunders, Mauro (with Tarsia, Antonio) The problem of equilibrium of a plate resting on an elastic obstacle. (Italian. English summary) *Ric. Mat. Univ. Parma* (4) 4 (1978), 359–367 (1979). (D. R. Bland) **80f:73060** 73K10
- Sastry, A. R. K. (with Kanak, Laveen N.) Models for channels with memory and their applications to error control. *Proc. IEEE* 66 (1978), no. 7, 724–744. (Rajendra Singh) **80j:94020** 94A40 (68J10)
- Sastry, A. S. (with Sastry, K. P. R.) Measure extensions of set functions over lattices of sets. *J. Indian Math. Soc. (N.S.)* 41 (1977), no. 3–4, 317–330 (1978). (T. P. Srinivasan) **80h:28013** 28B05
- Sastry, D. (with Gauvrit, M.) A two-level algorithm for the simultaneous state and parameter identification. *Internat. J. Systems Sci.* 9 (1978), no. 12, 1397–1418. (Ivar Gustavsson) **80h:93143** 93E10
- Sastry, D. V. S. (with Bhagwandas) Some constructions of balanced incomplete block designs. *J. Indian Statist. Assoc.* 15 (1977), 91–95. (D. SotEAU) **80h:05014** 05B05
- Sastry, K. P. R. (with Sastry, A. S.) Measure extensions of set functions over lattices of sets. *J. Indian Math. Soc. (N.S.)* 41 (1977), no. 3–4, 317–330 (1978). (T. P. Srinivasan) **80h:28013** 28B05
- (with Naidu, S. Venkata Ratnam) On a fixed point theorem of Chi Song Wong. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 3, 545–554. (Editors) **80b:47060** 47H10
- (with Naidu, S. Venkata Ratnam) On best simultaneous approximation in normed linear spaces. *Proc. Nat. Acad. Sci. India Sect. A* 48 (1978), no. 4, 249–250. (O. P. Kapoor) **80c:41033** 41A65
- (with Naidu, S. Venkata Ratnam) Some fixed point theorems in normed linear spaces. *Indian J. Pure Appl. Math.* 10 (1979), no. 8, 928–937. (Chi-Song Wong) **80j:47074** 47H10
- Sastry, Sundaram M. A. (with Srinivasan, Sundarajan) A sufficient condition for a subspace to be proximinal. *J. Madurai Kamaraj Univ.* 8 (1979), no. 1, 109–110. (O. P. Kapoor) **80i:46017** 46B20
- Satake, Akio (with Reddy, J. N.) A numerical method for elastic-plastic torsion by variational inequality. *Internat. J. Solids and Structures* 16 (1980), no. 1, 1–18. (Authors' summary) **80i:73047** 73K25
- Satake, I. La déformation des formes hermitiennes et son application aux domaines de Siegel. *Ann. Sci. École Norm. Sup. (4)* 11 (1978), no. 3, 445–449. (S. Kaneyuki) **80i:32058** 32M10
- Sataev, A. D. (with Schadze, G. A.) The equivalence of Gaussian measures under nonlinear transformation in a Hilbert space. (Russian) *Dokl. Akad. Nauk SSSR* 240 (1978), no. 4, 790–793. (G. N. Sytaja) **80a:60056** 60G30
- Satgé, Philippe. Inégalités de miroir. *Séminaire Delange-Pisot-Poitou, 18e année: 1976/77, Théorie des nombres, Fasc. 2, Exp. No. 18, 4 pp., Secrétariat Math., Paris*, 1977. (From the text) **80k:12014** 12A55 (12A65)
- (with Oriat, Bernard) Un essai de généralisation du "Spiegelungssatz". *J. Reine Angew. Math.* 387/308 (1979), 134–159. (J. Browkin) **80i:12007** 12A50
- Sathaye, Avinash On the Forster-Eisenbud-Evans conjectures. *Invent. Math.* 46 (1978), no. 3, 211–224. (J. W. Brewer) **80c:13009** 13C15 (13F20)
- (with Russell, Peter) On finding and cancelling variables in  $k[X, Y, Z]$ . *J. Algebra* 57 (1979), no. 1, 151–166. (T. Kamabayashi) **80j:14030** 14J25 (13B25, 14E25)
- Sathe, V. S. (with Lingras, S. R.) Bounds for the Pearson type IV tail probabilities. *Comm. Statist. A—Theory Methods* 8 (1979), no. 6, 533–541. (From the introduction) **80c:62022** 62E15
- (with Shenoy, R. G.) On inequalities for statistics similar to Student's  $t$ . *Comm. Statist. A—Theory Methods* 8 (1979), no. 6, 575–579. (M. L. Tiku) **80j:62019** 62E15
- Sather, D. (with Knightly, George H.) Nonlinear buckling and stability of cylindrical panels. *SIAM J. Math. Anal.* 10 (1979), no. 2, 389–403. (O. John) **80d:73072** 73H05 (35B32, 47H99, 58E99)
- Sathyabhama, V. (with Kannappan, P.) Generalization of sum representation functional equations. I. *Internat. J. Math. Math. Sci.* 2 (1979), no. 3, 459–471. (Inder Jeet Taneja) **80j:39012a** 39B40 (94A17)
- Šatlov, A. I. On the control of the signal detection process in the presence of noise. *Radiotekhn. i Elektron.* 23 (1978), no. 8, 1650–1656. (Russian); translated as *Radio Engng. Electron. Phys.* 23 (1978), no. 8, 70–75 (1979). (Author's summary) **80m:93006** 93E10
- Šatili, A. N. (with Sokolov, S. N.) Physical equivalence of three forms of relativistic dynamics and addition of interactions in the front and instant forms. (Russian. English summary) *Teoret. Mat. Fiz.* 37 (1978), no. 3, 291–304. (V. D. Koimanenko) **80c:81115** 81M05 (47A40)
- Sato, Enji (with Saeki, Sadahiro) Critical points and point derivations on  $M(G)$ . *Michigan Math. J.* 25 (1978), no. 2, 147–161. (Colin C. Graham) **80b:43002b** 43A10
- Sato, Hiroshi Hilbertian support of a probability measure on a Banach space. *Probability in Banach spaces, II* (Proc. Second Internat. Conf., Oberwolfach, 1978), pp. 195–205, *Lecture Notes in Math.*, 709, Springer, Berlin, 1979. (N. N. Vahanja (Vahania)) **80j:60014** 60B11 (46C10)
- Sato, Iwao On a few clique-graph equations. *TRU Math.* 14 (1978), no. 2, 31–36. (Geoffrey Exoo) **80m:05097** 05C99
- Sato, Ken-iti A note on convergence of probability measures on  $C$  and  $D$ . *Ann. Sci. Kanazawa Univ.* 14 (1977), 1–5 (1978). (Ju. S. Mišura) **80j:60008** 60B10
- Diffusion operators in population genetics and convergence of Markov chains. *Measure theory applications to stochastic analysis* (Proc. Conf., Res. Inst. Math., Oberwolfach, 1977), pp. 127–137, *Lecture Notes in Math.*, 695, Springer, Berlin, 1978. (H. A. Guess) **80d:60101** 60J60 (60J70, 92A10)
- Urbanik's class  $L_m$  of probability measures. *Ann. Sci. Kanazawa Univ.* 15 (1978), 1–10 (1979). (R. Jajte) **80k:60024** 60E07 (60F05)
- Sato, Kijirō Geodesics on the tangent bundles over space forms. *Tensor (N.S.)* 32 (1978), no. 1, 5–10. (T. J. Willmore) **80f:53030** 53C25
- A decision procedure for the unique decipherability of multivalued encodings. *IEEE Trans. Inform. Theory* 25 (1979), no. 3, 356–360. (Author's summary) **80g:94044** 94A29 (68C30, 68F05)
- Sato, Makoto (with Iijima, Taizo) Feature parameters with optimal variances. *Systems-Comput.-Controls* 9 (1978), no. 1, 46–53 (1979). (From the summary) **80j:68074** 68G10
- Sato, Masahisa On equivalences between module subcategories. *J. Algebra* 59 (1979), no. 2, 412–420. (Wolfgang Gröze) **80k:16053** 16A90 (18E99)
- Sato, Mitsuo (with Abe, Kenichi; Takeda, Hiroshi) Asymptotic properties of Markovian decision processes with unknown parameters using Bayesian approach. *Systems-Comput.-Controls* 9 (1978), no. 1, 1–8 (1979). (Authors' summary) **80c:90122** 90C40
- Sato, Ryonosuke (with Lapwood, E. R.) The pattern of eigenfrequencies of overtones of torsional oscillations of a layered spherical shell. *J. Comput. Phys.* 29 (1978), no. 3, 412–420. (Editors) **80c:86001** 86A15 (34B25, 73L05)
- Sato, Ryōtarō Contraction semigroups in Lebesgue space. *Pacific J. Math.* 78 (1978), no. 1, 251–259. (J. A. Goldstein) **80b:47054** 47D05
- On local ergodic theorems for positive semigroups. *Studia Math.* 63 (1978), no. 1, 45–55. (J. A. Goldstein) **80b:47055** 47D05 (47A35)
- On abstract mean ergodic theorems. *Tōhoku Math. J. (2)* 30 (1978), no. 4, 575–581. (R. J. Nagel) **80a:47013** 47A35
- Ergodic theory and the approximate solution of simultaneous linear functional equations. *J. Math. Anal. Appl.* 68 (1979), no. 1, 12–16. (Charles W. Groetsch) **80g:47008** 47A35 (47D05, 65J10)
- The Hahn-Banach theorem implies Sine's mean ergodic theorem. *Proc. Amer. Math. Soc.* 77 (1979), no. 3, 426. (Michael Lin) **80m:47007** 47A35
- Sato, Shizuko (with Yamaguchi, Seiichi) On holomorphically subplanar curves in almost complex manifolds. *Tensor (N.S.)* 32 (1978), no. 2, 231–242. (T. Suguri) **80c:53029** 53B35
- On analytic HSP-transformations in complex manifolds. *Tensor (N.S.)* 32 (1978), no. 3, 366–372. (R. Miron) **80c:53038** 53C15
- Sato, Yoshikazu Calculations on the mixed crossed extensor. *Tensor (N.S.)* 32 (1978), no. 1, 107–113. (A. Kawaguchi) **80b:53007** 53A45
- Satsuma, J. (with Ablowitz, Mark J.) Solitons and rational solutions of nonlinear evolution equations. *J. Math. Phys.* 19 (1978), no. 10, 2180–2186. (Ryogo Hirota) **80c:35121** 35Q20 (35A30)
- (with Ablowitz, Mark J.) Two-dimensional lumps in nonlinear dispersive systems. *J. Math. Phys.* 20 (1979), no. 7, 1496–1503. (Ryogo Hirota) **80f:35117** 35Q20 (81C99)
- Sattar, Gazdar, Abdus Generation of waves of small amplitude by an obstacle placed beneath the free surface of running stream of infinite depth. *J. Phys. Soc. Japan* 44 (1978), no. 2, 652–658. (N. D. Kopačevskij) **80j:76009** 76B15
- Satterthwaite, S. P. (with Hutchinson, T. P.) A generalisation of Gumbel's bivariate logistic distribution. *Metrika* 25 (1978), no. 3, 163–170. (Authors' summary) **80c:62066** 62H10
- Sattlinger, D. H. Group-theoretic methods in bifurcation theory. *Transactions of the Twenty-Third Conference of Army Mathematicians* (Langley Res. Center, Hampton, Va., 1977), pp. 467–485, *ARO Rep. 78, 1, U. S. Army Res. Office, Research Triangle Park, N.C.*, 1978. (B. V. Loginov) **80i:58021** 58E07 (47H15)
- Bifurcation from rotationally invariant states. *J. Math. Phys.* 19 (1978), no. 8, 1720–1732. (B. V. Loginov) **80j:58027** 58E07 (22E70, 47H15)
- Sattler, R. New results on  $(0, 2\pi)$ -primitive sequences, a odd. *Nederl. Akad. Wetensch. Indag. Math.* 40 (1978), no. 3, 385–397. (Graham Lord) **80g:10060** 10L10
- Satubaldyev, D. Transition phenomena for stopping times of a Brownian motion. (Russian. Uzbek summary) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1978, no. 5, 71–73. (D. A. Darling) **80a:60103** 60J65
- Satyanarayana, Chandra Lee metric codes over integer residue rings. *IEEE Trans. Inform. Theory* 25 (1979), no. 2, 250–254. (B. D. Sharma) **80b:94028** 94B05
- Satyanarayana, Kesiraju ★ Dihedral angles and in- and ex-elements of  $n$ -space simplexes. *Studies in coordinate geometry. Visalaandhra Publishing House, Vijayawada*, 1979. vi+46 pp. (S. R. Mandan) **80i:51024** 51M05
- Satyanarayana, M. Naturally totally ordered semigroups. *Pacific J. Math.* 77 (1978), no. 1, 249–254. (R. McFadden) **80b:06016** 06F05
- ★ Positively ordered semigroups. *Lecture Notes in Pure and Applied Mathematics* 42, Marcel Dekker, Inc., New York-Basel, 1979. v+102 pp. ISBN 0-8247-6810-4 (R. McFadden) **80i:06011** 06F05 (20M99)



- Radical theory of semigroups. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 509–517. *Colloq. Math. Soc. János Bolyai*, 20, North-Holland, Amsterdam, 1979. (J. E. Kuczowski) **80g:20076** 20M11
- Correction to my paper: "Structure and ideal theory of commutative semigroups" [*Czechoslovak Math. J.* **28**(103) (1978), no. 2, 171–180; MR **58** #952]. *Czechoslovak Math. J.* **29**(104) (1979), no. 4, 662–663. (T. Tamura) **80i:20044** 20M10
- (with Deshpande, M. G.) Rings with unique maximal ideals. *Math. Nachr.* **87** (1979), 213–219. (Beth Barnwell) **80e:16022** 16A66
- (with Nagore, C. Sri Hari) Integrally ordered semigroups. *Semigroup Forum* **17** (1979), no. 2, 101–111. (Thérèse Merlier) **80i:06012** 06F05
- (with Nagore, C. Sri Hari) On naturally ordered semigroups. *Semigroup Forum* **18** (1979), no. 2, 95–103. (Frank A. Smith) **80i:06013** 06F05
- Saty, A. V. (with Maëgoiz, M. D.) Properties of a first-order gradient-free algorithm for the minimization of functionals. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 8* (1979), 604–607, 686. (From the introduction) **80g:49039** 49D99 (49D07)
- Satz, H. See Many degrees of freedom in particle theory. **80j:81006**
- Sau, J. Collective angular momentum in classical mechanics. *J. Phys. A* **12** (1979), no. 11, 1971–1979. (M. Hussain) **80i:70018** 70F99
- Sauer, Norbert (with Spencer, Joel H.) Edge disjoint placement of graphs. *J. Combin. Theory Ser. B* **25** (1978), no. 3, 295–302. (E. C. Milner) **80m:05098** 05C99
- Sauer, Wilfried Darstellung des Mengen- und Intensitätsverhaltens von Stückgutprozessen mittels Distributionen-, Signal- und Systemtheorie. *Wiss. Z. Tech. Univ. Dresden* **27** (1978), no. 6, 1175–1179. (Author's summary) **80c:94008** 94A15
- Saulis, L. Large deviations for the maximum of a random number of sums of independent random variables. (Russian. Lithuanian and English summaries) *Lietusk. Mat. Sb.* **18** (1978), no. 4, 147–164, 202. (Zdzisław Rychlik) **80b:60044** 60F10
- (with Rudzki, R.; Statulevičius, V.) Large deviations for sums of independent random variables. (Russian. Lithuanian and English summaries) *Lietusk. Mat. Sb.* **19** (1979), no. 1, 169–179, 232. (S. A. Book) **80f:60029** 60F10
- Saunders, B. David (with Schneider, Hans) Flows on graphs applied to diagonal similarity and diagonal equivalence for matrices. *Discrete Math.* **24** (1978), no. 2, 205–220. (C. Y. Chao) **80e:15008** 15A21
- (with Schneider, Hans) Cones, graphs and optimal scalings of matrices. *Linear and Multilinear Algebra* **8** (1979/80), no. 2, 121–135. (E. W. Ellers) **80k:15036** 15A60 (05C50, 92A25)
- Saunders, I. W. Locating bright spots in a point process. *Adv. in Appl. Probab.* **10** (1978), no. 3, 587–612. (S. K. Srinivasan) **80a:60111** 60K10
- A model for myxomatosis. *Math. Biosci.* **48** (1980), no. 1–2, 1–15. (Author's summary) **80k:92012** 92A15
- Saunders, R. (with Bullough, R. K.; Jack, P. M.; Kitchenside, P. W.) Solitons in laser physics. Special issue on solitons in physics. *Phys. Scripta* **20** (1979), no. 3–4, 364–381. (J. S. Joel) **80k:81202** 81K05 (58F07, 78A15)
- Saunders, Roy (with Kryscio, Richard J.; Funk, Gerald M.) Limiting results for arrays of binary random variables on rectangular lattices under sparseness conditions. *J. Appl. Probab.* **16** (1979), no. 3, 554–566. (David J. Strauss) **80i:60135** 60K99 (60F10)
- (with Lefèvre, Claude; Kryscio, Richard J.) A note on the expected number of survivors in supercritical carrier-borne epidemics. *J. Appl. Probab.* **16** (1979), no. 3, 646–650. (Vincenzo Capasso) **80k:92013** 92A15
- Saunders, Sam C. (with Myhre, Janet M.; Rosenfeld, Andrew M.) Determining confidence bounds for highly reliable coherent systems based on a paucity of component failures. *Naval Res. Logist. Quart.* **25** (1978), no. 2, 213–227. (Masanori Kodama) **80h:90074** 90B25
- Saut, Jean-Claude ★ Sur des généralisations de l'équation de Korteweg-de Vries. Publications Mathématiques d'Orsay 78, 6. Université de Paris-Sud, Département de Mathématique, Orsay, 1978. ii + 147 pp. (J. S. Joel) **80a:35107** 35Q20 (80A30, 92A15)
- (with Scheurer, B.) Remarks on a non-linear equation arising in population genetics. *Comm. Partial Differential Equations* **3** (1978), no. 10, 907–931. (J. Smoller) **80a:35012** 35B32 (92A15)
- (with Temam, Roger) Generic properties of nonlinear boundary value problems. *Comm. Partial Differential Equations* **4** (1979), no. 3, 293–319. (A. A. Arsen'ev) **80k:35080** 35J60 (58C15)
- Savagoot, Jean-Luc Idéaux primitifs de certains produits croisés. *Math. Ann.* **231** (1977/78), no. 1, 61–76. (Elliot C. Gootman) **80d:46112** 46L05 (22D25, 22D30)
- Sava, Valeriu A. Uniqueness of weak solutions of the micropolar fluid equations. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **24** (1978), no. 1, 157–166. (Radu Bădescu) **80b:35128** 35Q20 (76A99)
- The initial-boundary-value problems in the theory of micropolar fluids. (German and Russian summaries) *Z. Angew. Math. Mech.* **58** (1978), no. 11, 511–518. (S. J. Sackett) **80a:76002** 76A05 (35Q10)
- Savage, J. E. (with Harper, L. H.) Lower bounds on synchronous combinational complexity. *SIAM J. Comput.* **8** (1979), no. 2, 115–119. (Y. L. Varol) **80c:68027** 68C25
- Savage, N. (with Bustoz, Joaquin) Inequalities for ultraspherical and Laguerre polynomials. *SIAM J. Math. Anal.* **10** (1979), no. 5, 902–912. (S. Saran) **80k:33009** 33A45 (33A65)
- Savagene, Michael A. Growth of complex systems can be related to the properties of their underlying determinants. *Proc. Nat. Acad. Sci. U.S.A.* **76** (1979), no. 11, 5413–5417. (Author's summary) **80h:92025** 93A15 (90A10, 92A15)
- Savarita, P. (with Kunstatler, G.; Moffat, J. W.) Cosmological solution of Bianchi type I in a new theory of gravitation. *Phys. Rev. D* **3** (1979), no. 12, 3559–3561. (Authors' summary) **80m:83049** 83F05 (53B50, 83D05)
- Savarovskii, B. Z. Characteristic vectors and similarity of matrix pencils of simple structure. (Russian) *Mat. Metody i Fiz.-Mekh. Polja* **9** (1979), 41–44, 131. (Cs. J. Hegedűs) **80e:15012** 15A30
- Savčenko, A. Ja. See Savčenko, O. Ja.
- Savčenko, G. B. The correctness of a boundary value problem for a system of linear differential equations. (Russian) *Differentsial'nye Uravnenija* **14** (1978), no. 11, 2082–2085, 2110–2111. (Author's summary) **80k:35121** 35R25 (35E99)
- Savčenko, O. Ja. (with Ignat'ev, A. O.; Svetlichnaya, N. V.) Stability in the critical case of  $n$  pairs of purely imaginary roots. (Russian) *Mekh. Tverd. Tela* **11** (1979), 95–98, 120. (V. M. Popov) **80j:34057** 34D20 (70K30)
- Savel'ev, I. V. Structure of the singularities of a class of complex hypersurfaces. (Russian) *Mat. Zametki* **25** (1979), no. 4, 497–503, 635. (R. R. Simha) **80g:32018** 32C40 (14B05, 32B30)
- Savelova, T. I. Regularization by means of operators of Fejér type. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **18** (1978), no. 3, 582–588, 810. (Author's summary) **80a:65274** 65R20 (65J05)
- Regularization of nonlinear integral equations of convolution type. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **19** (1979), no. 1, 22–28, 267. (Editors) **80c:65252** 65R20
- A stable summation of Fourier series. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **19** (1979), no. 4, 830–835, 1080. (A. Lupas) **80k:65011** 65B10 (65T05)
- (with Knopova, S. M.) Application of projection methods to solving unstable problems. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **19** (1979), no. 5, 1091–1096, 1355. (Authors' summary) **80i:65069** 65J15 (47H17)
- Savel'ov, O. I. 0-modular lattices. (Russian) *Ordered sets and lattices*, No. 5 (Russian), pp. 97–107, 119, Saratov. Gos. Univ., Saratov, 1978. (Wojciech Cegła) **80m:06012** 06C20
- Savenkova, N. P. A numerical solution of a nonselfadjoint eigenvalue problem. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* **1978**, no. 2, 85–88. (Author's summary) **80a:65184** 65L15
- (with Gordeev, A. V.; Gulín, A. V.) Instability of an electron flow in magnetic self-confinement. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 129* (1979), 29 pp. (Authors' summary) **80h:76077** 76W05
- Savgulidze, E. T. An example of a measure which is quasi-invariant relative to the action of a group of diffeomorphisms of the circle. (Russian) *Funktsional. Anal. i Prilozhen.* **12** (1978), no. 3, 55–60, 96. (D. Newton) **80c:28008** 28D15 (58F14)
- The direct equation of Kolmogorov for measures in a Hilbert scale of spaces. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Mekh.* **1978**, no. 3, 19–28. (A. Badrikian) **80j:60113** 60J99 (46G99, 58D25)
- Savin, M. G. ★ Проблема калибровки Лоренца в анизотропных средах. (Russian) [The Lorentz gauge problem in anisotropic media] *Nauka*, Moscow, 1979. 123 pp. (Editors) **80k:78015** 78A25 (86A25)
- Savin, N. E. (with White, Kenneth J.) Estimation and testing for functional form and autocorrelation. A simultaneous approach. *J. Econometrics* **8** (1978), no. 1, 1–12. (Authors' summary) **80m:62092** 62M10
- Savinov, G. V. Numerical stability of a block triangular decomposition for a class of linear systems. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **18** (1978), no. 6, 1589–1593, 1631. (C. Ilioi) **80i:65038** 65F05
- A generalized conjugate gradient method for solving linear systems. (Russian) Numerical methods and questions in the organization of calculations. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **80** (1978), 181–188, 269. (E. G. D'jakonov) **80f:65041** 65F10
- Savinova, L. T. Calculation of the small eigenvalues of a matrix. (Russian) Numerical methods and questions in the organization of calculations. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **80** (1978), 167–180, 269. (Author's summary) **80d:65008** 65–04
- Savitch, Walter J. (with Vitányi, Paul M. B.) On inverse deterministic pushdown transductions. *J. Comput. System Sci.* **16** (1978), no. 3, 423–444. (I. Hal Sudborough) **80a:68066** 68D35
- (with Pawlak, Z.; Rozenberg, Grzegorz) Programs for instruction machines. *Inform. and Control* **41** (1979), no. 1, 9–28. (Authors' summary) **80c:68019** 68B05 (68D35)
- Savits, Thomas H. (with Block, Henry W.) Systems with exponential life and IFRA component lives. *Ann. Statist.* **7** (1979), no. 4, 911–916. (Moshe Shaked) **80h:62072** 62N05 (62H05)
- Savits, M. (with Bergia, S.; Cannata, F.; Ruffo, S.) Group theoretical interpretation of von Neumann's theorem on composite systems. *Amer. J. Phys.* **47** (1979), no. 6, 548–552. (Authors' summary) **80i:81040** 81C40
- Saw, John G. (with Walker, Glenn A.) The distribution of linear combinations of  $t$ -variables. *J. Amer. Statist. Assoc.* **73** (1978), no. 364, 876–878. (Lennart Bondesson) **80c:62024** 62E15
- Sawada, Katsuro (with Osawa, Takeo) On exactly soluble nonlinear ordinary differential equations of the Liénard type. *J. Phys. Soc. Japan* **44** (1978), no. 5, 1730–1732. (Authors' summary) **80f:34027** 34B30 (58F21)
- Sawade, Kazuo (with Ono, Tamio) Addition sets with a multiplier  $q$ . (Japanese. English summary) *Bull. Nagoya Inst. Tech.* **29** (1977), 155–159. (K. Yamamoto) **80m:05017** 05B10
- Sawaki, Sumio (with Yano, Kentaro) On the Weyl and Bochner curvature tensor. *Rend. Accad. Naz. XL* (5) **3** (1977/78), 31–54 (1979). (E. Pavlov) **80h:53058** 53C40
- (with Sekigawa, Kouei)  $\alpha$ -hypersurfaces in a locally symmetric almost Hermitian manifold. *Tōhoku Math. J. (2)* **30** (1978), no. 4, 543–551. (T. Nagano) **80b:53013** 53B20
- Sawami, Hideo (with Niki, Hiroshi; Ondoh, Tetsuya) A note on a practical technique for solving elliptic equations. *J. Inst. Math. Appl.* **22** (1978), no. 3, 353–359. (Authors' summary) **80a:65215** 65N20
- Sawano, Kenzuke Exponential asymptotic stability for functional-differential equations with infinite retardations. *Tōhoku Math. J. (2)* **31** (1979), no. 3, 363–382. (Olusola Akinyele) **80k:34107** 34K20 (34K15)
- Sawaragi, Yoshikazu (with Baba, Norio; Shoman, Toshio) A modified convergence theorem for a random optimization method. *Inform. Sci.* **13** (1977), no. 2, 159–166. (Authors' summary) **80f:93068** 93E20 (49B60)
- (with Soeda, Takashi; Omatsu, Sigeru) ★ Modeling, estimation, and their applications for distributed parameter systems. *Lecture Notes in Control and Information Sciences*, 11. Springer-Verlag, Berlin-New York, 1978. vi + 269 pp. ISBN 3-540-09142-4 (Vladimir Katkovnik) **80f:93100** 93E20 (60G35)
- (with Inoue, Koichi; Nakayama, Hirotsugu) Environmental pollution control and multiplier method. *Applied optimal control*, pp. 185–198, *Studies in the Management Sci.*, 9, North-Holland, Amsterdam, 1978. (W. S. C. Gurney) **80c:49029** 49D37 (93C99)
- (with Tanino, Tetsuzoh) Stability of the solution set in problems of finding cone

- extreme points. (Japanese. English summary) *Systems and Control* **22** (1978), no. 11, 693-700. (From the summary) **80a:49049** 49B99
- (with Miyamoto, Sadaaki) State estimation formula for a parabolic system with unknown input function. *J. Math. Anal. Appl.* **68** (1979), no. 2, 431-440. (Authors' summary) **80c:93117** 93E10
- (with Tanino, Tetsuzoh) Duality theory in multiobjective programming. *J. Optim. Theory Appl.* **27** (1979), no. 4, 509-529. (I. M. Stancu-Minasian) **80f:90130** 90C31
- (with Nakamori, Yoshiteru; Miyamoto, Sadaaki; Ikeda, Saburo) Sensitivity approach to measurement optimization in distributed parameter systems. (Japanese. English summary) *Systems and Control* **23** (1979), no. 4, 247-255. (Authors' summary) **80c:93087** 93C99
- Sawashima, Ikuko** (with Niuro, Fumio) A reduction of a positive operator in an arbitrary Banach lattice to its irreducible components. *Natur. Sci. Rep. Ochanomizu Univ.* **30** (1979), no. 1, 11-16. (A. V. Buhvalov) **80i:47052** 47B55
- Sawashita, Norichika** The group of self-homotopy equivalences. (Japanese) *Sūgaku* **30** (1978), no. 3, 255-264. (M. Mimura) **80k:55025** 55P10
- Sawczuk, A.** (with Murakami, Sumio) On description of rate-independent behaviour for prestrained solids. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* **31** (1979), no. 2, 251-264. (J. Dunwoody) **80f:73001** 73B05
- Sawitzki, Günther** Exact filtering in exponential families: discrete time. *Stochastic control theory and stochastic differential systems* (Proc. Workshop, Deutsch. Forschungsgemeinschaft, Univ. Bonn, Bad Honnef, 1979), pp. 554-558, *Lecture Notes in Control and Information Sci.* **16**, Springer, Berlin, 1979. (Author's summary) **80g:93081** 93E11
- Saworotnow, Parfeny P.**  $H^*$ -algebra valued measure on a locally compact space. *Bull. Calcutta Math. Soc.* **68** (1976), no. 3, 155-156. (N. Dinculeanu) **80f:46057** 46J99 (28B05)
- Sawyer, Stanley** Isotropic random walks in a tree. *Z. Wahrsch. Verw. Gebiete* **42** (1978), no. 4, 279-292. (Pierre Crépel) **80a:60092** 60J15 (60J50, 92A10)
- A limit theorem for patch sizes in a selectively-neutral migration model. *J. Appl. Probab.* **16** (1979), no. 3, 482-495. (Author's summary) **80j:92012** 92A15
- Sawyers, K. N.** (with Rivlin, R. S.) A note on the Hadamard criterion for an incompressible isotropic elastic material. *Mech. Res. Comm.* **5** (1978), no. 4, 211-214. (G. Eason) **80b:73023** 73D99 (73G05)
- Saxena, Asha Rani** (with Gopalan, M. N.) Probabilistic analysis of a system with dependent units having a single repair facility subject to preventive maintenance. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* **9** (1978), no. 3, 441-449. (Authors' summary) **80a:90074** 90B25
- Saxena, Ashok K.** Complex multivariate statistical analysis: an annotated bibliography. (French summary) *Internat. Statist. Rev.* **46** (1978), no. 2, 209-214. (From the summary) **80c:62067** 62H10
- (with Prasad, Rajendra) On the Nörlund summability of Fourier-Jacobi series. *Indian J. Pure Appl. Math.* **10** (1979), no. 10, 1303-1311. (G. U. Brauer) **80k:42014** 42A24 (42A20, 42C10)
- Saxena, P. C.** (with Aggarwal, S. P.) A class of fractional functional programming problems. *New Zealand Oper. Res.* **7** (1979), no. 1, 79-90. (I. M. Stancu-Minasian) **80b:90126** 90C32
- (with Patkar, Vivek; Parkash, Om) Linear piecewise linear programs with variable coefficients. *Pure Appl. Math. Sci.* **10** (1979), no. 1-2, 51-56. (Authors' summary) **80a:90065** 90C05
- Saxena, R. B.** (with Srivastava, K. B.) On interpolation operators. I. A proof of Jackson's theorem for differentiable functions. *Anal. Numér. Théor. Approx.* **7** (1978), no. 2, 211-223. (R. K. Beaton) **80f:41003** 41A05
- Saxena, R. K.** See **Saxena, Rajendra K.**
- Saxena, R. K.** See **Saxena, Ram Kishore**
- Saxena, R. K.** (with Jain, Daulat R.) On the space of entire functions of finite growth over non-Archimedean fields. I, II. *Indian J. Pure Appl. Math.* **8** (1977), no. 12, 1480-1490, 1491-1496. (T. T. Raghunathan) **80j:32009** 32A15 (46E15, 46P05)
- Saxena, Rajendra K.** (with Mahajan, R. R.) On fractional integration and Meijer transform of two variables. *Islamabad J. Sci.* **4** (1977), no. 1-2, 47-49 (1978). (U. C. Jain) **80j:44003** 44A15
- (with Mahajan, R. R.) On summation of some double series of  $S$ -function. *Islamabad J. Sci.* **4** (1977), no. 1-2, 58-61 (1978). (B. L. Sharma) **80j:33004** 33A35
- (with Mahajan, R. R.) Some finite integrals and Fourier sine series for a generalized function of two variables. II. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **21** (1978), no. 2, 123-132. (Authors' summary) **80c:33003** 33A30
- (with Moharir, S. K.) A new generalization of Tricomi's theorem. *Indian J. Pure Appl. Math.* **10** (1979), no. 7, 878-885. (J. P. Singhal) **80k:44007** 44A45 (44A10, 44A20)
- (with Koranne, V. D.) Some double integral transformation of the  $H$ -function. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **22** (1979), no. 4, 345-350. (S. D. Bajpai) **80m:44011** 44A20 (33A35)
- Saxena, Ram Kishore** (with Mathai, A. M.) ★The  $H$ -function with applications in statistics and other disciplines. *Halsted Press [John Wiley & Sons], New York-London-Sidney*, 1978. xii + 192 pp. ISBN 0-470-26380-6 (R. G. Buschman) **80a:33007** 33A35 (62E10, 62H05)
- (with Dash, S. P.) The distribution of the linear combination and of the ratio of products of independent random variables associated with an  $H$ -function. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **22** (1979), no. 1, 57-65. (Authors' summary) **80f:62022** 62E15 (33A35)
- Saxena, V. P.** Some theorems on special integral equations. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **21** (1978), no. 1, 71-74. (C. M. Joshi) **80c:45011** 45H05
- Saxl, Jan** (with Cameron, Peter J.; Neumann, Peter M.) An interchange property in finite permutation groups. *Bull. London Math. Soc.* **11** (1979), no. 2, 161-169. (Peter Rowlinson) **80g:20005** 20B10
- (with Neumann, Peter M.) The primitive permutation groups of some special degrees. II. Small multiples of certain large primes. *Math. Z.* **169** (1979), no. 3, 205-222. (W. M. Kantor) **80m:20002** 20B20
- Sayama, Hayatoshi** (with Kameyama, Yoshimasa) A comparison of convergence characteristics between the multiplier method of Rockafellar and that of Sayama et al. for nonlinear programming problem. (Japanese. English summary) *Systems and Control* **23** (1979), no. 5, 269-276. (Authors' summary) **80f:90121** 90C30
- Sayari, Abdelhamid** (with Billiet, Yves; Zarrouk, Hédi) Complete list of subgroups and changes of standard setting of two-dimensional space groups. *Acta Cryst. Sect. A* **34** (1978), no. 4, 553-555. (Authors' summary) **80c:20069** 20H15
- (with Billiet, Yves; Zarrouk, Hédi) L'association des familles de Wyckoff dans les changements de repère conventionnel des groupes spatiaux et les passages aux sous-groupes spatiaux. (English summary) *Acta Cryst. Sect. A* **34** (1978), no. 5, 811-819. (Authors' summary) **80b:20062** 20H15
- el-Sayed, Abu-Bakr** See **El-Sayed, Abu-Bakr**
- Sayed, W. A.** (with Mukku, C.) Torsion without torsion. *Phys. Lett. B* **82** (1979), no. 34, 382-386. (Authors' summary) **80f:81071** 81E10
- Sayegh, N. N.** (with Gauvin, W. H.) Numerical analysis of variable property heat transfer to a single sphere in high temperature surroundings. *AIChE J.* **25** (1979), no. 3, 522-534. (From the summary) **80d:80013** 80A20
- Sayfy, A.** (with Cooper, G. J.) Semiplicit  $A$ -stable Runge-Kutta methods. *Math. Comp.* **33** (1979), no. 146, 541-556. (René Alt) **80d:65090** 65L05
- Sayward, Charles** (with Hugly, Philip) A semantical account of the vicious circle principle. *Notre Dame J. Formal Logic* **20** (1979), no. 3, 595-598. (Ayda I. Arruda) **80f:03018** 03B20 (03A05)
- Sazdjan, H.** Position variables in classical relativistic Hamiltonian mechanics. *Nuclear Phys. B* **161** (1979), no. 2-3, 469-492. (N. D. Sengupta) **80k:81232** 81M05
- Saženkov, A. N.** Boundedness of vector-valued outer measures. (Russian) *Mat. Zametki* **25** (1979), no. 6, 913-917, 958. (Ivan Dobrakov) **80i:28026** 28B10 (46G10)
- Sažin, A. L.** (with Antonov, V. A.; Sokolov, L. L.; Holševnikov, K. V.) On the instability of Hamiltonian systems. *Astronom. Zh.* **55** (1978), no. 4, 906-908. (Russian); translated as *Soviet Astronom.* **22** (1978), no. 4, 516-517. (J. S. Joel) **80d:58022** 58F05 (34D30)
- Analytic sets of periodic solutions of quasi-Liouville systems. A one-parameter case. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* **1978**, *suppl.* 1, 136-141, 158. (R. S. Levin) **80j:34040** 34C25
- Sazonov, L. I.** (with Pilidi, V. S.) Bisingular integral operators in spaces of Hölder functions. (Russian) *Dokl. Akad. Nauk SSSR* **246** (1979), no. 2, 278-282. (T. A. Ebanoidze) **80h:47056** 47G05 (45E05)
- Sazonov, V. V.** (with Saryčev, V. A.; Mel'nik, N. V.) Spatial periodic oscillations of a satellite relative to the center of mass. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 118* (1978), 53 pp. (Authors' summary) **80d:70050** 70M05 (65L05)
- (with Mirancev, V. G.) On the central limit theorem in  $\mathbb{R}^k$ . (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **23** (1978), no. 2, 425-429. (M. U. Gafurov) **80c:60041** 60F05
- Sbordone, Carlo** (with Marcellini, Paolo) Homogenization of nonuniformly elliptic operators. *Applicable Anal.* **8** (1978/79), no. 2, 101-113. (E. M. Saak) **80f:35042** 35J15
- Sburian, Silvii** (with Pascali, Dan) ★Nonlinear mappings of monotone type. *Edinur Academičesk. Bucharest: Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn*, 1978. x + 341 pp. ISBN 90-286-0118-X (J. Kolomý) **80g:47056** 47Hxx
- (with Pascali, Dan) Odd nonlinear operators. (Romanian. English summary) *Stud. Cerc. Mat.* **30** (1978), no. 4, 413-424. (A. B. Németh) **80a:47101** 47H15
- Scalia, Antonio** (with Carletta, Michele) Thermoelasticity of hereditary materials. (Italian. English summary) *Boll. Un. Mat. Ital. B* **5** (1978), no. 2, 592-605. (Authors' summary) **80a:73008** 73B30 (35Q99)
- Scalia, M.** (with Caprino, Silvia; Negri, P.) Asymptotic and total stability for generalized dynamical systems. *Applicable Anal.* **7** (1977/78), no. 4, 279-287. (Aubrey B. Poore) **80d:34054** 34C35 (34D05, 54H20)
- Scanlan, Sean O.** (with Baher, Hussein) Synthesis of a two-variable cascade of lumped two-ports and commensurate stubs. 1978 *IEEE International Symposium on Circuits and Systems* (New York, 1978), pp. 942-945, *IEEE, New York*, 1978. (Authors' summary) **80b:94054** 94C30
- (with Baher, Hussein) Driving-point synthesis of a resistor-terminated cascade composed of lumped lossless two-ports and commensurate stubs. *IEEE Trans. Circuits and Systems* **26** (1979), no. 11, 947-955. (Authors' summary) **80j:94034** 94C05
- Scaron-Scanlon, Jane** See **Cronin-Scanlon, Jane**
- Scaravelli, Corrado** (with Teppati, Giancarlo) On probability Souslin measures. (Italian summary) *Rend. Istit. Mat. Univ. Trieste* **9** (1977), no. 1-2, 64-69 (1978). (Authors' summary) **80c:28007** 28A12
- Solutions of prederivative equations and linear homogeneous differential equations with constant coefficients. *Riv. Mat. Univ. Parma* **4** (1978), 433-441 (1979). (I. Fenyő) **80j:39005** 39A10 (34A30)
- Scarabata, G.** (with Gaev, G. P.) Die Erzeugung von Walshfunktionen unter Ausnutzung ihres Zusammenhangs mit dem Graycode. *Wiss. Z. Tech. Hochsch. Ilmenau* **25** (1979), no. 4, 85-96. (From the text) **80h:94006** 94A11
- Scarowsky, Manny** (with Boyarsky, Abraham) On a class of transformations which have unique absolutely continuous invariant measures. *Trans. Amer. Math. Soc.* **255** (1979), 243-262. (Manfred Denker) **80i:28033** 28D05 (60F05)
- (with Boyarsky, Abraham; Propp, Harold) Some properties of piecewise linear expanding maps. *Nonlinear Anal.* **4** (1980), no. 1, 109-121. (T. Y. Li) **80m:20006** 26A18
- Scarpellini, Bruno** Predicting the future of functions on flows. *Math. Systems Theory* **12** (1978/79), no. 3, 281-296. (J. B. Robertson) **80d:60053** 60G25 (54H20)
- Entropy and nonlinear prediction. *Z. Wahrsch. Verw. Gebiete* **50** (1979), no. 2, 165-178. (M. M. Rao) **80k:60050** 60G25 (28D10)
- Scarpini, Francesco** Monotone algorithms for the resolution of variational inequalities relative to nonlinear operators. (Italian) *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis* (Rome, 1978), pp. 557-579, *Pitagora, Bologna*, 1979. (Kurt Georg) **80f:90137** 90C33 (49A29, 65K10, 65N30)
- Scarselli, Alessandro** On a class of inseparable finite groups. *J. Algebra* **58** (1979), no. 1, 94-99. (Hartmut Laue) **80h:20033** 20D10
- Scarsi, Giulio** (with Boccotti, Paolo) The statistical properties of waves generated by wind. (Italian. English and French summaries) *Atti Accad. Ligure Sci. Lett.* **35** (1979), 159-185 (1979). (Authors' summary) **80g:86001** 86A05 (76B15)
- Ščedrin, B. M.** (with Andruševskii, N. M.; Židkov, N. P.) Optimal approximation of



- functions by a finite number of their Fourier coefficients. (Russian) *Z. Vyčisl. Mat. i Mat. Fiz.* **18** (1978), no. 6, 1595-1599, 1631. (Gheorghe Coman) **80f:42002** 42A10 (65D15)
- Ščernik, A. I. Contour-solid theorems for holomorphic functions in  $C^n$ . (Russian) *Ukrain. Mat. Ž.* **31** (1979), no. 1, 107-109, 112. (A. I. Heifich) **80f:32804** 32A10
- Ščoturova, L. A. (with Cabdarov, Š. M.) Construction and application of cubature formulas in poly-Gaussian models of random events. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 51 (1978), 151-156, 231. (Authors' summary) **80f:65024** 65D32
- Ščennikov, V. N. Uniform asymptotic stability of a differential system with respect to the first nonlinear approximation of order  $\mu$ . (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 9, 1601-1605, 1723. (A. Corduneanu) **80a:34067** 34D10
- Ščepeter, V. A. The area theorem for a class of quasiconformal mappings. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 8* (1979), 618-621, 687. (J. Ławrynowicz) **80m:30020** 30C60
- Ščepin, E. V. Sur les applications continues des cubes de Tihonov. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 4, A257-A260. (Author's summary) **80b:54007** 54B10 (54C05)
- Tihonov manifolds. (Russian) *Dokl. Akad. Nauk SSSR* **246** (1979), no. 3, 551-554. (R. Engelking) **80k:57027** 57N20 (54F40)
- Ščerbak, L. N. (with Loginov, A. N.) Prediction of a linear nonstationary random process by the method of integral representations. (Russian) *Otbor i Predača Informacii* No. 53 (1978), 3-9, 129. (Authors' summary) **80a:60052** 60G25
- Ščerbakov, B. A. See **Studies in functional analysis and differential equations**, **80d:00020**
- Ščerbakova, R. I. Evolution representations of the algebra  $L_p(R^n)$ . (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 1, 175-180, 207. (P. P. Zabreiko) **80b:47056** 47D05
- Ščerbina, E. S. On the general theory of the vibroprotection of dynamical systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 6* (1979), 429-433, 493. (V. V. Obuhovskii) **80k:34070** 34C40 (58F30)
- Ščerbina, U. V. (with Nikolov, D. A.) Prediction of random processes using a harmonic series expansion and the Kalman filter taking into account correlation between noise and the model. *Automatika* **1978**, no. 5, 85-87, 94 (Russian); translated as *Societ Automat. Control* **11** (1978), no. 5, 70-71. (Agostino Villa) **80g:93076** 93E10
- Schaar, Günter. On 3-Hamiltonian cubes of connected graphs. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 959-971, Coll. Math. Soc. János Bolyai, 18, North-Holland, Amsterdam, 1978. (Linda Lesniak-Foster) **80c:05096** 05C45
- (with Heinrich, Peter) Über zusammenhängende Graphen mit  $p$ -hamiltonscher  $(p+1)$ -ter Potenz ( $p \geq 4$ ). *Math. Nachr.* **90** (1979), 225-238. (H. Sachs) **80k:05076** 05C45
- Schaback, Robert (with Robitzsch, H.) Die numerische Berechnung von Startnäherungen bei der Exponentialapproximation. (English summary) *Numerische Methoden der Approximationstheorie, Band 4 (Meeting, Math. Forschungsinst., Oberwolfach, 1977)*, pp. 260-280, Internat. Schriftenreihe Numer. Math., 42, Birkhäuser, Basel, 1978. (Authors' summary) **80c:65041** 65D15
- On alternation numbers in nonlinear Chebyshev approximation. *J. Approx. Theory* **23** (1978), no. 4, 379-391. (D. E. Wulbert) **80k:41025** 41A50
- (with Werner, Helmut) ★Praktische Mathematik. II. Methoden der Analysis. Based on lectures at the Universities of Münster and Göttingen. Edited by J. Ebert. Second, revised and enlarged edition. Hochschultext. Springer-Verlag, Berlin-New York, 1979. viii + 388 pp. ISBN 3-540-09193-9 (Editors) **80a:65008** 65-01
- Schack, S. An alternative to the Friedman test with certain optimality properties. *Ann. Statist.* **7** (1979), no. 3, 537-550. (Z. Govindarajulu) **80g:62029** 62G10
- Schacher, Murray (with Fein, Burton) Ulm invariants of the Brauer group of a field. II. *Math. Z.* **163** (1978), no. 1, 1-3. (M. Orzech) **80a:12027** 12F20 (13A20)
- (with Fein, Burton; Sonn, Jack) Brauer groups of rational function fields. *Bull. Amer. Math. Soc. (N.S.)* **1** (1979), no. 5, 766-768. (Lindsay N. Childs) **80b:12019** 12F20 (12A80, 13A20)
- Schachter, Bruce Decomposition of polygons into convex sets. *IEEE Trans. Comput.* **27** (1978), no. 11, 1078-1082. (D. T. Lee) **80a:68108** 68G10 (52A25)
- Ščugur-Schächter, Miroslav See Mugur-Schächter, Miroslav
- Schade, L. (with Hoffmann, A.) Bericht über die Arbeitstagung "Mathematische Optimierung". Abstracts. Held in Heiligenstadt, March 29-April 2, 1977. *Wiss. Z. Tech. Hochsch. Ilmenau* **25** (1979), no. 1, 39-63. (From the text) **80c:90001** 90-06 (65Kxx, 90Cxx)
- Schade, Wolfgang Indexmengen rekursiver reeller Zahlen. *Z. Math. Logik Grundlag. Math.* **25** (1979), no. 2, 103-110. (S. A. Berezin) **80d:03041** 03D25
- Schader, Martin Branch & bound clustering with the generalized scatter criterion. *Operations Research Verfahren*, 30, pp. 154-162, Hain, Meisenheim, 1979. (From the text) **80b:90164** 90C50 (68G10)
- Schaefer, Barbara Kirsch ★Using the mathematical literature. A practical guide. Books in Library and Information Science, 25. Marcel Dekker, Inc., New York-Basel, 1979. ix + 141 pp. ISBN 0-8247-6675-X (R. G. Bartle) **80c:00026** 00A20
- Schaefer, Daniel J. (with Leon, Benjamin J.) Volterra series and Picard iteration for nonlinear circuits and systems. Special issue on the mathematical foundations of system theory. *IEEE Trans. Circuits and Systems* **25** (1978), no. 9, 789-793. (Authors' summary) **80a:94059** 94C10
- Schaefer, Helmut H. (with Wolff, Manfred; Arendt, Wolfgang) On lattice isomorphisms with positive real spectrum and groups of positive operators. *Math. Z.* **164** (1978), no. 2, 115-123. (A. V. Buhvalov) **80b:47048** 47B55 (47D10)
- Schaefer, Mark E. (with Balachandran, K. R.) Regulation by price of arrivals to a congested facility. *Cahiers Centre Études Rech. Opér.* **21** (1979), no. 2, 149-154. (Authors' summary) **80f:90063** 90B22
- Schaefer, Philip W. Uniqueness in some higher order elliptic boundary value problems. (German summary) *Z. Angew. Math. Phys.* **29** (1978), no. 4, 693-697. (O. John) **80a:35039** 35J40
- (with Walter, Wolfgang) On pointwise estimates for metaharmonic functions. *J. Math. Anal. Appl.* **69** (1979), no. 1, 171-179. (G. Albinus) **80f:35050** 35J40 (31B30)
- Schaefer, Thomas J. The complexity of satisfiability problems. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 216-226, ACM, New York, 1978. (M. I. Dehtjar) **80d:68058** 68C25 (03B05, 03D15, 05C15, 68E10)
- On the complexity of some two-person perfect-information games. *J. Comput. System Sci.* **16** (1978), no. 2, 185-225. (R. E. Stearns) **80a:90131** 90D05 (68C25)
- Schaeffer, D. J. (with Janardan, K. G.) Another characterization of the Weibull distribution. (French summary) *Canad. J. Statist.* **6** (1978), no. 1, 77-78. (J. S. Huang) **80j:62013** 62E10
- Schaeffer, David G. An application of the Nash-Moser theorem to a free boundary problem. *Nonlinear partial differential equations and applications (Proc. Special Sem., Indiana Univ., Bloomington, Ind., 1976-1977)*, pp. 129-143, *Lecture Notes in Math.*, 648, Springer, Berlin, 1978. (Ronald DiPerna) **80c:35067** 35L65 (58C15)
- (with Golubitsky, Martin) Imperfect bifurcation in the presence of symmetry. *Comm. Math. Phys.* **67** (1979), no. 3, 205-232. (D. H. Sattinger) **80j:58017** 58C40 (26E10, 58C27, 58E07, 58F99)
- (with Golubitsky, Martin) A theory for imperfect bifurcation via singularity theory. *Comm. Pure Appl. Math.* **32** (1979), no. 1, 21-98. (J. E. Marsden) **80j:58061** 58F99 (35B32, 47H15, 58C27, 58E07)
- Schaeffer, Helmut Eine Winkelmetrik zur Begründung euklidisch-metrischer Ebenen. (English summary) *J. Geom.* **12** (1979), no. 2, 152-167. (W. Benz) **80b:51006** 51F99 (51A25)
- Schäfer, Eugen Fehlerabschätzungen für Eigenwertnäherungen nach der Ersatzkernmethode bei Integralgleichungen. (English summary) *Numer. Math.* **32** (1979), no. 3, 281-290. (Ulrich Kosel) **80c:65129** 65R20
- Schäfer, G. (with Dehnen, H.) Pair creation in cosmology when electromagnetic fields are present. *J. Phys. A* **13** (1980), no. 2, 517-528. (Authors' summary) **80a:83055** 83F05
- Schäfer, Lothar (with Houghton, A.) High-order behaviour of zero-component field theories without the  $n \rightarrow 0$  limit. *J. Phys. A* **12** (1979), no. 8, 1309-1319. (R. Kotecký) **80g:82030** 82A40 (82A50)
- See also Dahem, Pierre. **80m:01045**
- Schäffer, Juan Jorge (with Noll, Walter) Order-isomorphisms in affine spaces. *Ann. Mat. Pura Appl.* (4) **117** (1978), 243-262. (W. Benz) **80j:51015** 51G05 (51B20, 83A05)
- (with Noll, Walter) Corrigenda to the paper: "Orders, gauge, and distance in faceless linear cones: with examples relevant to continuum mechanics and relativity" (*Arch. Rational Mech. Anal.* **66** (1977), no. 4, 345-377). *Arch. Rational Mech. Anal.* **68** (1978), no. 4, 383-384. (Editors) **80b:06020** 06F20 (73B05, 83C10)
- A characterization of quadric cones. *J. Math. Anal. Appl.* **71** (1979), no. 1, 303-312. (S. Gudder) **80b:46006** 46A40
- (with van Dulst, D.) Two examples of flat spots in nonflat Banach spaces. *Nieuw Arch. Wisk.* (3) **27** (1979), no. 2, 187-196. (R. C. James) **80b:46020** 46B20
- Schaffer, William M. (with Rosenzweig, Michael L.) Homage to the Red Queen. I. Coevolution of predators and their victims. *Theoret. Population Biol.* **14** (1978), no. 1, 135-157. (Nishan Krikorian) **80f:92021a** 92A15
- (with Rosenzweig, Michael L.) Homage to the Red Queen. II. Coevolutionary response to enrichment of exploitation ecosystems. *Theoret. Population Biol.* **14** (1978), no. 1, 158-163. (Nishan Krikorian) **80f:92021b** 92A15
- Schaffter, Thomas (with Briggs, James M.) Measure and cardinality. *Amer. Math. Monthly* **86** (1979), no. 10, 852-855. (From the text) **80j:93075** 03E35 (28A05)
- Schafmeister, Otto (with Wiebe, Hartmut) ★Grundzüge der Algebra. Mathematik für das Lehramt an Gymnasien. B. G. Teubner, Stuttgart, 1978. 247 pp. ISBN 3-519-02754-2 (B. Artmann) **80j:00004** 00A05
- van Schagen, F. (with Gohberg, Israel; Kaashoek, M. A.) Common multiples of operator polynomials with analytic coefficients. *Manuscripta Math.* **25** (1978), no. 3, 279-314. (P. A. Kučment) **80d:47023** 47A68 (47A55)
- Schagen, I. P. Interpolation in two dimensions—a new technique. *J. Inst. Math. Appl.* **23** (1979), no. 1, 53-59. (Author's summary) **80c:65028** 65D05
- Schäuble, Siegfried ★Analyse und Anwendungen von Quotientenprogrammen. Ein Beitrag zur Planung mit Hilfe der nichtlinearen Programmierung. Mathematical Systems in Economics, 42. Verlag Anton Hain, Königstein, 1978. vii + 259 pp. ISBN 3-445-01880-4 (Uwe Zimmermann) **80b:90136** 90C32
- Schäl, Manfred An operator-theoretical treatment of negative dynamic programming. *Dynamic programming and its applications (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 351-368, Academic Press, New York, 1978. (Wayne Winston) **80g:90111** 90C39
- On the  $M/G/1$ -queue with controlled service rate. *Optimization and operations research (Proc. Workshop, Univ. Bonn, Bonn, 1977)*, pp. 233-239, *Lecture Notes in Econ. and Math. Systems*, 157, Springer, Berlin, 1978. (Richard F. Serfozo) **80a:60123** 60K25 (90C40)
- Schalkwijk, J. Pieter M. (with Vinck, A. J.; Post, Karel A.) Syndrome decoding of binary rate  $k/n$  convolutional codes. *IEEE Trans. Inform. Theory* **24** (1978), no. 5, 553-562. (Sat Narain Gupta) **80c:94017** 94B10
- Schapery, R. A. (with Walton, J. R.; Nachman, A.) The sliding of a rigid indenter over a power-law viscoelastic half-space. *Quart. J. Mech. Appl. Math.* **31** (1978), no. 3, 295-321. (Steen Krenk) **80a:73037** 73F15 (45E05)
- Schapira, Pierre (with Kashiwara, Masaki) Problème de Cauchy pour les systèmes d'équations différentielles et microdifférentielles dans le domaine complexe. *Équations aux dérivées partielles (Proc. Conf., Saint-Jean-de-Monts, 1977)*, pp. 117-127, *Lecture Notes in Math.*, 660, Springer, Berlin, 1978. (A. Hirschowitz) **80b:58044** 58G07 (35R99, 47F05)
- (with Kashiwara, Masaki) Problème de Cauchy pour les systèmes microdifférentiels dans le domaine complexe. *Invent. Math.* **46** (1978), no. 1, 17-38. (R. D. Moyer) **80a:58031** 58G15 (35N10)
- (with Kashiwara, Masaki) Micro-hyperbolic systems. *Acta Math.* **142** (1979), no. 1-2, 1-55. (R. D. Moyer) **80b:58060** 58G17 (35L99)
- Conditions de positivité dans une variété symplectique complexe. Applications à l'étude des microfonctions. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 16, A783-A785. (Author's summary) **80a:32025** 32F99 (35S05, 58G07)
- Schaposnik, F. A. (with Solomin, J. E.) Gauge field singularities and noninteger topological charge. *J. Math. Phys.* **20** (1979), no. 10, 2110-2114. (Authors' summary) **80b:81059** 81E15 (57R20)
- Schappacher, Wilhelm (with Kappel, F.) Autonomous nonlinear functional differential equations and averaging approximations. *Nonlinear Anal.* **2** (1978), no. 4, 391-422. (M. I. Kamenskii) **80g:34078** 34K15

- (with Kunisch, Karl) Positive solutions of functional differential equations. *Functional differential equations and approximation of fixed points (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978)*, pp. 238-246. *Lecture Notes in Math.*, 730, Springer, Berlin, 1979. (Seppo Heikkilä) **80m:34070** 34K15
- (with Kunisch, Karl) Order-preserving evolution operators of functional differential equations. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **16** (1979), no. 2, 480-500. (Seppo Heikkilä) **80m:47052** 47H07 (34K15, 47H20)
- (with Kappel, F.) Nonlinear functional differential equations and abstract integral equations. *Proc. Roy. Soc. Edinburgh Sect. A* **84** (1979), no. 1-2, 71-91. (S. Schwabik) **80m:34067** 34K05 (45J05)
- Scharf, G. (with Nenciu, G.) On regular external fields in quantum electrodynamics. *Helv. Phys. Acta* **51** (1978), no. 3, 412-424. (K. Drühl) **80d:81139** 81L05
- (with Fierz, H.) Particle interpretation for external field problems in QED. *Helv. Phys. Acta* **52** (1979), no. 4, 437-453 (1980). (Authors' summary) **80m:81127** 81L05
- Scharlau, Rudolf (with Grunewald, Fritz J.) A note on finitely generated torsion-free nilpotent groups of class 2. *J. Algebra* **58** (1979), no. 1, 162-175. (U. Stambach) **80a:20051** 20F18
- Scharle, P. An example for constructing the variational (energetic) error principle. (German and Russian summaries) *Acta Tech. Acad. Sci. Hungar.* **86** (1978), no. 3-4, 395-400. (Author's summary) **80d:73013** 73C99 (49H05)
- Scharlemann, Martin Smooth CE maps and smooth homeomorphisms. *Algebraic and geometric topology (Proc. Sympos., Univ. California, Santa Barbara, Calif., 1977)*, pp. 234-240. *Lecture Notes in Math.*, 664, Springer, Berlin, 1978. (Leonard R. Rubin) **80b:57016** 57R12 (57Q55)
- (with Kirby, Robion C.) Eight faces of the Poincaré homology 3-sphere. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 113-146. *Academic Press, New York*, 1979. (Anatoly Libgober) **80b:57042** 57Q45 (14B05, 32B30)
- Approximating CAT CE maps by CAT homeomorphisms. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 475-501. *Academic Press, New York*, 1979. (L. Guillou) **80g:57027** 57Q55
- Subgroups of  $SL(2, \mathbb{R})$  freely generated by three parabolic elements. *Linear and Multilinear Algebra* **7** (1979), no. 3, 177-191. (W. W. Stothers) **80b:10020** 10D07 (20H10)
- Transverse Whitehead triangulations. *Pacific J. Math.* **80** (1979), no. 1, 245-251. (L. Guillou) **80a:57047** 57R05
- Schamberger, R. Insensitivity of steady-state distributions of generalized semi-Markov processes with speeds. *Adv. in Appl. Probab.* **10** (1978), no. 4, 836-851. (Ralph L. Disney) **80b:60119** 60K15
- The insensitivity of stationary probabilities in networks of queues. *Adv. in Appl. Probab.* **10** (1978), no. 4, 906-912. (F. P. Kelly) **80g:60100a** 60K25
- A definition of discrete product form distributions. (German summary) *Z. Oper. Res. Ser. A-B* **23** (1979), no. 5, 189-195. (Author's summary) **80g:60095** 60K20 (68C15, 90B22)
- Correction: "The insensitivity of stationary probabilities in networks of queues" [*Adv. in Appl. Probab.* **10** (1978), no. 4, 906-912; MR **80g:60100**]. *Adv. in Appl. Probab.* **12** (1980), no. 2, 541. (Editors) **80g:60100b** 60K25
- Schatzner, Ruprecht The center of mass in general relativity. *Gen. Relativity Gravitation* **10** (1979), no. 5, 377-393. (Virgil Obădeanu) **80j:83023** 83C99 (53C20, 57R20)
- The uniqueness of the center of mass in general relativity. *Gen. Relativity Gravitation* **10** (1979), no. 5, 395-399. (Virgil Obădeanu) **80j:83039** 83C99 (58F14)
- (with Köhler, Egon) Some results on pseudorigid motions. *Gen. Relativity Gravitation* **10** (1979), no. 8, 709-716. (A. F. de F. Teixeira) **80j:83008** 83C10
- Schatzman, Michelle A class of nonlinear differential equations of second order in time. *Nonlinear Anal.* **2** (1978), no. 3, 355-373. (Ju. V. Trubnikov) **80a:34013** 34A60
- Schäuble, Manfred Anmerkungen zu einem Lemma von Hoang Tuy. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* **9** (1978), no. 3, 349-355. (Gerd H. Fricke) **80f:90107** 90C25
- Schay, Géza Optimal joint distributions of several random variables with given marginals. *Stud. Appl. Math.* **61** (1979), no. 2, 179-183. (Giorgio Dall'Aglio) **80b:6005a** 60B05 (60E05)
- Erratum: "Optimal joint distributions of several random variables with given marginals" [*Stud. Appl. Math.* **61** (1979), no. 2, 179-183]. *Stud. Appl. Math.* **62** (1980), no. 1, 93. (Editors) **80b:6005b** 60B05
- Scheaffer, R. L. (with Jakeman, A. J.) On the properties of product integration estimators for linear functionals of particle size distributions. *Utilitas Math.* **14** (1978), 117-128. (Shigeru Mase) **80b:62110** 62M99 (60D05)
- Schechter, Martin Scattering theory for the Schrödinger operator with potentials not of short range. (Russian summary) *Complex analysis and its applications (Russian)*, pp. 601-607, 672. "Nauka", Moscow, 1978. (M. M. Skraganov) **80c:35078** 35P25 (47A40)
- Another look at scattering theory. *Internat. J. Theoret. Phys.* **17** (1978), no. 1, 33-41. (M. M. Skraganov) **80c:47012** 47A40
- Completeness of wave operators in two Hilbert spaces. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **30** (1979), no. 2, 109-127. (P. A. Mišnaevskii) **80c:47012** 47A40
- The invariance principle. *Comment. Math. Helv.* **54** (1979), no. 1, 111-125. (M. M. Skraganov) **80c:47013** 47A40 (35P25)
- Scattering in two Hilbert spaces. *J. London Math. Soc. (2)* **19** (1979), no. 1, 175-186. (M. Demuth) **80c:47012** 47A40 (35P25)
- eroda-Schechter, Micheline See Eroda-Schechter, Micheline
- Schechter, Murray (with Mond, B.) A duality theorem for a homogeneous fractional programming problem. *J. Optim. Theory Appl.* **25** (1978), no. 3, 349-359. (Authors' summary) **80b:90127** 90C32
- More on subgradient duality. *J. Math. Anal. Appl.* **71** (1979), no. 1, 251-262. (B. Mond) **80i:90079** 90C25 (90C30)
- Schechtman, G. (with Maurey, Bernard) Some remarks on symmetric basic sequences in  $L_1$ . *Compositio Math.* **38** (1979), no. 1, 67-76. (P. Wojtaszczyk) **80c:46039** 46E30 (46B15)
- Schechter, Stephen Structure of the demand function and Pareto optimal set with natural boundary conditions. *J. Math. Econom.* **5** (1978), no. 1, 1-21. (Yves Balasko) **80b:90011** 90A10 (90A14)
- On the structure of the equilibrium manifold. *J. Math. Econom.* **6** (1979), no. 1, 1-5. (Yves Balasko) **80i:90035** 90A14 (58E17)
- Scheerer, K. (with Stumpf, Harald) Unitarization in nonlinear spinor field quantum theory. *Z. Naturforsch. A* **34** (1979), no. 3, 284-291. (K. J. Le Couteur) **80b:81065** 81E99
- Scheffé, Henry See Optimizing methods in statistics, **80d:62003** and Brillinger, David R. **80c:61024**
- Scheffler, Vladimir The Navier-Stokes equations in space dimension four. *Comm. Math. Phys.* **61** (1978), no. 1, 41-68. (P. A. Mišnaevskii) **80i:35148** 35Q10 (58D25)
- Scheffler, T. B. (with Malherbe, J. B.) Complex energy eigenvalues of a zero-range atom in a uniform electric field. *J. Phys. A* **12** (1979), no. 7, 1011-1023. (Authors' summary) **80d:81016** 81C05 (34B25)
- Scheffold, Egon (with Schlosser, Karl-Heinz) Splines-Funktionen mehrerer Veränderlicher. (English summary) *J. Approx. Theory* **23** (1978), no. 3, 242-260. (Manfred Sommer) **80i:41007** 41A05 (41A15)
- Fixräume regulärer Operatoren und ein Korovkin-Satz. (English summary) *J. Funct. Anal.* **30** (1978), no. 2, 147-161. (W. A. J. Luxemburg) **80c:47049** 47B55 (46B30)
- Über Konvergenz linearer Operatoren. *Mathematica (Cluj)* **20**(43) (1978), no. 2, 193-198. (R. J. Nagel) **80d:47064** 47B55 (47A55)
- Scheller, Ernest (with Breckner, Wolfgang W.) A Hahn-Banach type extension theorem for linear mappings into ordered modules. *Mathematica (Cluj)* **19**(42) (1977), no. 1, 13-27 (1978). (Mehmet Orhon) **80g:46008** 46A22 (06F25)
- Schellbächer, Hartmann Specifically objective stochastic latency mechanisms. *J. Math. Psych.* **19** (1979), no. 1, 18-38. (Author's summary) **80g:62117** 62P15 (92A25)
- Scheid, Werner (with Teubner, Eberhard; Terleicki, Georg; Grün, Norbert) Classical relativistic trajectory method and application to the K-shell ionisation in U-U collision. *J. Phys. B* **13** (1980), no. 3, 523-538. (Authors' summary) **80c:81182** 81G35 (81M05)
- Scheidt, W. (with Ziegler, F.) Interaction of a pulsed Rayleigh surface wave and a rigid cylindrical inclusion. *Modern problems in elastic wave propagation (Proc. IUTAM Sympos., Northwestern Univ., Evanston, Ill., 1977)*, pp. 145-169. Wiley, New York, 1978. (R. L. Richardson) **80f:73030** 73D15 (35C10, 86A15)
- vom Scheidt, Jürgen (with Purkert, Walter) Zum Mittelwertproblem bei stochastischen Eigenwertaufgaben. *Beiträge Anal.* **10** (1977), 47-61. (A. T. Bharucha-Reid) **80g:60064** 60H99 (60H10)
- (with Purkert, Walter) Randwertprobleme mit schwach korrelierten Prozessen als Koeffizienten. (English summary) *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1975)*, Vol. B, pp. 107-118. Reidel, Dordrecht, 1978. (Ludwig Arnold) **80f:60051** 60H10 (34F05)
- (with Purkert, Walter) Stochastic eigenvalue problems for differential equations. *Rep. Math. Phys.* **15** (1979), no. 2, 205-227. (A. T. Bharucha-Reid) **80m:60071** 60H10 (34F05)
- Schein, Boris M. Projection partitions of function semigroups. *C. R. Math. Rep. Acad. Sci. Canada* **1** (1978/79), no. 2, 67-70. (Fred W. Roush) **80c:20084** 20M20
- (with Bredihin, D. A.) Representations of ordered semigroups and lattices by binary relations. *Colloq. Math.* **39** (1978), no. 1, 1-12. (M. Yamada) **80c:20093** 20A30 (06F05)
- (with Roitz, E. N.) Radicals of semigroups. *Semigroup Forum* **16** (1978), no. 3, 299-344. (Editors) **80c:20089** 20M11
- Injective monars over inverse semigroups. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 519-544. *Colloq. Math. Soc. János Bolyai*, 24, North-Holland, Amsterdam, 1979. (J. K. Luedeman) **80c:20082** 20M50 (20M10)
- (with Trohimenko, Valentin S.) Algebras of multiplicative functions. *Semigroup Forum* **17** (1979), no. 1, 1-64. (Gilbert Crombez) **80c:08002** 08A05 (20N15)
- Scheinkman, J. A. (with Benveniste, L. M.) On the differentiability of the value function in dynamic models of economics. *Econometrica* **47** (1979), no. 3, 727-732. (P. Kisich) **80c:90026** 90A16
- Scheja, Günter (with Storch, Uwe) Fortsetzung von Derivationen. *J. Algebra* **54** (1978), no. 2, 353-365. (Ernst Kunz) **80a:13004** 13B10
- Schell, Hans-Joachim Asymptotische Darstellungen für Parameterintegrale mit zwei reellen Parametern. *II. Math. Nachr.* **88** (1979), 391-408. (L. Berg) **80j:41050** 41A60
- Schellekens, A. N. Subtraction scheme dependence of QCD predictions. *Leti. Nuovo Cimento* (2) **24** (1979), no. 15, 513-519. (From the text) **80c:81056** 81G05
- Schellenberg, P. J. (with Van Rees, G. H. J.; Vanstone, S. A.) Four pairwise orthogonal Latin squares of order 15. *Ars Combin.* **6** (1978), 141-150. (D. Soiteau) **80c:05019** 05B15
- Schelp, R. H. (with Faudree, R. J.) Connected Ramsey numbers for paths and star-combinatorics. (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. 1, pp. 307-313. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (David P. Sumner) **80c:05101** 05C55
- (with Burr, S. A.; Erdős, Paul; Faudree, R. J.) A class of Ramsey-finite graphs. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 171-180. *Congress. Numer.*, XXI, Utilitas Math., Winnipeg, Man., 1978. (C. C. Rousseau) **80m:05081** 05C55
- (with Faudree, R. J.) Various length paths in graphs. *Theory and applications of graphs (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976)*, pp. 160-173. *Lecture Notes in Math.*, 642, Springer, Berlin, 1978. (Arthur M. Hobbs) **80m:05071** 05C38 (05C45)
- (with Faudree, R. J.) Some problems in Ramsey theory. *Theory and applications of graphs (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976)*, pp. 500-515. *Lecture Notes in Math.*, 642, Springer, Berlin, 1978. (Stefan A. Burr) **80a:05146** 05C55
- (with Faudree, R. J.) Some connected Ramsey numbers. *J. Graph Theory* **3** (1978), no. 2, 119-128. (Torrence D. Parsons) **80a:05147** 05C55
- (with Erdős, Paul; Faudree, R. J.; Rousseau, C. C.) The size Ramsey number. *Period. Math. Hungar.* **9** (1978), no. 1-2 no. 2, 145-161. (F. Harary) **80b:05037** 05C55
- Scheller, W. (with Artin, M.) A version of Zariski's main theorem for polynomial identity rings. *Amer. J. Math.* **101** (1979), no. 2, 301-330. (P. Abellana) **80c:14003** 14E05 (16A38)



- Schupp, Walter (with Delves, F.-J.; Posdorf, H.) Serendipity-type bivariate interpolation. *Multivariate approximation (Sympos., Univ. Durham, Durham, 1977)*, pp. 47-56. Academic Press, London, 1978. (David R. Hill) **80b:65009** 65D05
- Approximation and Transformationsmethoden. (English summary) *Numerische Methoden der Approximationstheorie, Band 4 (Meeting, Math. Forschungsinst., Oberwolfach, 1977)*, pp. 299-305. Internat. Schriftenreihe Numer. Math., 42. Birkhäuser, Basel, 1978. (Author's summary) **80b:41001** 41-XX
- On the convergence of cardinal logarithmic splines. *J. Approx. Theory* **23** (1978), no. 2, 108-112. (Author's introduction) **80g:41015** 41A15
- See also Multivariate approximation theory, **80b:65006**
- Schenk, W. (with Langer, Heinz) A class of infinitesimal generators of one-dimensional Markov processes. II. Invariant measures. *J. Math. Soc. Japan* **32** (1980), no. 1, 1-18. (Francis Hirsch) **80b:47044** 47D07 (60J35)
- Schenkel, Antonio See Künnet, Hermann, **80b:53034**
- Schneuz, Peter (with Ngo Viet Trung; Nguyễn Tu' Cu'ong) Verallgemeinerte Cohen-Macaulay-Moduln. *Math. Nachr.* **85** (1978), 57-73. (W. Vogel) **80b:13008** 13H10 (14M05)
- Dualizing complexes and systems of parameters. *J. Algebra* **58** (1979), no. 2, 495-501. (R. M. Fossum) **80f:14025** 14M05 (13H10)
- Multiplizitäten in verallgemeinerten Cohen-Macaulay-Moduln. *Math. Nachr.* **88** (1979), 295-306. (W. Vogel) **80b:13003** 13H10 (14M05)
- Schep, A. R. (with Luxemburg, W. A. J.) A Radon-Nikodym type theorem for positive operators and a dual. *Nederl. Akad. Wetensch. Indag. Math.* **40** (1978), no. 3, 357-375. (S. Kutateladze) **80b:47058** 47B55
- Kernel operators. *Nederl. Akad. Wetensch. Indag. Math.* **41** (1979), no. 1, 39-53. (A. V. Buhvalov) **80b:47028** 47B38 (47G05)
- (with Luxemburg, W. A. J.) An extension theorem for Riesz homomorphisms. *Nederl. Akad. Wetensch. Indag. Math.* **41** (1979), no. 2, 145-154. (A. V. Buhvalov) **80b:47051** 47B55 (46A40)
- Schever, Rudolf A necessary condition for B-stability. *BIT* **19** (1979), no. 1, 111-115. (Sándor Frivaldsky) **80b:65079** 65L07
- Scherk, J. On the Gauss-Manin connection of an isolated hypersurface singularity. *Math. Ann.* **238** (1978), no. 1, 23-32. (Helmut Hamm) **80g:14017** 14D05 (34A20)
- (with Cremmer, E.; Julia, B.; Ferrara, S.; Girardello, L.; van Nieuwenhuizen, P.) Spontaneous symmetry breaking and Higgs effect in supergravity without cosmological constant. *Nuclear Phys. B* **147** (1979), no. 1-2, 105-131. (Authors' summary) **80b:83024** 83C45 (35Q99)
- (with Schwarz, John H.) How to get masses from extra dimensions. *Nuclear Phys. B* **153** (1979), no. 1-2, 61-88. (Authors' summary) **80b:81151** 81M05 (83E15)
- Scherrer, Willy See Hadwiger, H., **80j:01027**
- Schertz, Reinhold Teilkörper relativ abelscher Erweiterungen imaginär-quadratischer Zahlkörper, deren Klassenzahl durch Primteiler des Körpergrades teilbar ist. *J. Reine Angew. Math.* **302** (1978), 59-69. (K. Lakkis) **80b:12008** 12A65 (12A25)
- Über die analytische Klassenzahlformel für reelle abelsche Zahlkörper. *J. Reine Angew. Math.* **307/308** (1979), 424-430. (T. Lepistö) **80b:12014** 12A50
- (with Stender, Hans-Joachim) Eine Abschätzung der Klassenzahl gewisser reiner Zahlkörper sechsten Grades. *J. Reine Angew. Math.* **311/312** (1979), 347-355. (K. Lakkis) **80b:12011** 12A50 (12A45)
- Schertzer, D. (with Lesieur, M.) Amortissement autosimilaire d'une turbulence à grand nombre de Reynolds. (English summary) *J. Mécanique* **17** (1978), no. 4, 609-646. (V. Girault) **80b:76015** 76F05 (35Q99)
- Maggiolo-Schettini, Andrea See Maggiolo-Schettini, Andrea
- Scheuvert, Manfred ★The theory of Lie superalgebras. An introduction. Lecture Notes in Mathematics, 716. Springer-Verlag, Berlin-New York, 1979. x+271 pp. ISBN 3-540-09256-0 (Ernest Stitzinger) **80b:17005** 17A70
- Generalized Lie algebras. *J. Math. Phys.* **20** (1979), no. 4, 712-720. (Nicholas M. J. Woodhouse) **80f:17007** 17B70 (81G99)
- Scheurer, B. (with Saut, Jean-Claude) Remarks on a non-linear equation arising in population genetics. *Comm. Partial Differential Equations* **3** (1978), no. 10, 907-931. (J. Smoller) **80a:35012** 35B32 (92A15)
- Schwarz, Jürgen Bifurcation of a stationary solution of a dynamical system into n-dimensional tori of quasiperiodic solutions. *Functional differential equations and approximation of fixed points (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978)*, pp. 442-454. *Lecture Notes in Math.*, 730. Springer, Berlin, 1979. (Charles C. Conley) **80b:34061** 34C25 (58C15, 58F14)
- (with Kirchgässner, Klaus) On the bounded solutions of a semilinear elliptic equation in a strip. *J. Differential Equations* **32** (1979), no. 1, 119-148. (Philip W. Schaefer) **80b:35024** 35J60 (35B35)
- Schiaffino, A. On a diffusion Volterra equation. *Nonlinear Anal.* **3** (1979), no. 5, 595-600. (J. Smoller) **80b:35077** 35K55 (92A15)
- Schirvell, L. (with Sella, F.) Further consequences of Einstein locality. *Found. Phys.* **9** (1979), no. 5-6, 339-352. (Authors' summary) **80b:81092** 81M05
- Schick, M. (with Hilhorst, H. J.; van Leeuwen, J. M. J.) Exact renormalization group equations for the two-dimensional Ising model. *Phys. Rev. B* **3** (1979), no. 5, 2749-2763. (W.-H. Steeb) **80b:82030** 82A15
- (with Nienhuis, B.; Riedel, E. K.) Variational renormalization-group approach to the q-state Potts model in two dimensions. *J. Phys. A* **13** (1980), no. 2, L31-L34. (Authors' summary) **80b:82034** 82A25 (81E15)
- Schiffelbusch, Larry Transfer and weakly closed subgroups. *Comm. Algebra* **7** (1979), no. 4, 333-340. (H. Bechtell) **80b:20031** 20D20 (20E25)
- Schiemann, Günther Zum geometrischen Sinn einer negativen Selbstschnittzahl. Beiträge zur Algebra und Geometrie, 7. Wiss. Beitr. Martin-Luther-Universität Halle-Wittenberg **M 11** (1978), 21-23. (Konrad Drechsler) **80b:14002** 14C17
- Schiemann, Ingrid Eine Axiomatisierung des monadischen Prädikatenkalküls mit verallgemeinerten Quantoren. (Russian, English and French summaries) *Wiss. Z. Humboldt-Universität Berlin Math.-Natur. Reihe* **26** (1977), no. 5, 647-657. (Author's summary) **80b:03045** 03C80 (03B25)
- Schlie, William C. (with Bailey, T. K.) Complex energy eigenstates in quantum decay models. (Italian and Russian summaries) *Nuovo Cimento A* **11** (1978), no. 2, 231-250. (Authors' summary) **80b:81015** 81C05 (46N05)
- (with Walls, D. F.; Carmichael, H. J.; Gragg, R. F.) Detailed balance, Liapounov stability, and entropy in resonance fluorescence. *Phys. Rev. A* **3** (1978), no. 4, 1622-1627. (Authors' summary) **80b:82031** 82A30
- (with Bulara, Adi R.) Entropy and stability in a stochastic laser model. *Z. Phys. B* **33** (1979), no. 2, 211-217. (Authors' summary) **80b:82092** 82A05 (34D20)
- Schiff, B. (with Gregory, John A.; Fishelov, D.; Whiteman, John Robert) Local mesh refinement with finite elements for elliptic problems. *J. Comput. Phys.* **29** (1978), no. 1, 133-140. (Authors' summary) **80c:65025** 65N30
- Schiff, J. L. On a class of analytic functions of Smirnov. *Canad. J. Math.* **31** (1979), no. 1, 181-183. (C. N. Linden) **80b:30032** 30D60
- Schiffer, M. (with Netanyahu, E.) On the monotonicity of some functionals in the family of univalent functions. *Israel J. Math.* **32** (1979), no. 1, 14-26. (E. Zlotkiewicz) **80b:30014** 30C55
- Schiffmann, G. (with Rallis, S.) Automorphic forms constructed from the Weil representation: holomorphic case. *Amer. J. Math.* **100** (1978), no. 5, 1049-1122. (Stephen Gelbart) **80d:10038** 10D15 (10D20, 22E45)
- Schild, Alfred E. (with Synge, J. L.) ★Tensor calculus. Reprinted from 1949 original. Dover Publications, Inc., New York, 1978. ix+324 pp. ISBN 0-486-63612-7 (Editors) **80b:53001** 53-01 (01A75)
- Schillo, Paul (with Straight, H. Joseph) On the problem of partitioning  $\{1, 2, \dots, n\}$  into subsets having equal sums. *Proc. Amer. Math. Soc.* **74** (1979), no. 2, 229-231. (John H. Loxton) **80f:05059** 05C38 (10A45)
- Schlipf, Paul Arthur See Einstein, Albert, **80b:01030**
- Schimming, Rainer (with Günther, Paul) Curvature and spectrum of compact Riemannian manifolds. *J. Differential Geom.* **12** (1977), no. 4, 599-618 (1978). (Harold Donnelly) **80b:58064** 58G25 (53C20)
- Geodätischer Abstand und die Methode der Koizidenzwerte in der Riemannschen Geometrie. *Vorträge von der Tagung Geometrie und Anwendungen (Gautschi, 1977)*, pp. 91-98. *Weiterbildungszentrum Math. Kybernet. Rechenzsch.*, 28. Tech. Univ. Dresden, Dresden, 1978. (R. Rosca) **80b:53063** 53C20
- Das Huygenssche Prinzip bei linearen hyperbolischen Differentialgleichungen zweiter Ordnung für allgemeine Felder. *Beiträge Anal. No. 11* (1978), 45-90. (P. Günther) **80b:58068** 58G16 (35L99, 53B99, 83C99)
- Schimpl, Richard See Fischer, Gerd, **80b:15001**
- Schimar, Arle P. Generalized inverse solutions of multiattribute accounting problems. *Internat. J. Comput. Inform. Sci.* **8** (1979), no. 2, 129-139. (Author's summary) **80g:92028** 92A15
- Schinkel, A. (with Baron, Gerd) An extension of Wilson's theorem. *C. R. Math. Rep. Acad. Sci. Canada* **1** (1978/79), no. 2, 115-118. (Richard T. Bumby) **80e:05025** 05A99 (10A10)
- (with Perlis, Robert) Zeta functions and the equivalence of integral forms. *J. Reine Angew. Math.* **309** (1979), 176-182. (B. Z. Moroz) **80b:12008** 12A70 (10C15)
- Schlop, Alexandru I. ★Analiza unor metode de discretizare. (Romanian) [Analysis of some discretization methods] With an English summary. *Editura Academiei Republicii Socialiste România, Bucharest*, 1978. 182 pp. (E. Schechter) **80g:65004** 65-02 (65L10, 65R20)
- On the condition number in the Rayleigh-Ritz method for nonlinear two-point boundary value problems. *Numer. Funct. Anal. Optim.* **1** (1979), no. 5, 561-564. (D. M. Sloan) **80b:65070** 65L10
- Schlop, F. On  $L^p$ -norm convergence and almost everywhere convergence of expansions with respect to a product system of some systems. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 413-422. "Nauka", Moscow, 1977. (N. T. Anisimova) **80g:42023** 42C99
- On a generalization of the martingale maximal theorem. *Approximation theory (Papers, Vth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 207-212. *Banach Center Publ.*, 4. PWN, Warsaw, 1979. (J. A. Chao) **80b:60066** 60G46 (42C10)
- Schittkowski, K. Über Minimierungsverfahren bei approximativer Kenntnis der Zielfunktion angewandt auf die numerische Lösung von Variationsproblemen. *First Symposium on Operations Research (Univ. Heidelberg, Heidelberg, 1976)*, Teil 1, pp. 415-427. *Operations Research Verfahren, XXV*, Hain, Königstein, 1977. (From the introduction) **80b:49034** 49D99 (90C50)
- (with Stoer, J.) A factorization method for the solution of constrained linear least squares problems allowing subsequent data changes. *Numer. Math.* **31** (1978/79), no. 4, 431-463. (C. A. Botaris) **80b:65129** 65K05 (65F25, 90C05)
- An adaptive precision method for nonlinear optimization problems. *SIAM J. Control Optim.* **17** (1979), no. 1, 82-98. (O. A. Sebakh) **80b:49065** 49D10 (65K05)
- Schjær-Jacobsen, Hans (with Hald, Jørgen) Linearly constrained minimax optimization without calculating derivatives. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 1, pp. 289-301. *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (Authors' summary) **80b:90081** 90C25 (90C30)
- Schkolnick, M. (with Bentley, J. L.; Kung, H. T.; Thompson, C. D.) On the average number of maxima in a set of vectors and applications. *J. Assoc. Comput. Mach.* **25** (1978), no. 4, 536-543. (Fabrizio Luccio) **80b:60035** 68C25 (68C05)
- Schlee, Walter Matrixalgorithmen bei stochastischer Bewertung. *First Symposium on Operations Research (Univ. Heidelberg, Heidelberg, 1976)*, Teil 1, pp. 333-340. *Operations Research Verfahren, XXV*, Hain, Königstein, 1977. (P. Neumann) **80b:90048** 90B15
- Nonparametric regression and density estimation. *Computat. Statist.* **1978** (Proc. Third Sympos. Comput. Statist., Leiden, 1978), pp. 117-124. *Physica*, Vienna, 1978. (G. Manija) **80b:62054** 62G05
- Asymptotische Verteilung des Kolmogoroff-Mehrstichproben-Tests bei un stetiger Verteilungsfunktion. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 481-488. *Academia*, Prague, 1978. (I. Vincze) **80b:62039** 62G30
- Schloe-Küster, Walburga Queues with priorities. *Second Symposium on Operations Research (Rheinisch-Westfälische Tech. Hochschule Aachen, Aachen, 1977)*, Teil 2, pp. 764-776. *Operations Research Verfahren, XXIX*, Hain, Meisenheim, 1978. (E. A. Danielian) **80f:60009** 60K25
- Schleiff, M. (with Schubert, Hans) Aspects on the calculation of two singular integral

- operators needed in the theory of generalized analytic functions. (Russian summary) *Complex analysis and its applications* (Russian), pp. 618–623, 672, "Nauka", Moscow, 1978. (Wolfgang Tutschke) **80c:30036** 30G20
- (with Gröger, Konrad) Bestimmung der Temperaturverteilung in einem stromdurchflossenen Körper. (English and Russian summaries) *Z. Angew. Math. Mech.* **58** (1978), no. 12, 547–553. (Brian DeFazio) **80d:80010** 80A20
- Schlesinger, Robert E. Nonlinear eddy-viscosity turbulence parameterization in anelastic three-dimensional flow: some mathematical aspects. *J. Atmospheric Sci.* **35** (1978), no. 12, 2268–2273. (K. B. Ranger) **80f:76022** 76F99 (86A35)
- Schlichting, G. Groups with representations of bounded degree. *Probability measures on groups* (Proc. Fifth Conf., Oberwolfach, 1978), pp. 344–348, *Lecture Notes in Math.*, 706, Springer, Berlin, 1979. (S. G. Dani) **80m:22006** 22D10
- Schlickewel, Hans Peter On indefinite diagonal forms in many variables. *J. Reine Angew. Math.* **307/308** (1979), 279–294. (Ming-Chit Liu) **80f:10041** 10F05 (10C10, 10K15)
- Schlittgen, R. The optimality of some tests for medians. (German, French and Russian summaries) *Statist. Hefte (N.F.)* **19** (1978), no. 1, 15–24. (Henry R. Neave) **80a:62061** 62G10
- Use of a median test for a generalized Behrens-Fisher problem. *Metrika* **26** (1979), no. 2, 95–103. (Author's summary) **80f:62051** 62G10
- Schlögl, F. Information measures and thermodynamic criteria of motion. *Structural stability in physics* (Proc. Internat. Symposia Appl. Catastrophe Theory and Topological Concepts in Phys., Inst. Inform. Sci., Univ. Tübingen, Tübingen, 1978), pp. 199–209, Springer Ser. in Synergetics, 4, Springer, Berlin, 1979. (Author's summary) **80m:80017** 80A99 (94A17)
- Schlösser, Hartmut Zur Berechnung von "strong intertwining operators" unitärer Darstellungen von Gruppen und einige Anwendungen. *Math. Nachr.* **85** (1978), 37–45. (A. Derighetti) **80d:22006** 22D10
- Schlösser, Karl-Heinz (with Scheffold, Egon) Spline-Funktionen mehrerer Veränderlicher. (English summary) *J. Approx. Theory* **23** (1978), no. 3, 242–260. (Manfred Sommer) **80i:41007** 41A05 (41A15)
- Schlüter, A. (with Gentzsch, W.) Über ein Einschrittverfahren mit zyklischer Schrittweitenänderung zur Lösung parabolischer Differentialgleichungen. *Z. Angew. Math. Mech.* **58** (1978), no. 7, T415–T416. **80a:65250** 65P05
- Schlüter, H. J. Über die Existenz eines diskreten Spektrums der elastischen Platte kleiner Ausbiegung bei gemischten Randbedingungen einschliesslich Randlagerung sowie Lagerung im Plattengebiet und Massenträgheiten. (English and Russian summaries) *Z. Angew. Math. Mech.* **58** (1978), no. 12, 571–578. (A. D. Ljajko) **80c:35075** 35P05 (73K10)
- Schlüter, Klaus Kreispäckung in Quadraten. *Elem. Math.* **34** (1979), no. 1, 12–14. (H. T. Croft) **80c:52014** 52A45 (05B40)
- Schmeichel, E. F. (with Hakimi, S. L.) On the connectivity of maximal planar graphs. *J. Graph Theory* **2** (1978), no. 4, 307–314. (D. J. Kleitman) **80a:05135** 05C40
- (with Hakimi, S. L.) On  $p$ -centers in networks. *Transportation Sci.* **12** (1978), no. 1, 1–15. (Authors' summary) **80c:90060** 90B10
- (with Hakimi, S. L.) On the number of cycles of length  $k$  in a maximal planar graph. *J. Graph Theory* **3** (1979), no. 1, 69–86. (Peter V. O'Neil) **80c:05025** 05C10
- (with Hakimi, S. L.; Thomassen, Carsten) On the number of Hamiltonian cycles in a maximal planar graph. *J. Graph Theory* **3** (1979), no. 4, 365–370. (D. Barrette) **80c:05075** 05C45
- Schmeidler, David (with Hurwicz, Leonid) Construction of outcome functions guaranteeing existence and Pareto optimality of Nash equilibria. *Econometrica* **46** (1978), no. 6, 1447–1474. (Mamoru Kaneko) **80a:90186** 90D99
- A bibliographical note on a theorem of Hardy, Littlewood, and Pólya. *J. Econom. Theory* **20** (1979), no. 1, 125–128. (Author's summary) **80c:90023** 90A14 (26–03)
- See also Hylland, Aamund, **80m:90008**
- Schmeisner, G. (with Gervais, R.; Rahman, Q. I.) Simultaneous interpolation and approximation by entire functions of exponential type. *Numerische Methoden der Approximationstheorie, Band 4* (Meeting, Math. Forschungsinst., Oberwolfach, 1977), pp. 145–153, *Internat. Schriftenreihe Numer. Math.*, 42, Birkhäuser, Basel, 1978. (Marc Duc-Jacquet) **80c:65038** 65D15 (30D15, 65E05)
- Schmelovskiy, Karl-Heinz (with Ahlbrecht, N.) Optimale Regelung zeitkontinuierlicher stochastischer Objekte bei zeitdiskreter Beobachtung. (English and Russian summaries) *Elektron. Informationsverarb. Kybernet.* **15** (1979), no. 8–9, 455–474. (Authors' summary) **80m:93093** 93E20
- Schmert, James H. Extending models of arithmetic. *Ann. Math. Logic* **14** (1978), 89–109. (Andreas Blass) **80f:03036** 03C65
- A decidable  $\kappa$ -categorical theory with a nonrecursive Ryll-Nardzewski function. *Fund. Math.* **98** (1978), no. 2, 121–125. (John T. Baldwin) **80g:03031** 03C35 (03B25, 03D35)
- Schmetterer, L. Einige Resultate aus der Theorie der erwartungstreuen Schätzungen. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians* (Tech. Univ. Prague, Prague, 1974), Vol. B, pp. 489–503, *Academia, Prague*, 1978. (A. L. Rukhin) **80c:62040** 62F10
- Schmid, B. (with Williams, H. C.) Some remarks concerning the M.I.T. public-key cryptosystem. *BIT* **19** (1979), no. 4, 525–538. (Authors' summary) **80m:94072** 94B99
- Schmid, Friedrich Strong consistency of non-linear least squares estimators in the presence of stochastic regressors. (German, French and Russian summaries) *Statist. Hefte (N.F.)* **19** (1978), no. 4, 218–230. (Peter M. Robinson) **80d:62067** 62M10 (62F12, 62J02)
- Schmid, Hans Joachim A geometrical interpretation of the Hungarian method. *Discrete Math.* **21** (1978), no. 3, 297–308. (C. H. Scott) **80j:90081** 90C08
- On cubature formulae with a minimum number of knots. *Numer. Math.* **31** (1978/79), no. 3, 281–297. (Thomas A. Atchison) **80a:65058** 65D32
- Schmid, Jörg Infinite distributivity in certain function lattices. *Arch. Math. (Basel)* **31** (1978/79), no. 2, 182–184. (Hartmut Hofst) **80a:06011** 06D05
- Algebraically and existentially closed distributive lattices. *Z. Math. Logik Grundlag. Math.* **25** (1979), no. 6, 525–530. (Bernd Dahn) **80f:03046** 03C60 (06D99)
- Schmid, Peter Group extensions and splitting modules. *Math. Z.* **163** (1978), no. 2, 177–185. (Chih-Han Sah) **80a:20058** 20J05
- Schmidt, B. G. (with Christodoulou, Demetrios) Convergent and asymptotic iteration methods in general relativity. *Comm. Math. Phys.* **68** (1979), no. 3, 275–289. (Authors' summary) **80f:83033** 83C99 (35C20, 65P05)
- Remarks about modifications of the  $b$ -boundary definition. *Gen. Relativity Gravitation* **10** (1979), no. 12, 981–982. (George S. Whiston) **80j:83025** 83D05 (83F05)
- Schmidt, C.-G. Die Relationen von Gaußschen Summen und Kreiseinheiten. *Arch. Math. (Basel)* **31** (1978/79), no. 5, 457–463. (K. Lakakis) **80k:12006** 12A45 (10G05)
- Schmidt, Darrell (with Henry, J. N.; Henry, M. S.) Numerical comparisons of algorithms for polynomial and rational multivariate approximations. *SIAM J. Numer. Anal.* **15** (1978), no. 6, 1197–1207. (Dietrich Braess) **80d:65029a** 65D15
- (with Wiggins, Kenneth L.) Minimax approximate solutions of linear boundary value problems. *Math. Comp.* **33** (1979), no. 145, 139–148. (I. P. Gavriljuk) **80b:65111** 65L10
- See also de Boor, Carl, **80d:65029b**
- Schmidt, Diana Associative ordinal functions, well partial orderings and a problem of Skolem. *Z. Math. Logik Grundlag. Math.* **24** (1978), no. 4, 297–302. (From the summary) **80b:04004** 04A10
- Schmidt, Dieter Spektraleigenschaften und kanonische Fundamentallösungen linearer Differentialoperatoren bei einfachen Singularitäten. *Arch. Math. (Basel)* **31** (1978/79), no. 3, 302–309. (Jean Mawhin) **80d:34067** 34G10 (47E05)
- Schmidt, Dieter S. (with Deprit, André) Exact coefficients of the limit cycle in van der Pol's equation. *J. Res. Nat. Bur. Standards* **84** (1979), no. 4, 293–297. (Authors' summary) **80c:65084** 65L99 (65–04)
- The lunar theory of Hill and Brown. *Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics* (Math. Forschungsinst., Oberwolfach, 1978), Part II. *Celestial Mech.* **21** (1980), no. 2, 163–169. (Authors' summary) **80j:70004** 70F15
- Schmidt, Dirk Hinreichende Optimalitätsbedingungen für Steuerprobleme. *Beiträge Anal.* **10** (1978), 139–145. (Wolfgang Welterling) **80a:49030** 49B10
- Schmidt, E. J. P. Georg Scattering theory for the Schroedinger equation with a potential almost periodic in time. *J. Analyse Math.* **33** (1978), 121–145. (R. C. Gilbert) **80c:35104** 35P25 (47A40)
- (with Weck, Norbert) On the boundary behavior of solutions to elliptic and parabolic equations—with applications to boundary control for parabolic equations. *SIAM J. Control Optim.* **16** (1978), no. 4, 593–598. (T. I. Seidman) **80d:35065** 35J67 (35K20, 93C20)
- Schmidt, Eckard (with Dunham, Charles B.) Discontinuity of the alternating Chebyshev operator. *Rocky Mountain J. Math.* **9** (1979), no. 2, 355–360. (H. Werner) **80k:41015** 41A50 (41A65)
- Schmidt, Eligius Tamás Starre Quotienten in modularen Verbänden. *Contributions to general algebra* (Proc. Klagenfurt Conf., Klagenfurt, 1978), pp. 331–339, *Heyn, Klagenfurt*, 1979. (Ralph Freese) **80c:06011** 06C05
- Remarks on finitely projected modular lattices. *Acta Sci. Math. (Szeged)* **41** (1979), no. 1–2, 187–190. (James W. Lea, Jr.) **80c:06004** 06C05
- See also Beiträge: Algebra and Geometry, **80a:00003**
- Schmidt, Erik Meinecke (with Fortune, Steven; Hopcroft, John) The complexity of equivalence and containment for free single variable program schemes. *Automata, languages and programming* (Fifth Internat. Colloq., Udine, 1978), pp. 227–240, *Lecture Notes in Comput. Sci.*, 62, Springer, Berlin, 1978. (Authors' summary) **80d:68004** 68C25
- Schmidt, F. Banach-space-valued stationary processes with absolutely continuous spectral function. *Probability theory on vector spaces* (Proc. Conf., Trzebiezowice, 1977), pp. 237–244, *Lecture Notes in Math.*, 656, Springer, Berlin, 1978. (H. Salehi) **80f:60036** 60G10 (47A99)
- Schmidt, Friedrich Karl See Puppe, Dieter, **80j:01034**
- Schmidt, Georg See Schmidt, E. J. P. Georg
- Schmidt, Günter ★Параметрические колебания. (Russian) [Parametric oscillations] Translated from the German by V. M. Staržinskii. Edited by M. Z. Litvin-Sedoi. "Mir", Moscow, 1978. 336 pp. (Vadim Komkov) **80d:70042** 70J25 (34C15, 73D35)
- Schmidt, Hermann (with Meyer, Gottfried P.) Zur Existenz und analytischen Darstellung von Nullstellenfolgen bei Exponentialsummen. *Bayer. Akad. Wiss. Math.-Natur. Kl. Sitzungsber.* **1977**, 125–133 (1978). (C. Tanaka) **80a:30007** 30C15
- Schmidt, J. (with Herrendörfer, Günter) Estimation and test for the mean in a model II of the analysis of variance. (German summary) *Biometrical J.* **20** (1978), no. 4, 355–361. (Colin L. Mallows) **80c:62006** 62J10 (62K05)
- Schmidt, Jochen W. Selected contributions to imbedding methods for finite dimensional problems. *Continuation methods* (Proc. Sympos., Johannes Kepler Univ., Linz, 1977), pp. 215–247, *Academic Press, New York*, 1978. (W. C. Rheinboldt) **80d:65058** 65H10
- Einschliessung inverser Elemente durch Fixpunktverfahren. (English summary) *Numer. Math.* **31** (1978/79), no. 3, 313–320. (U. Tippenhauer) **80a:65112** 65H05 (65F05)
- (with Hoyer, Wolfgang) Die Verfahren vom Brown-Brent-Typ bei gemischt linearen-nichtlinearen Gleichungssystemen. (English and Russian summaries) *Z. Angew. Math. Mech.* **58** (1978), no. 10, 425–428. (Authors' summary) **80c:65115** 65H10
- Berichtigungen: "Eine Anwendung des Brouwerschen Fixpunktsatzes zur Gewinnung von Fehlerschranken für Näherungen von Polynomnullstellen" (Beitrag Numer. Math. **6** (1977), 157–163). *Beiträge Numer. Math.* **7** (1979), 219. (Editors) **80b:65058** 65H05
- Schmidt, Klaus A cylinder flow arising from irregularity of distribution. *Compositio Math.* **36** (1978), no. 3, 225–232. (Paul C. Shields) **80c:28029** 28D15 (10K05)
- Unique ergodicity and related problems. *Ergodic theory* (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1978), pp. 188–198, *Lecture Notes in Math.*, 729, Springer, Berlin, 1979. (Pierre Michel) **80j:28022** 28Dxx
- Sur la valeur d'un processus de fonctions d'ensembles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 7, A431–A434. (Author's summary) **80m:60060** 60G99 (60B11)
- Espaces vectoriels réticulés, décompositions de Riesz, et caractérisations de certains processus de fonctions d'ensembles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B*



289 (1979), no. 2, A75–A78. (Author's summary) **80i:60068** 60G48 (46G99)

Sur la convergence d'une martingale bornée et un théorème de Chatterji. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 3, A181–A183. (Author's summary) **80i:28009** 28A15 (60G48)

Unique ergodicity for quasi-invariant measures. *Math. Z.* **167** (1979), no. 2, 169–172. (B. S. Pickel) **80i:28022** 28D05

Schmidt, Mechthild Über eine Methode zur Berechnung von Indizes bei Siegelschen Stufengruppen. *Arch. Math. (Basel)* **31** (1978/79), no. 4, 339–345. (H. Klingens) **80i:10029** 10D20

Der Index Siegelscher Stufengruppen in ihrer maximalen diskreten rationalen Erweiterung. *Arch. Math. (Basel)* **32** (1979), no. 5, 436–440. (Günter Köhler) **80i:10025** 10D20 (10D23)

Schmidt, Peter (with Lahiri, Kajal) On the estimation of triangular structural systems. *Econometrica* **46** (1978), no. 5, 1217–1221. (H. Neudecker) **80i:62082** 62P20

Schmidt, R. (with Guenther, Ronald B.) Remarks on parameter identification. *SIAM J. Appl. Math.* **37** (1979), no. 3, 619–623. (G. Banon) **80i:93021** 93B30

Schmidt, Rolf (with Herrmann, M.) Remarks on generalized Cohen-Macaulay rings and singularities. *J. Math. Kyoto Univ.* **19** (1979), no. 1, 33–40. (D. Kirby) **80i:14002** 14B05 (13H10, 14M05)

Schmidt, Rüdiger On the existence of uncountably many matroidal families. *Discrete Math.* **27** (1979), no. 1, 93–97. (J. M. S. Simões-Pereira) **80i:05029** 05B35

Schmidt, V. (with König, D.; Rolski, T.; Stoyan, Dietrich) Stochastic processes with imbedded marked point processes (PMP) and their application in queueing. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* **9** (1978), no. 1, 125–141. (N. P. Leont'eva) **80i:60068** 60G55 (60K25)

On some relations between stationary time and customer state probabilities for queueing systems  $G/G/1/s/r$ . (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* **9** (1978), no. 2, 261–272. (D. N. Shanbhag) **80i:60113** 60K25

Schmidt, Walter Cohomologie in  $q$ -konvexen Räumen und algebraische Abhängigkeit. *Schr. Math. Inst. Univ. Münster* **2** (No. 17) (1979), v+96 pp. (O. Riemenschneider) **80i:32048** 32F10 (32J10, 32L15, 32L20)

Schmidt, Wolfgang M. True's equation over function fields. *J. Austral. Math. Soc. Ser. A* **25** (1978), no. 4, 385–422. (D. W. Masser) **80i:10020** 10B40 (10F45)

(with Wang, Yuan) A note on a transference theorem of linear forms. *Sci. Sinica* **22** (1979), no. 3, 276–280. (Thomas W. Cusick) **80i:10028** 10F10

Small zeros of additive forms in many variables. *Trans. Amer. Math. Soc.* **248** (1979), no. 1, 121–133. (Ming-Chit Liu) **80i:10019** 10B30 (10J10)

Schmidtke, D. (with Läter, E.; Läter, H.) Properties and comparison of procedures of discriminant analysis. With a German discussion. *Biometrical J.* **20** (1978), no. 4, 407–424. (Adolfo Gili) **80i:62090** 62H30

Schneider, Gerald Maximalschlichte Konkretisierung Riemannscher Flächen. *Math. Ann.* **242** (1979), no. 2, 173–176. (Horst Tietz) **80i:30054** 30F20

Schneider, R. Bemerkungen zu einem Isomorphie-Problem für Graphen, die speziellen Matrizen zugeordnet sind. *Math. Nachr.* **90** (1979), 213–224. (Jacqueline G. Wells) **80i:05087** 05C99 (05C60)

Schmielow, Roswitha (with Oelschlägel, Dieter; Süsse, Herbert) Die Behandlung von Aufgaben aus der Optimierung dynamischer Systeme mittels intervallanalytischer Methoden. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* **21** (1979), no. 1, 105–111. (Authors' summary) **80i:93056** — 93C99 (65G10)

Schmiecke, U.-W. On Schrödinger's factorization method for Sturm-Liouville operators. *Proc. Roy. Soc. Edinburgh Sect. A* **80** (1978), no. 1–2, 67–84. (A. D. Wood) **80i:34025** 34B25 (47E05)

Schmitendorf, W. E. (with Leitmann, George) Profit maximization through advertising: a nonzero sum differential game approach. *IEEE Trans. Automat. Control* **23** (1978), no. 4, 645–650. (M. I. Gusev) **80i:90165** 90D25 (90D45)

A simple derivation of necessary conditions for static minimax problems. *J. Math. Anal. Appl.* **70** (1979), no. 2, 486–489. (M. Yamasaki) **80i:90088** 90C30

A general sufficiency theorem for minimax control. *J. Optim. Theory Appl.* **27** (1979), no. 3, 463–468. (Author's summary) **80i:93061** 93C15

Schmitt, B. A. Eine explizite Darstellung der Funktion einer Dreiecksmatrix. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* **59** (1979), no. 3, T76–T77. (Cs. J. Hegedüs) **80i:65047** 65F30 (15A21, 15A24)

Schmitt, Klaus Periodic solutions of a forced nonlinear oscillator involving a one-sided restoring force. *Arch. Math. (Basel)* **31** (1978/79), no. 1, 70–73. (Noel G. Lloyd) **80i:34045** 34C25

(with Smith, Hal L.) Positive solutions and conjugate points for systems of differential equations. *Nonlinear Anal.* **2** (1978), no. 1, 93–105. (B. G. Pachpatte) **80i:34033** 34C10

Boundary value problems for quasilinear second-order elliptic equations. *Nonlinear Anal.* **2** (1978), no. 3, 263–309. (E. M. Sank) **80i:35064** 35J65

(with Thompson, Russell C.; Walter, Wolfgang) Existence of solutions of a nonlinear boundary value problem via the method of lines. *Nonlinear Anal.* **2** (1978), no. 5, 519–535. (From the introduction) **80i:65132** 65N40 (35J65)

Periodic solutions of delay-differential equations. *Functional differential equations and approximation of fixed points (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978)*, pp. 455–469. *Lecture Notes in Math.*, **730**, Springer, Berlin, 1979. (B. Stephan) **80i:34072** 34K15 (58F22, 92A15)

(with Berberes, J. W.) On the existence of maximal and minimal solutions for parabolic partial differential equations. *Proc. Amer. Math. Soc.* **73** (1979), no. 2, 211–218. (Lu-San Chen) **80i:35072** 35K55

Schmitz, Andrew (with Turnovsky, Stephen J.; Shalit, Haim) Consumer's surplus, price instability, and consumer welfare. *Econometrica* **48** (1980), no. 1, 135–152. (Authors' summary) **80i:90025** 90A12 (90A16)

Schmitz, Norbert (with Plachky, Delfe; Baringhaus, Ludwig) Stochastik. I. Eine elementare Einführung in Grundbegriffe der Wahrscheinlichkeitsrechnung und Statistik. Studien-Texte: Mathematik. Akademische Verlagsgesellschaft, Wiesbaden, 1978. 250 pp. ISBN 3-400-00390-5 (From the author's forward and chapter headings) **80i:60002** 60-01 (62-01)

(with Irlé, Albrecht) Decision theory for continuous observations. I. Bayes solutions. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 209–221. *Academia, Prague*, 1978. (L. B. Klebanov) **80i:62007** 62C05 (62C07, 62C10)

(with Rauhut, Burkhard; Zachow, Ernst-Wilhelm) Spieltheorie. Eine Einführung in die mathematische Theorie strategischer Spiele. Leitfäden der Angewandten Mathematik und Mechanik, **49**. B. G. Teubner, Stuttgart, 1979. 400 pp. ISBN 3-519-02351-2 (J. Rosenmüller) **80i:90001** 90-01 (90D99)

(with Irlé, Albrecht) Minimax strategies for discounted "secretary problems". *Operations Research Verfahren*, **30**, pp. 77–86. Hain, Meisenheim, 1979. (Jaap Wessels) **80i:60059** 60G40 (62L15)

Schmüdgen, Konrad Trace functionals on unbounded operator algebras. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics (Leipzig, 1977)*, pp. 224–228. Teubner, Leipzig, 1978. (A. Ramm) **80i:47071** 47D25 (47D40)

On trace representation of linear functionals on unbounded operator algebras. *Comm. Math. Phys.* **63** (1978), no. 2, 113–130. (J. W. M. Ford) **80i:47054** 47D40 (81C10)

Lokal multiplikativ konvexe  $Op^*$ -Algebren. *Math. Nachr.* **85** (1978), 161–170. (O. I. Reinov) **80i:47042** 47D30 (46H99)

Positive cones in enveloping algebras. *Rep. Math. Phys.* **14** (1978), no. 3, 385–404. (J. W. M. Ford) **80i:17006** 17B35 (44A99)

Ein positives Element der einhüllenden Algebra der  $sl(2, \mathbb{R})$ , das keine Quadratsumme ist. *Wiss. Z. Karl-Marx-Universität Leipzig Math.-Natur. Reihe* **27** (1978), no. 3, 299–301. (A. J. Coleman) **80i:17012** 17B35

Schnitzer, Ernst Relativitätstheorie—aktuell. Ein Beitrag zur Einheit der Physik. Mathematisch-Naturwissenschaftliche Bibliothek, **68**. BSB B. G. Teubner Verlagsgesellschaft, Leipzig, 1979. 177 pp. (5 plates). (H. Treder) **80i:01018** 01A60 (83-03)

Electromagnetic field of a rotating permanently magnetized sphere in the inertial and the comoving frames of reference. *Acta Phys. Polon. B* **10** (1979), no. 6, 515–524. (N. D. Sengupta) **80i:78004** 78A25 (45K05)

Schnabel, Robert B. (with Gay, David M.) Solving systems of nonlinear equations by Broyden's method with projected updates. *Nonlinear programming, 3 (Proc. Sympos., Special Interest Group Math. Programming, Univ. Wisconsin, Madison, Wis., 1977)*, pp. 245–281. Academic Press, New York, 1978. (W. M. Kincaid) **80i:65100** 65H10

Optimal conditioning in the convex class of rank two updates. *Math. Programming* **15** (1978), no. 3, 247–260. (D. J. van Wyk) **80i:65130** 65K05 (90C30)

(with Dennis, J. E., Jr.) Least change secant updates for quasi-Newton methods. *SIAM Rev.* **21** (1979), no. 4, 443–459. (Kurt Georg) **80i:65021** 65H10 (65K05)

Schneebell, Hans Rudolf Group extensions whose profinite completion is exact. *Arch. Math. (Basel)* **31** (1978/79), no. 3, 244–253. (A. I. Moskalenko) **80i:20047** 20E22 (20E18)

Schneider, Albert (with Kabbalo, Winfried) On the spectral kernel of symmetric extensions. *Manuscripta Math.* **29** (1979), no. 2–4, 113–118. (E. Durst) **80i:47030** 47B25

Schneider, C. Numerische Behandlung schwachsingulärer Fredholmischer Integralgleichungen zweiter Art. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* **59** (1979), no. 3, T77–T79. (From the text) **80i:65158** 65R20

Schneider, Claus Regularity of the solution to a class of weakly singular Fredholm integral equations of the second kind. *Integral Equations Operator Theory* **2** (1979), no. 1, 62–68. (R. V. Dudučava) **80i:45002** 45B05 (47G05)

Schneider, Fred B. (with Akkoyunlu, Eralp A.; Bernstein, Arthur J.; Silberschatz, Abraham) Conditions for the equivalence of synchronous and asynchronous systems. *IEEE Trans. Software Engrg.* **4** (1978), no. 6, 507–516. (Authors' summary) **80i:68008** 68B05

Schneider, H. J. See Schneider, Hans-Jürgen

Schneider, Hans (with Saunders, B. David) Flows on graphs applied to diagonal similarity and diagonal equivalence for matrices. *Discrete Math.* **24** (1978), no. 2, 205–220. (C. Y. Chao) **80i:15008** 15A21

(with Saunders, B. David) Cones, graphs and optimal scalings of matrices. *Linear and Multilinear Algebra* **8** (1979/80), no. 2, 121–135. (E. W. Eilers) **80i:15036** 15A60 (05C50, 92A25)

Schneider, Hans-Jürgen See Graphs, data structures, algorithms, **80i:68008** and Jahrestagung: Gesellschaft für Informatik, **7**, **80i:68072**

Schneider, K. R. Zur Konvergenzbeschleunigung bei Summen strikt kontraktiver Operatoren. (English and Russian summaries) *Z. Angew. Math. Mech.* **58** (1978), no. 9, 383–389. (U. Tippenhauer) **80i:65123** 65J15 (47H15)

Über die Anwendung der Funktionalisierungsmethode bei nichtlinearen Eigenwertproblemen. *Math. Nachr.* **89** (1979), 217–223. (Milan Kučera) **80i:47079** 47H17 (47H15)

Schneider, Manfred (with Aziz, A. K.) On uniqueness of Frankl-Morawetz problem in  $\mathbb{R}^2$ . *Monatsh. Math.* **85** (1978), no. 4, 265–276. (Editors) **80i:35085** 35M05

(with Aziz, A. K.) Frankl-Morawetz problem in  $\mathbb{R}^2$ . *SIAM J. Math. Anal.* **10** (1979), no. 5, 913–921. (N. D. Kopačevskii) **80i:35123** 35M05

Schneider, Robert (with Ahern, Patrick) A smoothing property of the Henkin and Szegő projections. *Duke Math. J.* **47** (1980), no. 1, 135–143. (Ingo Lieb) **80i:32015** 32A40

Schneider, Rolf Über Tangentialkörper der Kugel. (English summary) *Manuscripta Math.* **23** (1977/78), no. 3, 269–278. (H. W. Guggenheimer) **80i:52010** 52A45 (52A20)

Curvature measures of convex bodies. *Ann. Mat. Pura Appl.* **(4)** **116** (1978), 101–134. (W. J. Firey) **80i:52012** 52A20 (28A75, 53C65, 60D05)

Bestimmung konvexer Körper durch Krümmungsmasse. *Comment. Math. Helv.* **54** (1979), no. 1, 42–60. (V. T. Fomenko) **80i:53065** 53C45 (52A20)

(with Firey, William J.) The size of skeletons of convex bodies. *Geom. Dedicata* **8** (1979), no. 1, 99–103. (G. Freilich) **80i:52013** 52A40

On the curvatures of convex bodies. *Math. Ann.* **240** (1979), no. 2, 177–181. (T. Zamfirescu) **80i:52018** 52A30 (53C45)

Schneider, Theodor See Herlotz, Gustav, **80i:01040**

Schneider, Toni See Solitons and condensed matter physics, **80i:81002**

- Schneider, Victor P. A universal property of the Whyburn construction. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 5, 397-400. (Kim-Peu Chew) 80m:54013 54B25 (54C20)
- Schultzman, H. Zur ebenen Deformation inkompressibler durch undeformable Fasern verstärkter Materialien. *Z. Angew. Math. Mech.* 59 (1979), no. 5, T210-T212. (From the text) 80f:73005 73B05
- Schnorr, C.-P. (with Fuchs, P. H.) Monte Carlo methods and patternless sequences. *First Symposium on Operations Research (Univ. Heidelberg, Heidelberg, 1976), Teil 1*, pp. 443-450, *Operations Research Verfahren, XXV*, Hain, Königstein, 1977. (Artenio De Matteis) 80b:65006 65C05 (65C10)
- Multiterminal network flow and connectivity in unsymmetrical networks. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978)*, pp. 425-439, *Lecture Notes in Comput. Sci.*, 62, Springer, Berlin, 1978. (Jacques A. Ferland) 80d:90036 90B10 (05C40, 90C35)
- Multiterminal network flow and connectivity in unsymmetrical networks. *Optimization and operations research (Proc. Workshop, Univ. Bonn, Bonn, 1977)*, pp. 241-254, *Lecture Notes in Econom. and Math. Systems*, 157, Springer, Berlin, 1978. (James R. Evans) 80a:90067 90B10
- An algorithm for transitive closure with linear expected time. *SIAM J. Comput.* 7 (1978), no. 2, 127-133. (Sukhamay Kundu) 80a:68073 68E10 (68C05)
- Improved lower bounds on the number of multiplications/divisions which are necessary to evaluate polynomials. *Theoret. Comput. Sci.* 7 (1978), no. 3, 251-261. (Author's summary) 80b:68030 68C25 (12-04, 65H05)
- Bottlenecks and edge connectivity in unsymmetrical networks. *SIAM J. Comput.* 8 (1979), no. 2, 265-274. (Tadashi Nakamura) 80g:90045 90B10 (68C25)
- Schnupp, Peter ★Rechnernetze. Entwurf und Realisierung. de Gruyter Lehrbuch. *Walter de Gruyter, Berlin-New York, 1978*. 193 pp. ISBN 3-11-007290-4 (From the foreword) 80f:68002 68-01 (68Bxx)
- Schober, G. (with Cima, Joseph A.) On spaces of meromorphic functions. *Rocky Mountain J. Math.* 9 (1979), no. 3, 527-532. (H. Tornehave) 80d:30021 30D30 (30H05, 46E25)
- Schock, Manfred (with Lyksa, W.) Ein weiterer kombinatorischer Algorithmus für 0-1-Optimierungsaufgaben. I. Theoretische Grundlagen. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 3, 307-320. (Csaba Fabian) 80c:90065 90C09
- (with Runge, Walter) An algorithm for the solution of a generalized problem with fixed charges. I. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1978, no. 2, 10-17, 93. (M. M. Syslo) 80f:90126a 90C30
- (with Runge, Walter) An algorithm for the solution of a generalized problem with fixed charges. II. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1978, no. 3, 7-12, 86. (M. M. Syslo) 80f:90126b 90C30
- Schochetman, Claude (with Kaminker, Jerome) Analytic equivariant K-homology. *Geometric applications of homotopy theory (Proc. Conf., Evanston, Ill., 1977)*, I, pp. 292-302, *Lecture Notes in Math.*, 657, Springer, Berlin, 1978. (Harold Hastings) 80f:55006 55N15 (46M20, 47D25)
- (with Loeb, Richard I.) Covariant representations on the Calkin algebra. I. *Duke Math. J.* 45 (1978), no. 4, 721-734. (R. G. Douglas) 80c:22012 22D25 (46M20)
- Acylic ideals and Koszul complexes. *J. Pure Appl. Algebra* 14 (1979), no. 3, 311-314. (Joseph Neisendorfer) 80m:18007 18G10 (55T20, 55U99)
- Schochetman, Irwin E. Kernels and integral operators for continuous sums of Banach spaces. *Mem. Amer. Math. Soc.* 14 (1978), no. 202, v+120 pp. (A. C. Zaenen) 80a:47046 47B38 (47G05)
- Schock, Rolf On classifications and hierarchies. *Z. Allgemeine Wissenschaftstheorie* 10 (1979), no. 1, 98-106. (Philip L. Quinn) 80j:83014 03A05 (04A05)
- Schoen, Richard M. (with Yau, Shing Tung) Incompressible minimal surfaces, three-dimensional manifolds with nonnegative scalar curvature, and the positive mass conjecture in general relativity. *Proc. Nat. Acad. Sci. U.S.A.* 75 (1978), no. 6, 2567. (F. J. Flaherty) 80c:53045 53C20 (58E15, 83C99)
- (with Yau, Shing Tung) On the proof of the positive mass conjecture in general relativity. *Comm. Math. Phys.* 65 (1979), no. 1, 45-76. (J. L. Kazdan) 80j:83024 83C99 (53C20, 58E20)
- (with Yau, Shing Tung) On the structure of manifolds with positive scalar curvature. *Manuscripta Math.* 28 (1979), no. 1-3, 159-183. (Paul E. Ehrlich) 80c:53064 53C20 (58E20, 83C99)
- (with Yau, Shing Tung) Complete manifolds with nonnegative scalar curvature and the positive action conjecture in general relativity. *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 3, 1024-1025. (Mauro Francaviglia) 80c:58034 58D30 (53C50, 83C99)
- Schoen, Robert Calculating increment-decrement life tables by estimating mean durations at transfer from observed rates. *Math. Biosci.* 47 (1979), no. 3-4, 255-269. (Author's summary) 80j:62095 62P05 (92A20)
- Schoenberg, I. J. The Landau problem for the differential operator  $D^2 - a^2$  in a circular ring. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976), Vol. II*, pp. 713-723, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (Luciana Lupas) 80j:26017 26D10
- Schoenberg, Bruno Bemerkungen zu den Eisensteinschen Reihen und ihren Anwendungen in der Arithmetik. Special issue dedicated to the seventieth birthday of Erich Kähler. *Abh. Math. Sem. Univ. Hamburg* 47 (1978), 201-209. (H. Klingens) 80c:10025 10D12
- Zusammenhang von Dirichletschen Reihen mit Funktionalgleichung, Integralen 3. Gattung und Theta-Reihen in der Theorie der Modulformen. *Math. Ann.* 239 (1979), no. 2, 149-164. (H. Klingens) 80c:10032 10D24 (10H08)
- Schoenfeld, R. (with Neundorff, W.) Stable iterative hybrid method for the solution of weak nonlinear parabolic differential equations. *Math. Comput. Simulation* 22 (1980), no. 1, 1-6. (John Crank) 80m:65064 65M99
- Schoenberger-Deuel, Johanna (with Hess, Peter) Nonlinear parabolic boundary value problems with upper and lower solutions. *Israel J. Math.* 29 (1978), no. 1, 92-104. (D. Ramakrishna Rao) 80a:35010 35B10 (35K55)
- Schoener, Thomas W. Effects of density-restricted food encounter on some single-level competition models. *Theoret. Population Biol.* 13 (1978), no. 3, 365-381. (T. G. Hallam) 80d:92034 92A15
- Schoenstadt, Arthur L. See Information linkage between applied mathematics and industry. 80c:00004
- Schoenwaelder, Ulrich (with Sandlöbes, Hedwig) The core-free groups of Sylow-2-type  $M_{24}$ . *Math. Z.* 167 (1979), no. 1, 15-23. (George Glauberman) 80c:20021 20D05
- Schofield, N. Generalised bargaining sets for cooperative games. *Internat. J. Game Theory* 7 (1978), no. 3-4, 183-199. (J. H. Blau) 80a:90169 90D12
- Schofield, Robert D. See Newton, Isaac. 80d:01011
- Schoisengier, Johannes Eine neue Diskrepanz für gewisse Primzahlfolgen. *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* 187, no. 4-7, 219-224 (1978). (Jack P. Tull) 80m:10038 10K05 (10G10, 10H15)
- The connection between the zeros of the  $\zeta$ -function and sequences  $(g(p))$ ,  $p$  prime, mod 1. *Monatsh. Math.* 87 (1979), no. 1, 21-52. (Gutti J. Babu) 80g:10054 10K05 (10H05)
- Zur Metrik der Diskrepanz. (English summary) *Monatsh. Math.* 87 (1979), no. 4, 313-316. (H. Kesten) 80c:62034 62E20 (10K30)
- Schol-Canceller, Claudy Unicité dans  $L^p(\Omega)$  de la solution faible du problème de Dirichlet et construction de semi-groupes de Feller. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 16, A757-A760. (Author's summary) 80b:35052 35J25
- Schöler, Ulrich (with Fischer, Werner) Integral representation of additive operators with respect to a vector measure and its applications. *Math. Nachr.* 87 (1979), 249-264. (Paul Lepow) 80b:47038 47B38 (46E30)
- Schöll, E. (with Landsberg, Peter T.) Semiconductor models for first and second order nonequilibrium phase transitions. *Proc. Roy. Soc. London Ser. A* 365 (1979), no. 1723, 495-510. (Katsuhiko Fujii) 80d:82040a 82A25
- Formal conditions for nonequilibrium phase transitions in semiconductors. *Proc. Roy. Soc. London Ser. A* 365 (1979), no. 1723, 511-521. (Katsuhiko Fujii) 80d:82040b 82A25
- Scholl, Lars U. Bürokratisierung und Professionalisierung. Zur Genesis technischen Beamtentums im Staatsdienst am Beispiel des Königreichs Hannover. *Technische Geschichte* 46 (1979), no. 2, 117-137. (I. Grattan-Guinness) 80g:01037 01A80 (01A55)
- Scholtz, Robert A. (with Welch, Lloyd R.) Group characters: sequences with good correlation properties. *IEEE Trans. Inform. Theory* 24 (1978), no. 5, 537-545. (Michele Elia) 80g:94066 94B50
- (with Welch, Lloyd R.) Continued fractions and Berlekamp's algorithm. *IEEE Trans. Inform. Theory* 25 (1979), no. 1, 19-27. (Robert P. Kurshan) 80j:94016 94B15
- Scholz, Arnold See Jehme, Wolfram. 80c:12013
- Scholz, Reinhard Interior error estimates for a mixed finite element method. *Numer. Funct. Anal. Optim.* 1 (1979), no. 4, 415-429. (R. A. Nicolaides) 80c:65116 65N30
- Schomburg, Hermann Tschebyscheff-Approximation mit rationalen splines bei freien Knoten. (English summary) *J. Approx. Theory* 23 (1978), no. 3, 214-228. (Gerhard Merz) 80j:41020 41A15 (41A20, 41A50)
- Parallel computers and parallel numerical methods. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T439-T440. (From the introduction) 80a:65010 65-04 (68B20)
- Monotonically convergent iterative methods for nonlinear discrete elliptic boundary value problems. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T440-T441. 80a:65206 65N05
- Monotonically convergent iterative methods for nonlinear systems of equations. *Numer. Math.* 32 (1979), no. 1, 97-104. (J. R. Kuttler) 80b:65130 65N20
- Schon, J. P. (with Gence, J. N.; Mathieu, Jean) Justification des approximations de Boussinesq pour la description d'une turbulence thermique et cinématique homogène. (English summary) *J. Mécanique* 17 (1978), no. 2, 299-321. (J. D. Atkinson) 80b:76014 76F05 (65N99)
- Schönauer, W. (with Grüning, J.; Däubler, H.-G.; Glotz, G.) Streamline coordinates and similarity transformation for the 3-D boundary layer. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T320-T321. (E. G. Broadbent) 80a:76025 76D10 (65D99)
- Schönbeck, Maria Elena Boundary value problems for the Fitzhugh-Nagumo equations. *J. Differential Equations* 30 (1978), no. 1, 119-147. (Kuang-Ho Chen) 80b:35078 35K55 (35Q20, 92A05)
- Schönbeck, Tomas Decay of solutions of Schrödinger equations. *Duke Math. J.* 46 (1979), no. 1, 203-213. (Richard B. Lavine) 80j:35079 35P25 (35J10)
- Schöneberg, Rainald Weak convergence of trajectories of nonexpansive semigroups in Hilbert space. *Israel J. Math.* 30 (1978), no. 1-2, 130-132. (Simeon Reich) 80m:47066 47H20
- A note on connection properties of fixed point sets of nonexpansive mappings. *Math. Nachr.* 83 (1978), 247-253. (S. Swaminathan) 80g:47068 47H10
- Schönfeld, Peter On the relationship between different estimation principles in linear regression models. *Quantitative Wirtschaftsforschung*, pp. 617-625, Mohr, Tübingen, 1977. (Hilmar Drygas) 80g:62051 62J05
- Schönfeld, Wolfgang An undecidability result for relation algebras. *J. Symbolic Logic* 44 (1979), no. 1, 111-115. (G. E. Celtnin) 80f:03074 03G15 (03D35)
- Schönhage, Arnold Arbitrary perturbations of Hermitian matrices. *Linear Algebra Appl.* 24 (1979), 143-149. (B. N. Moysl) 80m:15012 15A42 (15A57)
- Schönwald, Hans G. Rechnen in Keilschrift und im Computer—Beispiele praktischer Verwendung nichtdezimaler Stellenwertsysteme. *Praxis Math.* 21 (1979), no. 8, 233-239. (E. M. Bruins) 80c:01002 01A17
- Schopf, G. Conjugate orders and conjugate types of the decrease of a multidimensional probability law. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 5, 701-707, 719. (E. Lukacs) 80g:60016b 60E10
- Conjugate orders and conjugate types of decrease of a multivariate probability law. (Russian, German summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 1, 204-207. (E. Lukacs) 80g:60016a 60E10
- Schöpf, Hans-Georg Zum 100. Geburtstag von A. Einstein: Albert Einsteins annus mirabilis 1905. *NTM Schr. Geschichte Natur. Tech. Medizin* 15 (1978), no. 2, 1-17. (H. C. Kennedy) 80c:01047 01A60 (83-03)
- Schori, R. M. (with Curtis, D. W.) Hyperspaces of Peano continua are Hilbert cubes. *Fund. Math.* 101 (1978), no. 1, 19-38. (G. R. Gordh, Jr.) 80a:54010 54B20 (54F25, 57N20)
- (with Walsh, John J.) Examples of hereditarily strongly infinite-dimensional compacta. *Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978), II. Topology Proc.* 3 (1978), no. 2, 495-506 (1979). (Michel Smith) 80m:54051 54F45



- (with Rubin, Leonard R.; Walsh, John J.) New dimension-theory techniques for constructing infinite-dimensional examples. *General Topology Appl.* 10 (1979), no. 1, 93-102. (A. R. Pears) **80e:54049** 54F45 (57N20)
- Scharr, B. The exact solution of the Burbidge-Prendergast integral equation for the mass density in galaxies. *Astronom. and Astrophys.* 78 (1979), no. 3, 299-302. (From the introduction) **80h:85005** 85A05 (45D05)
- Schott, Steven H. Geometrical properties of the penosculating conics of a plane curve. *Amer. Math. Monthly* 86 (1979), no. 6, 449-457. (Bernard Rouxel) **80h:53003** 53A04
- Schott, Peter K. (with Jensen, Jorgen B.; Larsen, Peter F.; MacLellan, Edwin J.) A note on three-valued modal logic. *Notre Dame J. Formal Logic* 19 (1978), no. 1, 63-68. (A. Rose) **80h:03026** 03B50 (03B45)
- Schott, René (with Gallardo, Léonard) Marches aléatoires sur les espaces homogènes de certains groupes de type rigide. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 19, A917-A920. (Authors' summary) **80e:60006** 60J15 (22E27)
- Schou, Geert Estimation of the concentration parameter in von Mises-Fisher distributions. *Biometrika* 65 (1978), no. 2, 369-377. (J. S. Rao) **80g:62018** 62F12
- Schoumaker, Françoise Incentives in planning with private goods. *Rev. Econom. Stud.* 46 (1979), no. 2, 315-318. (Author's introduction) **80h:90014** 90A05
- van der duyn Schouten, F. A. See van der Duyn Schouten, F. A.
- Schouten, J. A. ★Der Ricci-Kalkül. Eine Einführung in die neueren Methoden und Probleme der mehrdimensionalen Differentialgeometrie. Reprint of the 1924 original. *Grundlehren der Mathematischen Wissenschaften*, 10. Springer-Verlag, Berlin-New York, 1978. x + 312 pp. ISBN 3-540-08565-3 (Editors) **80a:53001** 53-01 (01A75)
- See also Strulik, D. J., **80e:01029**
- Schrader, Jürgen (with Deistler, Manfred) Exact estimability of the transfer functions of linear systems. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 9 (1978), no. 3, 411-417. (A. S. C. Sinha) **80f:93072** 93E10
- (with Deistler, Manfred) Linear models with autocorrelated errors: structural identifiability in the absence of minimality assumptions. *Econometrica* 47 (1979), no. 2, 495-506. (Peter Schmidt) **80g:62046** 62J05
- Schrader, R. (with Hogreve, H.; Seiler, R.) A conjecture on the spinor functional determinant. *Nuclear Phys. B* 142 (1978), no. 4, 525-534. (Pierre Hillion) **80a:81072** 81E10 (00A89)
- (with Bachem, Achim) A duality theorem and minimal inequalities in mixed integer programming. *Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I* (Brussels, 1978). *Z. Angew. Math. Mech.* 59 (1979), no. 3, T88-T89. (Leon Cooper) **80f:90087** 90C10
- High energy behaviour for nonrelativistic scattering by stationary external metrics and Yang-Mills potentials. *Z. Phys. C* 4 (1980), no. 1, 27-36. (Author's summary) **80m:81080** 81F20 (81E10)
- Schrag, G. Some inequalities for multidimensional (0, 1)-matrices. *Discrete Math.* 23 (1978), no. 2, 169-175. (Peter Eades) **80c:05047** 05B20
- Schrammer, R. (with Grossmann, S.; Richter, Peter H.) Dynamic correlation functions in the brusselator. *Z. Phys. B* 35 (1979), no. 4, 363-381. (G. A. Skorobogatov) **80m:80014** 80A30 (82A35)
- Schreier, B. (with Wood, R. D.) Geometrically nonlinear analysis—a correlation of finite element notations. *Internat. J. Numer. Methods Engrg.* 12 (1978), no. 4, 635-642. (Authors' summary) **80h:73056** 73K25 (65N30)
- Schreier, Bertram M. (with Kumar, Arunod) Representation of certain infinitely divisible probability measures on Banach spaces. *J. Multivariate Anal.* 9 (1979), no. 2, 288-303. (Albert Tortrat) **80j:60013** 60B11 (60E07)
- Schreier, J. F. (with Bibel, W.; Furbach, U.) Strategies for the synthesis of algorithms. *Programmiersprachen (Fünfte GfF Fachtagung, Braunschweig, 1978)*, pp. 97-109. *Informatik-Fachberichte*, 12, Springer, Berlin, 1978. (Giorgio Ausiello) **80c:68005** 68B10 (68C05, 68E05)
- Schreier, Morris See Garten, Scott, **80c:10007**
- Schreier, Peter Johann Heinrich Lambert zum Gedenken. *NTM Schr. Geschichte Natur. Tech. Medizin* 15 (1978), no. 1, 1-7. (Peeter Mürrspreg) **80j:01013** 01A50
- Schreier, W. M. (with Landovitz, L. F.; Levine, A. M.) Time-dependent harmonic oscillators. *Phys. Rev. A* (3) 20 (1979), no. 3, 1162-1168. (Authors' summary) **80f:81021** 81C05 (70D10)
- Schreier, Wolfgang Physik und Industrielle Revolution. *NTM Schr. Geschichte Natur. Tech. Medizin* 15 (1978), no. 2, 57-64. (D. J. Struik) **80h:01020** 01A55 (01A80)
- Schreyer, Howard L. (with Shih, Pen Yuan) Lower bounds to fundamental frequencies and buckling loads of columns and plates. *Internat. J. Solids and Structures* 14 (1978), no. 12, 1013-1026. (Vadim Komkov) **80e:73025** 73D99 (49G05)
- (with Fedcock, Joseph J.) Orthogonal base functions and consistent diagonal mass matrices for two-dimensional elements. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 9, 1379-1398. (Authors' summary) **80e:73056** 73K99 (65N30, 70E99)
- Schriever, Karl-Heinz (with Heller, Wolf-Dieter; Lindenberg, Henner; Nuske, Manfred) ★Stochastische Systeme. Markoffketten, Stochastische Prozesse, Warteschlangen. de Gruyter Lehrbuch. Walter de Gruyter, Berlin-New York, 1978. 257 pp. ISBN 3-11-007624-1 (E. Arjas) **80g:60002** 60-01 (60J10, 60J27, 60K25)
- A truncated player-the-winner procedure for selecting the best of  $k > 3$  binomial population. *Bull. Math. Statist.* 18 (1978/79), no. 1-2, 21-33. (Joseph A. Yahav) **80g:62013** 62F07 (62L10)
- Schrijver, Alexander The linking of matroids by linking systems. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 973-981. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (John H. Mason) **80g:05026** 05B35 (05A05)
- The dependence of some logical axioms on disjoint transversals and linked systems. *Colloq. Math.* 39 (1978), no. 2, 191-199. (Robert Cowen) **80a:03065** 03E25 (06E05)
- Vertex-critical subgraphs of Kneser graphs. *Nieuw Arch. Wisk.* (3) 26 (1978), no. 3, 454-461. (László Lovász) **80g:05037** 05C15
- (with Mulder, Martyn) Median graphs and Helly hypergraphs. *Discrete Math.* 25 (1979), no. 1, 41-50. (A. K. Dewdney) **80h:05044** 05C65
- (with Seymour, P. D.) Solution of two fractional packing problems of Lovász. *Discrete Math.* 26 (1979), no. 2, 177-184. (László Lovász) **80j:05095** 05C65 (09C10)
- (with van Mill, Jan) Subbase characterizations of compact topological spaces. *General Topology Appl.* 10 (1979), no. 2, 183-201. (Teodor Przymusiński) **80d:54023** 54D30 (54E45, 54F05)
- A comparison of the Delsarte and Lovász bounds. *IEEE Trans. Inform. Theory* 25 (1979), no. 4, 425-429. (Author's summary) **80g:94033** 94A17 (90C05)
- (with van Mill, Jan) Superextensions which are Hilbert cubes. *Period. Math. Hungar.* 10 (1979), no. 1, 15-24. (J. J. Charatonik) **80d:54010** 54C20 (57N20)
- Schröder, Eberhard M. ★Darstellende Geometrie. Second revised edition. Studienbücherei. Mathematik für Lehrer, 8. VEB Deutscher Verlag der Wissenschaften, Berlin, 1978. 160 pp. (Editors) **80h:51014** 51N05
- Eine Kennzeichnung der regulären euklidischen Geometrien. *Abh. Math. Sem. Univ. Hamburg* 49 (1979), 95-117. (H. Groh) **80h:51019** 51F15 (15A63)
- Eine Ergänzung zum Satz von Beckman und Quaries. (English summary) *Aequationes Math.* 19 (1979), no. 1, 89-92. (Maurice Flamant) **80h:51017** 51K99
- Schröder, H. Theory of molecular dispersion forces and the molecular pair potential under the aspect of liquid crystal ordering. *J. Chem. Phys.* 72 (1980), no. 5, 3271-3289. (From the summary) **80m:82051** 82A60 (82A50)
- Schröder, Johann Das Wallman-Verfahren und inverse Limites. (English summary) Proceedings of the Second Symposium on Categorical Topology (Univ. Cape Town, Cape Town, 1976). *Questiones Math.* 2 (1977/78), no. 1-3, 325-333. (Stephen Willard) **80a:54043** 54D35 (54B25)
- Two-sided bounds and norm bounds for systems of nonlinear differential equations. *Differential equations and applications (Proc. Third Scheveningen Conf., Scheveningen, 1977)*, pp. 17-25. *North-Holland Math. Studies*, 31, North-Holland, Amsterdam, 1978. (Sadakazu Aizawa) **80h:35009** 35B05 (35J45)
- Pointwise norm bounds for systems of ordinary differential equations. *J. Math. Anal. Appl.* 70 (1979), no. 1, 10-32. (J. W. Bebernes) **80h:34018** 34A40
- Schröder, M. Order-bounded convergence structures on spaces of continuous functions. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 1, 39-61. (H.-P. Butzmann) **80i:46022** 46E05 (54A20, 54C35)
- Schrödinger, Erwin See Hanke, Paul A., **80g:82001**
- Schroer, B. Quantum field theory of kinks in two-dimensional space-time. *New developments in quantum field theory and statistical mechanics (Proc. Cargèse Summer Inst., Cargèse, 1976)*, pp. 385-417. *NATO Adv. Study Inst. Ser., Ser. B: Physics*, 26, Plenum, New York, 1977. (Jorge André Swieca) **80a:81135** 81M05 (00A89)
- Quantum field theory with soliton conservation laws. *Fortschr. Phys.* 26 (1978), no. 7-8, 441-454. (V. N. Sukko) **80c:81086** 81E15 (35Q99)
- (with Truong, T. T.) The order/disorder quantum field operators associated with the two-dimensional Ising model in the continuum limit. *Nuclear Phys. B* 144 (1978), no. 1, 80-122. (Authors' summary) **80h:82019** 82A15 (47B99)
- (with Belvedere, L. V.; Swieca, J. A.; Rothe, K. D.) Generalized two-dimensional abelian gauge theories and confinement. *Nuclear Phys. B* 153 (1979), no. 1-2, 112-140. (F. R. Halpern) **80c:81094** 81G05
- (with Truong, T. T.)  $Z_2$  duality algebra in  $D=2$  quantum field theory. *Nuclear Phys. B* 154 (1979), no. 1, 125-139. (L. Streit) **80c:82045** 82A67 (81E99)
- (with Hortaçu, M.; Rothe, K. D.) Generalized two-dimensional QED and functional determinants. *Phys. Rev. D* (3) 20 (1979), no. 12, 3203-3212. (Authors' summary) **80h:81161** 81G10 (81L05)
- Schroll, J. Winkelstabile Mehrschrittverfahren hoher Ordnung. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T441-T442. **80a:65189** 65L99
- Schrooten, J. (with Polak, S. J.; Barneveld Binkhuysen, C.) TEDDY2, a program package for parabolic composite region problems. *ACM Trans. Math. Software* 4 (1978), no. 3, 209-227. (Authors' summary) **80a:65009** 65-04
- Schroth, P. Hauptlösungen von Differenzengleichungen. (Serbo-Croatian and English summaries) *Glas. Mat. Ser. III* 14(34) (1979), no. 1, 67-75. (Wolfgang Hahn) **80h:39002** 39A10
- Schruben, Lee W. (with Margolin, Barry H.) Pseudorandom number assignment in statistically designed simulation and distribution sampling experiments. With comments and a reply by the authors. *J. Amer. Statist. Assoc.* 73 (1978), no. 363, 504-525. (B. L. Granovskii) **80e:62013** 62E25 (62J05, 65C99)
- Schubert, Hans (with Schleiff, M.) Aspects on the calculation of two singular integral operators needed in the theory of generalized analytic functions. (Russian summary) *Complex analysis and its applications (Russian)*, pp. 618-623, 672, "Nauka", Moscow, 1978. (Wolfgang Tutschke) **80c:30036** 30G20
- Schucany, William R. (with Parr, William C.; Boyer, John E.) Correlation structure in Farlie-Gumbel-Morgenstern distributions. *Biometrika* 65 (1978), no. 3, 650-653. (S. Kotz) **80g:62081** 62H20 (62H05)
- See also Hollander, Myles; et al., **80a:62056**
- Schücker, Thomas Premier groupe de cohomologie, à coefficients dans la représentation adjointe, pour des algèbres de Lie attachées à une paire de variétés. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 15, A1035-A1037. (Author's summary) **80h:58037** 58F05 (57R25, 58H10)
- Schurman, Donald W. The restricted three-body problem including radiation pressure. *Astrophys. J.* 238 (1980), no. 1, part 1, 337-342. (Author's summary) **80i:70008** 70F07
- Schuffe, J. A. Is there a scientific method? *Texas J. Sci.* 31 (1979), no. 2, 189-192. (Author's summary) **80h:00006** 00A25 (03A05)
- Schuh, H.-J. (with Heyde, C. C.) Uniform bounding of probability generating functions and the evolution of reproduction rates in birds. *J. Appl. Probab.* 15 (1978), no. 2, 243-250. (P. D. M. Macdonald) **80a:60106** 60B80 (60B85, 92A15)
- (with Barbour, Andrew D.) Functional normalization for the branching process with infinite mean. *J. Appl. Probab.* 16 (1979), no. 3, 513-525. (D. R. Grey) **80h:60114** 60J80
- Schulenberg, John R. Elastic waves in the half space  $R_+^2$ . *J. Differential Equations* 29 (1978), no. 3, 405-438. (From the introduction) **80d:73042** 73D20 (35P25)
- (with Gilliam, David S.) A class of symmetric hyperbolic systems with special properties. *Comm. Partial Differential Equations* 4 (1979), no. 5, 509-536. (J. Kopáček) **80f:35071** 35L45
- Schulman, E. E. (with Haidvogel, Dale B.; Robinson, A. R.) The accuracy, efficiency, and stability of three numerical models with application to open ocean problems. *J. Comput. Phys.* 34 (1980), no. 1, 1-53. (J. J. Mahony) **80m:86001** 86A05 (65N30)
- Schulman, L. S. (with Seiden, P. E.) Statistical mechanics of a dynamical system based on Conway's game of life. *J. Statist. Phys.* 19 (1978), no. 3, 293-314. (Authors' summary) **80a:82021** 82A25 (90D45)

- Schulman, Robert S. Ordinal data: an alternative distribution. *Psychometrika* 44 (1979), no. 1, 3-20. (Author's summary) **80i:62090** 62P15
- Schulten, Z. (with Anderson, D. G. M.; Gordon, Roy G.) An algorithm for the evaluation of the complex Airy functions. *J. Comput. Phys.* 31 (1979), no. 1, 60-75. (Authors' summary) **80c:65043** 65D15 (65D30)
- Schultheis, Hildegard (with Lichtner, Peter C.; Griffin, James J.; Schultheis, Rainer; Volkov, Anatole B.) Variational derivation of a time-dependent Hartree-Fock Hamiltonian. *Phys. Rev. C* (3) 20 (1979), no. 2, 845-846. (Authors' summary) **80i:81115** 81G45 (49H05)
- Schultheis, Rainer (with Lichtner, Peter C.; Griffin, James J.; Schultheis, Hildegard; Volkov, Anatole B.) Variational derivation of a time-dependent Hartree-Fock Hamiltonian. *Phys. Rev. C* (3) 20 (1979), no. 2, 845-846. (Authors' summary) **80i:81115** 81G45 (49H05)
- Schultz, Barbara Über die zu endlichen Körpern gehörigen induktiven Gruppoide. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* 20 (1978), no. 4, 511-516. (Phyllendu Das) **80c:20079** 20L99
- Über die zu endlichen zyklischen Ringen gehörigen induktiven Gruppoide. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* 20 (1978), no. 7, 925-934. (Author's summary) **80c:16048** 16A99 (20L99)
- Schultz, George W. (with Tsokos, Chris P.; Rao, A. N. V.) Statistical properties of a linear stochastic system. *Inform. and Control* 39 (1978), no. 1, 92-117. (T. Tobias) **80b:93144** 93E10
- Schultz, Philipp Annihilator classes of torsion-free abelian groups. *Topics in algebra* (Proc. 18th Summer Res. Inst., Austral. Math. Soc., Austral. Nat. Univ., Canberra, 1978), pp. 88-94, *Lecture Notes in Math.*, 697, Springer, Berlin, 1978. (B. J. Gardner) **80i:20074** 20K20
- The typeset and cotypeset of a rank 2 abelian group. *Pacific J. Math.* 78 (1978), no. 2, 503-517. (Otto Mutzbauer) **80a:20062** 20K15
- Schultz, Reinhard Smooth actions of small groups on exotic spheres. *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 1, pp. 155-160, *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (H.-T. Ku) **80c:57053** 57S25
- (with Becker, J. C.) Fixed-point indices and left invariant framings. *Geometric applications of homotopy theory* (Proc. Conf., Evanston, Ill., 1977), I, pp. 1-31, *Lecture Notes in Math.*, 657, Springer, Berlin, 1978. (M.-C. Ku) **80c:57045** 57S15 (55N22, 55Q45, 57R90)
- Spherelike G-manifolds with exotic equivariant tangent bundles. *Studies in algebraic topology*, pp. 1-38, *Advances in Math.*, Suppl. Studies, 5, Academic Press, New York, 1979. (W. D. Neumann) **80b:57046** 57S15 (57R85, 57S25)
- Schultze, Bernd Strongly irregular boundary value problems. *Proc. Roy. Soc. Edinburgh Sect. A* 82 (1978/79), no. 3-4, 291-303. (Walter Eberhard) **80b:34029** 34B25
- On the definition of Stone-regularity. *J. Differential Equations* 31 (1979), no. 2, 224-229. (William B. Day) **80c:34013** 34B05
- Green's matrix and the formula of Titchmarsh-Kodaira for singular left-definite canonical eigenvalue problems. *Proc. Roy. Soc. Edinburgh Sect. A* 83 (1979), no. 1-2, 147-183. (S. J. Lee) **80c:34025** 34B25
- Siegmund-Schultze, Rainer See Siegmund-Schultze, Rainer
- Schütz, Christoph (with Bokowski, Jürgen) Dichte Klassen konvexer Polytope. *Math. Z.* 160 (1978), no. 2, 173-182. (G. Ewald) **80i:52005** 52A25
- An invertible 3-diagram with 8 vertices. *Discrete Math.* 28 (1979), no. 2, 201-205. (D. Barnette) **80i:52002** 52A25 (05B30)
- Schulze, B.-W. (with Rempel, Stephan) ★ Elliptische Operatoren auf berandeten Mannigfaltigkeiten. With English and Russian summaries. Report No. R-02/78. *Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin*, 1978. 111 pp. (R. D. Moyer) **80a:58037** 58G99 (35J99, 47G05)
- Elliptic boundary value problems for operators of a special form. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 1, 148-159, 191. (J. Vanžura) **80i:58045** 58G20 (35J99, 58G10)
- On the mean value distributions associated with higher order elliptic equations. *Generalized functions and operational calculus* (Proc. Conf., Varna, 1975), pp. 182-191, *Bulg. Acad. Sci., Sofia*, 1979. (V. A. Kondrat'ev) **80i:35018** 35D10 (31B35)
- Over- and under-determined elliptic boundary value problems. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 2, 321-326, 382. (L. A. Ivanov) **80i:35046** 35N10 (58G20)
- Schulze, R. Zur Konvergenz der Zoutendijkschen Gradientenverfahren. *Wiss. Z. Karl-Marx-Univ. Leipzig Math.-Natur. Reihe* 27 (1978), no. 5, 509-520. (Wolfgang Wetherling) **80a:65135** 65K05 (90C30)
- Schulze, Reinhard (with Römisch, Werner) Kennwertmethoden für nichtlineare Volterra'sche Integralgleichungen in stetigen stochastischen Prozessen. VII. *Internationale Konferenz über Nichtlineare Schwingungen* (Berlin, 1975), Band I, Teil 2, pp. 245-251, *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977, 4, Akademie-Verlag, Berlin, 1977. (A. T. Bharucha-Reid) **80i:60055** 60H20 (45D05)
- Schulze-Dorff, B. Berechnung des Spektralradius nichtnegativer Matrizen. *J. Angew. Math. Mech.* 58 (1978), no. 7, T443-T444. **80a:65081** 65F15
- Schumacher, Dietmar (with Paré, Robert) Abstract families and the adjoint functor theorems. *Indexed categories and their applications*, pp. 1-125, *Lecture Notes in Math.*, 661, Springer, Berlin, 1978. (George D. Reynolds) **80b:18004** 18A40
- Schumacher, Georg Beispiele nicht reduzierter Strukturen auf kompakten, komplexen Räumen. *Math. Ann.* 238 (1978), no. 1, 33-38. (L. Andrew Campbell) **80d:32024** 32G05 (81E10)
- (with Axelsson, Reynir) Analytische Erweiterungen von Produkträumen. *Math. Z.* 162 (1978), no. 2, 189-199. (H. Kerner) **80i:32016** 32G05
- Schumacher, J. M. (with van Harten, A.) On a class of partial functional differential equations arising in feed-back control theory. *Differential equations and applications* (Proc. Third Scheveningen Conf., Scheveningen, 1977), pp. 161-179, *North-Holland Math. Studies*, 31, North-Holland, Amsterdam, 1978. (O. G. Nakonečnii) **80c:93099** 93D05 (35R10)
- Schumacher, R. T. Self-sustained oscillations of the clarinet: an integral equation approach. (German and French summaries) *Acustica* 40 (1978), no. 5, 298-309. (Christopher Caldwell) **80i:76040** 76Q05 (45G10)
- Schumaker, Larry L. (with Hämmerlin, Günther) Error bounds for the approximation of Green's kernels by splines. *Numer. Math.* 33 (1979), no. 1, 17-22. (J. Sprekels) **80m:65087** 65R10
- Schumann, Rainer (with Zeidler, Eberhard) The finite difference method for quasilinear elliptic equations of order 2m. *Numer. Funct. Anal. Optim.* 1 (1979), no. 2, 161-194. (Sean McKee) **80d:65107** 65N10
- Schumitzky, Alan (with McNabb, Alex) Factorization of Fredholm operators on analytic functions. *J. Funct. Anal.* 29 (1978), no. 3, 336-374. (P. M. Anselone) **80i:47023** 47A53 (32A30, 45H05)
- (with Pierce, J. G.) Optimal impulsive control of compartment models. II. Algorithm. *J. Optim. Theory Appl.* 26 (1978), no. 4, 581-599. (Robert J. Mulholland) **80c:90120** 90C50 (92A07, 92A09, 93C15)
- Schumm, George F. Putting  $\aleph_1$  in its place. *Notre Dame J. Formal Logic* 19 (1978), no. 4, 623-628. (Jerzy Kotas) **80a:03029** 03B45
- (with Edelstein, Roy) Negation-free modal logics. *Z. Math. Logik Grundlag. Math.* 25 (1979), no. 3, 281-288. (Charles F. Kielkopf) **80b:03033** 03B45
- Schupp, Hans (with Jäger, Joachim) Pseudofermat'sche Tripel. *Praxis Math.* 20 (1978), no. 8, 240-244. (Carl Pomerance) **80b:10028** 10B99
- Schupp, Paul E. Groups and graphs. Groups acting on trees, ends, and cancellation diagrams. *Math. Intelligencer* 1 (1978/79), no. 4, 205-208, 212-214. (Editors) **80i:05046** 05C25 (20F99)
- Schuppar, Berthold Elementare Aussagen zur Arithmetik und Galois-theorie von Funktionenkörpern. *J. Reine Angew. Math.* 313 (1980), 59-71. (W.-D. Geyer) **80m:12011** 12A90 (03C60, 12F10, 14H30)
- van Schuppen, Jan H. See Van Schuppen, Jan H.
- Schurer, F. (with Steutel, F. W.) On the degree of approximation by the operators of de la Vallée Poussin. *Monatsh. Math.* 87 (1979), no. 1, 53-64. (E. L. Stark and P. L. Butzer) **80b:41013** 41A44 (42A10)
- Schürger, Klaus On the asymptotic geometrical behaviour of a class of contact interaction processes with a monotone infection rate. *Z. Wahrsch. Verw. Gebiete* 48 (1979), no. 1, 35-48. (P. Tautu) **80c:60109** 60K35 (92A15)
- Schuss, Zeev Backward and degenerate parabolic equations. *Applicable Anal.* 7 (1977/78), no. 2, 111-119. (S. I. Rosencrans) **80a:35060** 35K25 (35R99)
- (with Levikson, Benny) Nonhomogeneous diffusion approximation to a genetic model. *J. Math. Pures Appl.* (9) 56 (1977), no. 1, 55-65. (James L. Cornette) **80i:92008** 92A10 (60J70)
- (with Matkowsky, Bernard J.) The exit problem: a new approach to diffusion across potential barriers. *SIAM J. Appl. Math.* 36 (1979), no. 3, 604-623. (Authors' summary) **80i:82011** 82A05 (60J70)
- Schuster, E. (with Yakowitz, Sidney) Contributions to the theory of nonparametric regression, with application to system identification. *Ann. Statist.* 7 (1979), no. 1, 139-149. (E. Nadaraja) **80d:62032** 62G05
- Schuster, P. (with Sigmund, K.; Wolff, R.) Dynamical systems under constant organization. I. Topological analysis of a family of non-linear differential equations—a model for catalytic hypercycles. *Bull. Math. Biol.* 40 (1978), no. 6, 743-769. (C. P. Bruter) **80a:92020** 92A05 (58F99)
- (with Sigmund, K.; Wolff, R.) On  $\omega$ -limits for competition between three species. *SIAM J. Appl. Math.* 37 (1979), no. 1, 49-54. (K. E. Swick) **80c:92029** 92A15 (58F13)
- Schuster, Peter (with Hartmann, Werner) Multiplicative complexity of some rational functions. *Theoret. Comput. Sci.* 10 (1980), no. 1, 53-61. (Authors' summary) **80i:68023** 68C25
- Schuster, Seymour Fixed-point-free embeddings of graphs in their complements. *Internat. J. Math. Math. Sci.* 1 (1978), no. 3, 335-338. (G. Chartrand) **80m:05029** 05C10
- Schütt, Carsten The projection constant of finite-dimensional spaces whose unconditional basis constant is 1. *Israel J. Math.* 30 (1978), no. 3, 207-212. (Yehoram Gordon) **80a:46013** 46B15
- Schütte, K. Ein Ansatz zum Entscheidungsverfahren für eine Formelklasse der Prädikatenlogik mit Identität. *Acta Cybernet.* 4 (1978/79), no. 1, 141-148. (H. Schwichtenberg) **80b:03013** 03B25
- Schütz, Bernard F. (with Comins, N.) On the ergoregion instability. *Proc. Roy. Soc. London Ser. A* 364 (1978), no. 1717, 211-226. (From the summary) **80b:85004** 85A15 (34E99)
- (with Dyson, Janet) Perturbations and stability of rotating stars. I. Completeness of normal modes. *Proc. Roy. Soc. London Ser. A* 368 (1979), no. 1734, 389-410. (From the summary) **80i:85004** 85A15
- Perturbations and stability of rotating stars. II. Properties of the eigenvectors and a variational principle. *Monthly Notices Roy. Astronom. Soc.* 190 (1980), no. 1, 7-20. (From the summary) **80i:85004b** 85A15
- Perturbations and stability of rotating stars. III. Perturbation theory for eigenvalues. *Monthly Notices Roy. Astronom. Soc.* 190 (1980), no. 1, 21-31. (From the summary) **80i:85004c** 85A15
- Schütze, Dieter Zur Grenzverteilung gewisser Funktionale eindimensionaler Diffusionsprozesse. *Math. Nachr.* 87 (1979), 121-127. (D. A. Darling) **80i:60097** 60J60 (60F05)
- Schützenberger, Marcel Paul Propriétés nouvelles des tableaux de Young. *Séminaire Delange-Pisot-Poitou, 19e année: 1977/78, Théorie des nombres, Fasc. 2, Exp. No. 26, 14 pp.*, Secrétariat Math., Paris, 1978. (Yasuhiro Asao) **80g:20023** 20C99
- A property of finitely generated submonoids of free monoids. *Algebraic theory of semigroups* (Proc. Sixth Algebraic Conf., Szeged, 1976), pp. 545-576, *Colloq. Math. Soc. János Bolyai*, 20, North-Holland, Amsterdam, 1979. (H. Jürgensen) **80i:20045** 20M10
- (with Lascaux, Alain) Croissance des polynômes de Foulkes-Green. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 2, A95-A98. (André Lentini) **80d:20052** 20M05 (05A15, 20C32)
- Sur les sous-groupes de rang fini d'un groupe libre. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 5, A207-A208. (Author's summary) **80m:20026** 20E07
- Schuur, Jerry D. (with Anichini, Giuseppe) A class of nonlinear ordinary differential equations with a "characteristic equation". (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 9-10, 787-790. (Authors' summary) **80c:34034** 34C11



- A class of nonlinear ordinary differential equations which inherit linear-like asymptotic behavior. *Nonlinear Anal.* 3 (1979), no. 1, 81–86 (P. DeKleene) 80b:34037 34C11
- Schubhauer, Wolfram Modellvollständigkeit der Mittelpunktgeometrie und der Theorie der Vektorgruppen. *Abh. Math. Sem. Univ. Hamburg* 48 (1979), 213–224. (L. W. Szczerba) 80i:03022 03B30 (03C65, 51A25)
- Schwabik, Stefan (with Tvrdý, Milan; Vejvoda, Otto) ★Differential and integral equations. Boundary value problems and adjoints. *D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London*, 1979. 248 pp. ISBN 90-277-0802-9 (A. M. Krall) 80b:34003 34-02 (34Bxx, 45-02)
- (with Tvrdý, Milan) On linear problems in the space BV. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977)*, pp. 366–373. *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (James V. Herod) 80m:34013 34B10 (45P05, 49F20)
- (with Tvrdý, Milan) Boundary value problems for generalized linear differential equations. (Russian summary) *Czechoslovak Math. J.* 29(104) (1979), no. 3, 451–477. (I. Kiguradze) 80i:34024 34B05
- Schwalger, Jens Eine Formel von E. Jabotinsky in der Theorie der analytischen Iterationen. *Iterationsprobleme (Graz, 1977)*, *Ber. No. 89*, 11 pp., Forschungszentrum Graz, Graz, 1978. (R. A. Rosenbaum) 80g:32002 32A05 (30C99)
- (with Reich, L.) Über die Funktionalgleichung  $N \circ T = T \circ M$  für formale Potenzreihen. *Aequationes Math.* 19 (1979), no. 1, 66–78. (I. Fenyő) 80i:39011 39B50 (22E05, 39B60, 58F99)
- Schwall, E. Diskret kompakte und konsistente Näherungsoperatoren für schwach singuläre Integraloperatoren. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T444–T446. (Boro Döring) 80a:65275 65R20
- Schwanengel, Ulrich An example of a  $Q$ -minimal precompact topological group containing a nonminimal closed normal subgroup. *Manuscripta Math.* 27 (1979), no. 3, 323–327. (M. I. Kabenjuk) 80b:22002 22A05
- Schwarz, Roland On the spectrum of the Burnside ring. *J. Pure Appl. Algebra* 15 (1979), no. 2, 181–185. (Jean-Louis Loday) 80k:57069 57S15 (20C10)
- Schwartz, A. J. (with Langer, J. S.) Kinetics of nucleation in near-critical fluids. *Phys. Rev. A* (3) 21 (1980), no. 3, 948–958. (Authors' summary) 80m:82046 82A50
- Schwartz, A. L. (with Connell, William C.) The harmonic machinery for eigenfunction expansions. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 2, pp. 429–434. *Proc. Sympos. Pure Math.*, XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979. (From the text) 80k:33010 33A45 (34B25)
- Schwartz, Abu (with Regev, Uri) Estimation of production functions free of specification bias due to aggregation. *Metroeconomica* 30 (1978), no. 1-3, 1–11. (From the introduction) 80j:90069 90B30 (90A20)
- Schwartz, Alan (with Wilde, Louis L.) Equilibrium comparison shopping. *Rev. Econom. Stud.* 46 (1979), no. 3, 543–553. (G. Chichilnisky) 80i:90037 90A14
- Schwartz, Bernd Zur Minimierung konvexer subdifferenzierbarer Funktionen über dem  $\mathbb{R}^n$ . (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 4, 545–557. (Siegfried Schaible) 80e:90085 90C25
- Zur Minimierung diskreter Maximumfunktionen mit Beschränkungen. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* 20 (1978), no. 6, 795–803. (Author's summary) 80g:49018 49A34 (65J10)
- Schwartz, Dietrich Kanonische Abbildungen und Eilenberg-Maschinen. *Z. Math. Logik Grundlag. Math.* 24 (1978), no. 2, 177–186. (G. Asser) 80e:03042 03D05 (03D70, 68F10)
- Beitrag zur algebraischen Rekursionstheorie. *Math. Nachr.* 90 (1979), 249–256. (R. Verbeek) 80b:03082 03D75
- Darstellung der Lewynschen Algebren. *Z. Math. Logik Grundlag. Math.* 25 (1979), no. 1, 53–56. (S. Comer) 80i:03077 03G25
- Untersuchungen über die Banach-Logik. *Z. Math. Logik Grundlag. Math.* 25 (1979), no. 2, 111–118. (Bernad Dahn) 80e:03020 03B50 (03C90)
- Schwartz, Jean-Marie (with Combes, F.; Anantharaman-Delaroche, Claire; Denizeau, Yves; Enock, M.) ★Représentations des groupes localement compacts et applications aux algèbres d'opérateurs. Based on lectures presented at the Séminaire d'Analyse Fonctionnelle held at the Université d'Orléans, Orléans, 1973–1974. With an English summary. *Astérisque*, 55. *Société Mathématique de France, Paris*, 1978. iii + 125 pp. (Dorte Olesen) 80d:46107 46Lxx (22D12, 22D25)
- (with De Cannière, Jean; Enock, Michel) Algèbres de Fourier associées à une algèbre de Kac. *Math. Ann.* 245 (1979), no. 1, 1–22. (Marc A. Rieffel) 80k:43009 43A40 (22D25, 46L99)
- Schwartz, Laurent ★Kurs analizy matematycznej. Tom I. (Polish) [A course on mathematical analysis. Vol. I] Translated from the French and with a preface by Tadeusz Trajdos. *Państwowe Wydawnictwo Naukowe (PWN), Warsaw*, 1979. 692 pp. ISBN 83-01-00964-0 (Editors) 80m:26004 26-01 (00A05)
- See also Martineau, André. 80i:01038 and Séminaire: Goulaouic-Schwartz, 80j:35001
- Schwartz, Lionel Orientabilité du fibré de Hopf complexe dans la théorie cohomologique associée à la  $K$ -théorie d'un corps fini. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 15, A727–A730. (Author's summary) 80m:55024 55R50 (55P47)
- Schwartz, Nancy L. (with Kamien, Morton I.) Optimal exhaustible resource depletion with endogenous technical change. *Rev. Econom. Stud.* 45 (1978), no. 1, 179–196. (From the introduction) 80m:90034 90A16
- Schwartz, Thomas Necessary truth as analyticity, and the eliminability of monadic de re formulas. *Notre Dame J. Formal Logic* 20 (1979), no. 2, 336–340. (Wiesław Dziobiak) 80i:03013 03A05 (03B45)
- Schwarz, A. S. See Švarc, A. S.
- Schwarz, Binyamin Injective differential systems. *Illinois J. Math.* 22 (1978), no. 4, 610–622. (John R. Graef) 80e:34004 34A20
- Schwarz, G. F. On some extensions of intuitionistic type theory. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 3, 31–34, 85. (Constantin Milić) 80i:03068 03F55
- Schwarz, Gerald W. Representations of simple Lie groups with regular rings of invariants. *Invent. Math.* 49 (1978), no. 2, 167–191. (V. L. Popov) 80m:14032 14L30 (14D25, 15A72, 20G05, 22E45)
- Representations of simple Lie groups with a free module of covariants. *Invent. Math.* 50 (1978/79), no. 1, 1–12. (V. L. Popov) 80e:14008 14D25 (15A72, 20G05)
- Schwarz, Hans-Rudolf Zur Eigenwertaufgabe  $Ax = \lambda Bx$ . (English summary) *Numerische Behandlung von Eigenwertaufgaben (Tagung, Tech. Univ. Clausthal, Clausthal, 1978)*, pp. 161–175. *Internat. Schriftenreihe Numer. Math.*, 43, Birkhäuser, Basel, 1979. (Author's summary) 80m:65031 65F15
- The method of conjugate gradients in finite element applications. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 2, 342–354. (From the introduction) 80e:65046 65F10
- Schwarz, Hans-Ulrich A characterization of  $(p, q)$ -absolutely summing operators. *Beiträge Anal.* No. 13 (1979), 143–145. (N. Tomczak-Jaegermann) 80m:47020 47B10
- Schwarz, Helmut ★Zeitdiskrete Regelungssysteme. Einführung. *Akademie-Verlag, Berlin*, 1979. 150 pp. (Vadim Komkov) 80e:93001 93-01
- Schwarz, John H. (with Scherk, J.) How to get masses from extra dimensions. *Nuclear Phys. B* 153 (1979), no. 1-2, 61–88. (Authors' summary) 80d:81151 81M05 (83E15)
- Schwarz, Stefan Semigroups containing maximal ideals. (Russian summary) *Math. Slovaca* 28 (1978), no. 2, 157–168. (O. Steinfeld) 80i:20102 20M12
- A theorem on binary relations and infinite regular languages. *Semigroup Forum* 17 (1979), no. 4, 307–316. (H. Jürgensen) 80i:20057 20M35 (68D30, 68F10)
- Schwarz, Wolfgang Vanishing sums of roots of unity. *Elem. Math.* 33 (1978), no. 6, 141–143. (S. Znám) 80a:10052 10F37
- Some applications of Elliott's mean-value theorem. *J. Reine Angew. Math.* 307/308 (1979), 418–423. (O. P. Stackelberg) 80m:10040 10K20 (10H25)
- (with Kopetzky, H. G.) Two conjectures of B. R. Santos concerning totatives. *Math. Comp.* 33 (1979), no. 146, 841–844. (Paul Hartung) 80i:10009 10A20 (10H25)
- Periodic, multiplicative number-theoretical functions. *Monatsh. Math.* 87 (1979), no. 1, 65–67. (F. J. Papp) 80e:10008 10A22
- Kosmann-Schwarzhach, Yvette See Kosmann-Schwarzhach, Yvette
- Schwarzenbach, H. (with Fässler, A.) Symmetriegerechte Polynome von Punktgruppen. (English summary) *Z. Angew. Math. Phys.* 30 (1979), no. 2, 190–200. (D. Ž. Đoković) 80b:22005 22C05 (20C30, 22E70)
- Schwarzmeier, James L. (with Symon, Keith R.) Variational nature of eigenvalue problems with a parameter. *J. Math. Phys.* 20 (1979), no. 6, 979–983. (J. Hersch) 80e:49035 49G05 (82A45)
- Schweiger, F. A modified Jacobi-Perron algorithm with explicitly given invariant measure. *Ergodic theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1978)*, pp. 199–202. *Lecture Notes in Math.*, 729, Springer, Berlin, 1979. (Paul Milnes) 80i:28035 28D05
- Schweiger, D. On semigroups of polynomial functions. *Semigroup Forum* 18 (1979), no. 1, 5–8. (David M. Clark) 80j:08002 08A40 (20M99)
- Schweitzer, Paul A. (with Whitman, Andrew P.) Pontryagin polynomial residues of isolated foliation singularities. *Differential topology, foliations and Gelfand-Fuks cohomology (Proc. Sympos., Pontificia Univ. Católica, Rio de Janeiro, 1976)*, pp. 95–103. *Lecture Notes in Math.*, 652, Springer, Berlin, 1978. (Connor Lazarov) 80a:57015 57R30
- Schweitzer, Paul J. (with Federgrün, A.) Discounted and undiscounted value-iteration in Markov decision problems: a survey. *Dynamic programming and its applications (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 23–52. *Academic Press, New York*, 1978. (Authors' summary) 80e:90118 90C40
- (with Federgrün, A.; Tijms, H. C.) Contraction mappings underlying undiscounted Markov decision problems. *J. Math. Anal. Appl.* 65 (1978), no. 3, 711–730. (S. K. Srinivasan) 80i:90142 90C40
- (with Federgrün, A.) The functional equations of undiscounted Markov renewal programming. *Math. Oper. Res.* 3 (1978), no. 4, 308–321. (Paul J. Schweitzer) 80a:90144 90C40
- (with Federgrün, A.) Geometric convergence of value-iteration in multichain Markov decision problems. *Adv. in Appl. Probab.* 11 (1979), no. 1, 188–217. (É. I. Kistauri) 80b:90133 90C40
- (with Merlin, Philip M.) Deadlock avoidance in store-and-forward networks. I. Store-and-forward deadlock. *IEEE Trans. Comm.* 28 (1980), no. 3, 345–354. (Authors' summary) 80m:68010a 68A05 (68C15)
- (with Merlin, Philip M.) Deadlock avoidance in store-and-forward networks. II. Other deadlock types. *IEEE Trans. Comm.* 28 (1980), no. 3, 355–360. (Authors' summary) 80m:68010b 68A05 (68C15)
- Schweizer, B. (with Moynihan, Richard) Betweenness relations in probabilistic metric spaces. *Pacific J. Math.* 81 (1979), no. 1, 175–196. (Georghe Bocsan) 80m:54045 54E99
- Schweizer, Urs (with Müller, Heinz) Temporary equilibrium in a money economy. *J. Econom. Theory* 19 (1978), no. 2, 267–286. (John Roberts) 80i:90031 90A14 (90A16)
- A spatial version of the nonsubstitution theorem. *J. Econom. Theory* 19 (1978), no. 2, 307–320. (Wolfgang Mayer) 80e:90038 90A16
- Schwenk, A. J. (with Harary, Frank) Generalized Ramsey theory for graphs. VII. Ramsey numbers for multigraphs and networks. *Networks* 8 (1978), no. 3, 209–216. (Authors' summary) 80a:05149 05C55
- Schwerdtfeger, Hann See Herglotz, Gustav. 80h:01040
- Schwertman, Neil C. A note on the Geisser-Greenhouse correction for incomplete data split-split analysis. *J. Amer. Statist. Assoc.* 73 (1978), no. 362, 393–403. (C. G. Khatri) 80a:62111 62J10
- Schweilck, Hubert ★Numerische Lösung nichtlinearer Gleichungen. *Mathematik für Naturwissenschaft und Technik*, 17. *VEB Deutscher Verlag der Wissenschaften, Berlin*, 1979. 346 pp. (W. Niethammer) 80i:65061 65H10
- Schwiebgen, Helmut On bar recursion of types 0 and I. *J. Symbolic Logic* 44 (1979), no. 3, 325–329. (Horst Luckhardt) 80e:03081 03F10 (03F65)
- Schwiez, K.-P. Existenz und Eindeutigkeit der Görtler-Funktionen. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T324–T325. (W. O. Crimale, Jr.) 80i:76036 76D10 (65L10)
- Abschätzungen für die "Görtler-Funktionen". *Z. Angew. Math. Mech.* 59 (1979), no. 5, T267–T269. (W. O. Crimale, Jr.) 80i:76031 76N05
- Schwinger, Julian (with Milton, Kimball A.; DeRaad, Lester L., Jr.) Casimir self-stress on a perfectly conducting spherical shell. *Ann. Physics* 115 (1978), no. 2, 388–403. (L. G. Chambers) 80e:78025 78A99 (81L05)
- Multipinor basis of Fermi-Bose transformations. *Ann. Physics* 119 (1979), no. 1,

- 192-237. (From the summary) **80g:81037** 81D99
- Schwinn, Hans** Sammierbarkeit von Orthogonalreihen durch Euler-Verfahren und Linearkombinationen von Euler-Verfahren. *Mitt. Math. Sem. Giessen* No. 141 (1979), ii+65 pp. (L. Leindler) **80h:42026** 42C05 (42A24)
- Sciore, E.** (with Tang, A.) Admissible coherent c.p.o.'s. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978)*, pp. 440-456, *Lecture Notes in Comput. Sci.*, 62, Springer, Berlin, 1978. (Henner Kröger) **80d:68106** 68F20
- (with Tang, A.) Computability theory in admissible domains. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 95-104, ACM, New York, 1978. (Giuseppe Longo) **80f:68056** 68C30 (03D05, 68B10)
- Sciate, S.** (with Marinucci, T.) Quantization of the conservation laws in the supersymmetric sine-Gordon model. *Nuclear Phys. B* 156 (1979), no. 1, 144-156. (V. E. Korepin) **80j:81049** 81E10
- (with Olive, David; Crewther, R. J.) Instantons in field theory. *Riv. Nuova Cimento* (3) 2 (1979), no. 8, 1-117. (James D. Fabrey) **80h:81105** 81E10
- (with d'Auria, R.; Regge, T.) A general scheme for bidimensional models with associated linear set. *Phys. Lett. B* 89 (1980), no. 3-4, 363-366. (Stanly L. Steinberg) **80h:81061** 81E99
- Sclove, Stanley L.** Testing independence of variates in an infinitely divisible random vector. *J. Multivariate Anal.* 8 (1978), no. 3, 479-485. (Author's summary) **80b:62067** 62H15
- Scott, Alwyn C.** (with McLaughlin, D. W.) Soliton perturbation theory. *Nonlinear evolution equations solvable by the spectral transform (Internat. Sympos., Accad. Lincei, Rome, 1977)*, pp. 225-243, *Res. Notes in Math.*, 26, Pitman, London, 1978. (From the introduction) **80d:81098** 81E99 (35Q99)
- Sine-Gordon breather dynamics. Special issue on solitons in physics. *Phys. Scripta* 20 (1979), no. 3-4, 509-513. (Brian DeFacio) **80j:81019** 81C05 (35Q20)
- Scott, C. H.** (with Jefferson, T. R.) A duality approach to discrete time control theory. *J. Austral. Math. Soc. Ser. B* 20 (1977/78), no. 3, 257-264. (J. C. Allwright) **80h:93102** 93C55 (49B99, 90C25)
- (with Jefferson, T. R.) On finding a point in the relative interior of a polyhedral set and degeneracy in geometric programming. *J. Austral. Math. Soc. Ser. B* 20 (1977/78), no. 4, 487-494. (Authors' summary) **80c:90125** 90C25
- (with Jefferson, T. R.) Generalized geometric programming applied to problems of optimal control. I. Theory. *J. Optim. Theory Appl.* 26 (1978), no. 1, 117-129. (Nobuo Sannomiya) **80b:90142a** 90C50
- (with Jefferson, T. R.) Characterizations of optimality for continuous convex mathematical programs. I. Linear constraints. *J. Austral. Math. Soc. Ser. B* 21 (1979/80), no. 1, 37-44. (Jean-Pierre Crouzeix) **80g:90097** 90C25
- (with Jefferson, T. R.; Lederer, B. R.) Complementary variational principles via generalized geometric programming. *J. Math. Anal. Appl.* 69 (1979), no. 2, 489-495. (From the introduction) **80h:90132** 90C30 (90C25)
- (with Jefferson, T. R.) Errata corrigé: "Generalized geometric programming applied to problems of optimal control. I. Theory" [*J. Optim. Theory Appl.* 26 (1978), no. 1, 117-129; MR 80b:90142]. *J. Optim. Theory Appl.* 30 (1980), no. 1, 149. (Editors) **80b:90142b** 90C50
- Scott, D. S.** (with Parlett, B. N.) The Lanczos algorithm with selective orthogonalization. *Math. Comp.* 33 (1979), no. 145, 217-238. (Colette Lebaud) **80c:65090** 65F15
- How to make the Lanczos algorithm converge slowly. *Math. Comp.* 33 (1979), no. 145, 239-247. (Colette Lebaud) **80c:65091** 65F15
- Scott, Dana S.** See Higher set theory. **80a:03005** and *Applications of sheaves*, **80j:18001**
- Scott, J. F.** (with Crighton, D. G.) Asymptotic solutions of model equations in nonlinear acoustics. *Philos. Trans. Roy. Soc. London Ser. A* 292 (1979), no. 1389, 101-134. (James Geer) **80h:76040** 76Q05 (35C20, 35Q99)
- Scott, L. Ridgway** (with Dupont, Todd) Constructive polynomial approximation in Sobolev spaces. Recent advances in numerical analysis (*Proc. Sympos., Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1978*), pp. 31-44, *Publ. Math. Res. Center Univ. Wisconsin*, 41, Academic Press, New York, 1978. (J. Albricht) **80j:41055** 41A65 (46E35)
- (with Bramble, James H.) Simultaneous approximation in scales of Banach spaces. *Math. Comp.* 32 (1978), no. 144, 947-954. (J. R. Rice) **80a:65222** 65N30 (46M35)
- Applications of Banach space interpolation to finite element theory. *Functional analysis methods in numerical analysis (Proc. Special Session, Annual Meeting, Amer. Math. Soc., St. Louis, Mo., 1977)*, pp. 298-318, *Lecture Notes in Math.*, 701, Springer, Berlin, 1979. (William W. Hager) **80b:65139** 65N30
- (with Douglas, Jim, Jr.; Dupont, Todd; Percell, Peter) A family of  $C^1$  finite elements with optimal approximation properties for various Galerkin methods for 2nd and 4th order problems. (French summary) *RAIRO Anal. Numér.* 13 (1979), no. 3, 227-255. (Reinhard Scholz) **80b:65087** 65N30
- Scott, Leonard L.** (with Goldschmidt, David M.) A problem of W. A. Manning on primitive permutation groups. *Math. Z.* 161 (1978), no. 2, 97-100. (Shiro Iwasaki) **80a:20004** 20B05 (20B15)
- Scott, Paul R.** Two inequalities for convex sets in the plane. *Bull. Austral. Math. Soc.* 19 (1978), no. 1, 131-133. (Jacques Dubois) **80b:52005** 52A10 (52A40, 70B15)
- Convex sets and the hexagonal lattice. *Math. Mag.* 51 (1978), no. 4, 237-238. (H. E. Debrunner) **80a:52013** 52A43
- (with Arkinstall, J. R.) An isoperimetric problem with lattice point constraints. *J. Austral. Math. Soc. Ser. A* 27 (1979), no. 1, 27-36. (Erwin Lutwak) **80h:52011** 52A40 (10E05)
- Scott, Philip J.** The "Dialectica" interpretation and categories. *Z. Math. Logik Grundlag. Math.* 24 (1978), no. 6, 553-575. (M. Makkai) **80m:03091** 03F10 (18A15)
- Scott, Richard A.** (with Dolph, Charles L.) Recent developments in the use of complex singularities in electromagnetic theory and elastic wave propagation. *Electromagnetic scattering*, pp. 503-570, Academic Press, New York, 1978. (Rolf Leis) **80h:78001** 78-02 (35-02, 35C99)
- Scott, Ridgway** See Scott, L. Ridgway
- Scott, S. D.** A construction of monogenic near-ring groups, and some applications. *Bull. Austral. Math. Soc.* 19 (1978), no. 1, 1-4. (Gordon Mason) **80a:16051** 16A76
- Scott, T.** Computation of scattering functions in second-order many-body theory. *J. Comput. Phys.* 33 (1979), no. 3, 369-381. (A. Terry Amos) **80m:81069** 81F05
- Scott, W. H.** (with Wilson, H. L.; Pomraning, G. C.) Neutron transport in moving media. *SIAM J. Appl. Math.* 36 (1979), no. 2, 230-262. (A. Belloni-Morante) **80b:82052** 82A75 (45K05)
- Scott, W. R.** Primitive groups of degree 42. *J. London Math. Soc.* (2) 19 (1979), no. 1, 53-56. (David B. Surowski) **80d:20003** 20B10
- Scotti, Fernanda** (with Torre, Anna) Characterizations of the line graph of BIB designs. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 3, 660-666. (N. Iu) **80g:05058** 05C99 (05B05)
- Scott-Jones, D. F. A.** (with MacFarlane, Alistair G. J.) Vector gain. *Internat. J. Control* 29 (1979), no. 1, 65-91. (Authors' summary) **80b:93128** 93D99
- Scotzafava, Romano** On finitely additive probability measures. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 175-180, Reidel, Dordrecht, 1978. (V. M. Klimkin) **80j:28007** 28A12
- Serfaty, R. E.** (with Knibb, D.) A collocation method for the numerical solution of non-linear parabolic partial differential equations. *J. Inst. Math. Appl.* 22 (1978), no. 3, 305-315. (Authors' summary) **80a:65238** 65N35
- Some new methods for stiff differential equations. *Internat. J. Comput. Math.* 7 (1979), no. 1, 55-63. (Author's summary) **80b:65103** 65L05
- (with Knibb, D.) A note on the numerical solution of nonlinear parabolic equations in Chebyshev series. *Internat. J. Comput. Math.* 7 (1979), no. 3, 217-225. (Author's summary) **80g:65120** 65N99
- Serfling, Christoph J.** Heinrich Hermelink in memoriam. (German) *Historia Math.* 6 (1979), no. 3, 233-235 (1 plate). (Editors) **80m:01035b** 01A70
- Serfling, D. F.** (with Al-Saadi, S. D.; Young, D. H.) Tests for independence of exponential variables. *J. Statist. Comput. Simulation* 9 (1979), no. 3, 217-233. (Author's summary) **80i:62019** 62F04 (62G10)
- Scudellaro, P.** (with de Ritis, R.; Pisello, Daniel M.; Platania, G.) A variational formulation for the Newtonian cosmology. (Italian summary) *Nuovo Cimento B* (11) 54 (1979), no. 2, 446-454. (Authors' summary) **80m:83052** 83F05
- Scudo, Francesco M.** See Golden age of theoretical ecology: 1923-1940, **80c:01021**
- Selivkova, O. A.** (with Zamahovskii, M. P.; Željakova, Z. N.) Semiquadraternonice elliptic and pseudoelliptic spaces. (Russian) *Geometry*, pp. 31-40, Leningrad. Gos. Ped. Inst., Leningrad, 1977. (D. B. Persic) **80g:53039** 53C35 (15A33)
- Sea, Z.** See Cea, Jean
- Seah, E.** (with Williams, H. C.) Some primes of the form  $(a^n - 1)/(a - 1)$ . *Math. Comp.* 33 (1979), no. 148, 1337-1342. (H. J. Godwin) **80g:10014** 10A25
- Searcy, J. L.** (with Troesch, B. A.) A cyclic inequality and a related eigenvalue problem. *Pacific J. Math.* 81 (1979), no. 1, 217-226. (Authors' summary) **80f:15019** 15A39 (26D15, 65F15)
- Searle, S. R.** (with Henderson, Harold V.) Vec and vech operators for matrices, with some uses in Jacobians and multivariate statistics. (French summary) *Canad. J. Statist.* 7 (1979), no. 1, 65-81. (H. Neudecker) **80j:15016** 15A69 (62H99)
- (with Henderson, Harold V.) Dispersion matrices for variance components models. *J. Amer. Statist. Assoc.* 74 (1979), no. 366, part 1, 465-470. (Friedrich Pukelsheim) **80h:62054** 62J10
- On inverting circulant matrices. *Linear Algebra Appl.* 25 (1979), 77-89. (Frank J. Hall) **80i:15005** 15A09
- Sears, D. B.** (with Ridley, J. N.) Asymptotic and exact analytic formulae for enumerating modules. *Arch. Math. (Basel)* 32 (1979), no. 2, 149-154. (W. Narkiewicz) **80g:10045** 10H26
- Sears, M.** Shiftlike approximations and topological mixing. *Quaestiones Math.* 3 (1978/79), no. 3, 181-188. (Richard K. Williams) **80c:54051** 54H20
- (with Keynes, H. B.)  $\mathfrak{S}$ -expansive transformation groups. *General Topology Appl.* 10 (1979), no. 1, 67-85. (Karl Petersen) **80f:54039** 54H20
- Seatzu, S.** An expression of the remainder, in a nonintegral form, in the quadrature formulas. (Italian. English summary) *Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* 112 (1978), no. 5-6, 313-324. (Gheorghe Coman) **80i:65030** 65D32
- On the construction of the best approximation of linear functionals in the sense of Sard. (Italian. English summary) *Calcolo* 15 (1978), no. 2, 171-179. (Bl. Sendov) **80h:41016** 41A50
- (with Besenghi, R.) Considerations about the estimation of the remainder for quadrature and cubature formulas. (Italian. English summary) *Rend. Sem. Fac. Sci. Univ. Cagliari* 48 (1978), no. 3-4, 385-403. (Marc Duc-Jacquet) **80c:65034** 65D32
- Sebakhy, O. A.** (with Abdel-Moneim, T. M.) State regulation in linear discrete-time systems in minimum time. *IEEE Trans. Automat. Control* 24 (1979), no. 1, 84-94. (Authors' summary) **80b:93057** 93B99
- (with Sorial, N. N.) Optimization of linear multivariable systems with prespecified closed-loop eigenvalues. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 355-357. (Authors' summary) **80b:93110** 93D99 (49G05)
- Comments on: "Optimal observers with specified eigenvalues" [*Internat. J. Control* 27 (1978), no. 2, 239-244; MR 57 #5234] by K. Ramar and V. Gourishankar. *Internat. J. Control* 29 (1979), no. 6, 1081-1082. (From the text) **80h:93018** 93B05
- Sebald, Anthony V.** Toward a computationally efficient optimal solution to the LOG discrete-time dual control problem. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 535-540. (Hsi-han Yeh) **80j:93140** 93E20
- Sebastian, Hans-Jürgen** Theorie zur numerischen Behandlung einer erweiterten Bellmanschen Funktionalgleichung der diskreten dynamischen Optimierung. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 2, 221-239. (Klaus Glaschoff) **80f:90141** 90C39
- Sebastiani, Marco** Monodromie et polynôme de Bernstein, d'après Malgrange. *Fonction de plusieurs variables complexes, III (Sém. François Norguet, 1975-1977)*, pp. 370-381, *Lecture Notes in Math.*, 670, Springer, Berlin, 1978. (J. S. Joel) **80h:32025** 32C40 (14D05)
- Sebbah, Ahmed** Prolongement des solutions d'un opérateur différentiel d'ordre infini. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 15, A735-A738. (Author's summary) **80k:32003** 32A15 (32D10, 46F10)
- Seberry, Jennifer** (with Kirton, H. C.) Generation of a frequency square orthogonal to a  $10 \times 10$  Latin square. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial*



- Theory, Australian Nat. Univ., Canberra, 1977, pp. 193-198, Lecture Notes in Math., 686, Springer, Berlin, 1978. (E. Seiden) 80m:05018 05B15 (05-04)*
- A computer listing of Hadamard matrices. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977), pp. 275-281, Lecture Notes in Math., 686, Springer, Berlin, 1978. (A. L. Whiteman) 80c:05048 05B20*
- (with Wehrhahn, K.) A class of codes generated by circulant weighing matrices. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977), pp. 282-289, Lecture Notes in Math., 686, Springer, Berlin, 1978. (D. W. Erbach) 80d:94023 94B25 (05B15)*
- (with Robinson, P. J.) A note on using sequences to construct orthogonal designs. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II, pp. 911-932, Colloq. Math. Soc. János Bolyai, 18, North-Holland, Amsterdam, 1978. (K. Vijayan) 80c:05038 05B15*
- (with Eades, Peter) Some asymptotic results for orthogonal designs. II. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 119-121, Colloques Internat. CNRS, 260, CNRS, Paris, 1978. (Bhagwandas) 80j:05033 05B30*
- A class of group-divisible designs. *Ars Combin. 6 (1978), 151-152. (Rudolf Mathon) 80c:05032 05B05 (05B25)*
- On skew Hadamard matrices. *Ars Combin. 6 (1978), 255-275. (A. L. Whiteman) 80c:05044 05B20*
- (with Nemeth, Evi; Shu, Michael) On the distribution of the permanent of cyclic (0, 1) matrices. *Utilitas Math. 16 (1979), 171-182. (R. A. Brualdi) 80m:15004 15A15 (05A15)*
- See also *Combinatorial mathematics, 80c:05001*
- Sebesta, Robert W. (with Jones, Neil D.) Parsers for indexed grammars. *Internat. J. Comput. Inform. Sci. 7 (1978), no. 4, 345-359. (Anton Nijholt) 80b:68103 68F25*
- Sebestyén, L. (with Mikolás, M.) A new approximate method for solving some ordinary nonlinear differential equations of higher order. *Z. Angew. Math. Mech. 58 (1978), no. 7, T388-T389. 80c:65179 65L99*
- Sebestyén, Z. Every  $C^*$ -seminorm is automatically submultiplicative. *Period. Math. Hungar. 10 (1979), no. 1, 1-8. (L. Narici) 80c:46065 46K05*
- Seberg, D. E. (with Iwai, Z.; Fisher, D. Grant; Kobayashi, N.) Decoupling of linear time-varying systems with time delays in the control variables or state variables. *Internat. J. Control 28 (1978), no. 6, 869-888. (Authors' summary) 80a:93014 93A15*
- (with Shah, S. L.; Fisher, D. Grant) Design and application of controllers and observers for disturbance minimization and pole assignment. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control 102 (1980), no. 1, 21-27. (Authors' summary) 80m:93017 93B05 (93B07)*
- Secomb, T. W. (with Rosenblat, S.) Torsional oscillations of a non-Newtonian fluid with a free surface. *J. Fluid Mech. 93 (1979), no. 4, 767-780. (R. K. Gupta) 80k:76004 76A05*
- Seda, Anthony Karel Transformation groupoids and bundles of Banach spaces. *Cahiers Topologie Géom. Différentielle 19 (1978), no. 2, 131-146. (G. L. Litvinov) 80k:58011 58B25 (28C10)*
- Quelques résultats dans la catégorie des groupoides d'opérateurs. (English summary) *C. R. Acad. Sci. Paris Sér. A-B 288 (1979), no. 1, A21-A24. (Authors' summary) 80b:22005 22A25 (58D99)*
- Seda, V. A partially ordered space connected with the de la Vallée Poussin problem. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977), pp. 374-383, Lecture Notes in Math., 703, Springer, Berlin, 1979. (Johannes Elschner) 80g:34014 34B10 (34B15)*
- Sedenko, V. I. The normal form of nonlinear partial differential equations on the real axis. (Russian) *Mat. Sb. (N.S.) 105(147) (1978), no. 1, 121-127, 144. (J. Chrastina) 80b:35006 35A30 (34G20, 58F05)*
- Sedgewick, Robert (with Guibas, Leo J.) A dichromatic framework for balanced trees. *19th Annual Symposium on Foundations of Computer Science (Ann Arbor, Mich., 1978), pp. 8-21, IEEE, Long Beach, Calif., 1978. (Authors' summary) 80c:68168 68E10 (68H05)*
- Sedlář-Truková, Věra Behaviour of machines in categories. *Comment. Math. Univ. Carolin. 20 (1979), no. 2, 267-282. (Authors' summary) 80c:68152 68D30 (18B20)*
- Sedwick, A. M. On completeness of the systems  $\{\exp(ix(n+ih_k))\}$ . (Russian summary) *Anal. Math. 4 (1978), no. 2, 125-143. (J. Németh) 80g:42021 42C30*
- Bases consisting of exponentials in  $E^p$  spaces on convex polygons. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat. 42 (1978), no. 5, 1101-1119, 1183. (D. M. Campbell) 80d:30003 30B60 (30D55)*
- The difference of the excesses of two systems of exponential functions. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst. No. 357 (1978), 98-102. (M. I. Nagnibida) 80j:42026 42A65*
- Sedvin-Sedoi, M. Z. See Litvin-Sedoi, M. Z.
- Sedov, A. N. (with Kuz'min, N. N.; Korotnik, Ju. Ja.) Identification of functions with orthogonal properties by the group method of data handling. *Avtomatika 1979, no. 2, 46-54. (Russian. English summary); translated as Soviet Automat. Control 12 (1979), no. 2, 38-45. (Authors' summary) 80m:93024 93B30 (93E12)*
- Sedov, Ju. B. (with Novikov, E. A.) Stochastic properties of a four-vortex system. *Ž. Éksp. Teoret. Fiz. 75 (1978), no. 3, 868-876. (Russian); translated as Soviet Phys. JETP 48 (1978), no. 3, 440-444. (1979). (J. L. Lumley) 80g:76026 76F99 (34F05, 35Q99, 58F13, 60G60)*
- Sedov, L. I. On a natural theory of continuous media. *Prikl. Mat. Meh. 41 (1977), no. 6, 971-984. (Russian); translated as J. Appl. Math. Mech. 41 (1977), no. 6, 991-1002. (1979). (A. Morro) 80f:80013 83C10 (73B99)*
- See also *Mechanics of solid deformable bodies, 80d:73006 and Mechanics of solid deformable bodies, 80d:73007*
- Sedov, Yu. B. See Sedov, Ju. B.
- Sedransk, J. (with Singh, Bahadur) Sample size selection in regression analysis when there is nonresponse. *J. Amer. Statist. Assoc. 73 (1978), no. 362, 362-365. (David Bellhouse) 80c:62018 62D05 (62F15, 62J05)*
- Sedukhin, E. V. (with Petekskaja, N. A.) Minimax designs of regression experiments with account taken of systematic error. (Russian. English summary) *Kibernetika (Kiev) 1978, no. 4, 126-130. (Ivar Petersen) 80a:62117 62K05 (62J05)*
- (with Bure, V. M.) Procedures that are unbiased in the  $L_2$ -metric for the design and analysis of regression experiments. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom. 1978, vyp. 3, 53-57, 156. (H. Bandemer) 80d:62060 62K05*
- Sedzimir, Zbigniew List description of rooted trees. (Polish. English and Russian summaries) *Prace Nauk. Inst. Cybernet. Tech. Wrocław. Ser. Stud. Materialy No. 22 Grafy w Teor. System. (1977), 47-58. (M. M. Sysło) 80f:68077 68E10 (05C05)*
- Sedziwy, Stanisław Boundedness of solutions of an  $n$ th order nonlinear differential equation. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur. (8) 64 (1978), no. 4, 363-366. (W. J. Kim) 80a:34050 34C11 (34C25)*
- Seebach, J. Arthur, Jr. (with Steen, Lynn Arthur) ★Counterexamples in topology. Second edition. *Springer-Verlag, New York-Heidelberg, 1978. xi + 244 pp. ISBN 0-387-90312-7 (Editors) 80a:54001 54-01*
- Seelberg, O. A new proof of the constructibility of local equilibrium ensembles. *Phys. A 94 (1978), no. 3-4, 605-614. (Authors' summary) 80d:82023 82A05 (49A99)*
- On master operators with extremal entropy production. *Z. Naturforsch. A 33 (1978), no. 10, 1122-1132. (Etang Chen) 80a:82027 82A30 (47B99)*
- On the derivation of entropy conserving equations for commuting macroobservables. *Phys. A 95 (1979), no. 3, 581-596. (Koichiro Matsuno) 80d:82033 82A15 (47A99, 82A30)*
- Seeländer, Jürg Über die Verschärfung von Schnitten bei modifizierten Gomory-Verfahren. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim. 9 (1978), no. 2, 171-183. (Authors' summary) 80f:90077 90C05*
- Einige Bemerkungen zur Bestimmung des Schnitttranges in der ganzzahligen linearen Optimierung. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim. 9 (1978), no. 3, 321-334. (Caaba Fabian) 80c:90070 90C10*
- Seeley, R. A sharp asymptotic remainder estimate for the eigenvalues of the Laplacian in a domain of  $\mathbb{R}^2$ . *Adv. in Math. 29 (1978), no. 2, 244-269. (Alan Weinstein) 80a:35096 35P20 (58G25)*
- (with Bott, Raoul) Some remarks on the paper of Callias: "Axial anomalies and index theorems on open spaces" [Comm. Math. Phys. 62 (1978), no. 3, 213-234; MR 80h:58045a]. *Comm. Math. Phys. 62 (1978), no. 3, 235-245. (J. H. Rawnsley) 80h:58045b 58G10 (81E10)*
- Seelig, F. F. (with Denzel, B.) Calculation of separatrixes in multistable chemical reaction systems. *Z. Naturforsch. A 33 (1978), no. 11, 1341-1345. (J. R. Ockendon) 80a:65163 65L07 (34C35, 80A30)*
- Seely, Justus A complete sufficient statistic for the linear model under normality and a singular covariance matrix. *Comm. Statist. A—Theory Methods 7 (1978), no. 15, 1465-1473. (Lubomir Kubáček) 80c:62083 62J05 (62B05)*
- Seervank, D. L. (with Mishra, K. K.) On absolute Nörlund summability of Laplace series. *Math. Ed. (Siwan) 13 (1979), no. 2, 21-26. (Authors' summary) 80j:40010 40C05*
- Seese, Detlef G. Decidability and generalized quantifiers. *Logic Colloquium '77 (Proc. Conf., Wrocław, 1977), pp. 229-237, Studies in Logic and Foundations of Math., 96, North-Holland, Amsterdam, 1978. (A. B. Slomson) 80b:03046 03C80 (03B25)*
- A remark to the undecidability of well-orderings with the Hájek quantifier. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys. 26 (1978), no. 12, 951 (1979). (Editors) 80b:03014 03B25*
- Seetharaman, M. (with Khalil, M. A. K.) Fisk-Tait equation for spin-3/2 particles. *Phys. Rev. D (3) 18 (1978), no. 8, 3040-3044. (V. V. Sokolov) 80c:81137 81M05 (35A30, 58G35, 81E99)*
- Sefer, S. Z. (with Borovskii, Ju. E.) A theorem of Chern-Kuiper. (Russian) *Sibirsk. Mat. Ž. 19 (1978), no. 6, 1386-1387, 1440. (K. Svoboda) 80b:53062 53C45*
- Conformal correspondence of metrics and the smoothness of isometric immersions. (Russian) *Sibirsk. Mat. Ž. 20 (1979), no. 2, 397-401, 460. (J. Vilms) 80j:53024 53B20 (53C42)*
- Seftel, Z. G. (with Kovalenko, I. P.; Roitberg, Ja. A.) The Green function of general inhomogeneous boundary value problems for systems elliptic in the sense of Douglas and Nirenberg. (Russian) *Ukrain. Mat. Ž. 30 (1978), no. 5, 664-668, 717. (Authors' summary) 80c:35033 35J55*
- (with Roitberg, Ja. A.) Optimal control of systems described by general elliptic problems. (Russian) *Differential'nye Uravnenija 15 (1979), no. 6, 1075-1087, 1150. (L. von Wolfersdorf) 80j:49008 49A22 (35J40, 49B22)*
- Segal, A. On the numerical solution of the Stokes equations using the finite element method. *Comput. Methods Appl. Mech. Engrg. 19 (1979), no. 2, 165-185. (R. A. Nicolaides) 80i:65126 65N30 (65P05)*
- Segal, Daniel (with Grunewald, Fritz J.) A note on arithmetic groups. *Bull. London Math. Soc. 10 (1978), no. 3, 297-302. (J. E. Humphreys) 80c:20061 20G30 (22E40)*
- Two theorems of polycyclic groups. *Math. Z. 164 (1978), no. 2, 185-187. (John F. Bowers) 80a:20040 20F16 (20G25)*
- (with Grunewald, Fritz J.; Pickel, P. F.) Finiteness theorems for polycyclic groups. *Bull. Amer. Math. Soc. (N.S.) 1 (1979), no. 3, 575-578. (Kenneth S. Brown) 80a:20026 20E15*
- Congruence topologies in commutative rings. *Bull. London Math. Soc. 11 (1979), no. 2, 186-190. (Chin-Pi Lu) 80j:13018 13J99 (22A05)*
- Segal, David M. The cooperations of  $MU_*(CP^\infty)$  and  $MU_*(HP^\infty)$  and the primitive generators. *J. Pure Appl. Algebra 14 (1979), no. 3, 315-322. (Nobuaki Yagita) 80j:55006 55N22 (55S25)*
- Segal, Graeme (with James, I. M.) On equivariant homotopy type. *Topology 17 (1978), no. 3, 267-272. (G. E. Bredon) 80a:55045 55P99 (55M99, 55P10, 57S10)*
- Classifying spaces related to foliations. *Topology 17 (1978), no. 4, 367-382. (D. B. Fuchs) 80h:57036 57R30*
- Segal, I. E. General properties of the Yang-Mills equations in physical space. *Proc. Nat. Acad. Sci. U.S.A. 75 (1978), no. 10, 4638-4639. (J. E. Marsden) 80a:58011 58D07 (58D25, 58D30, 81E10)*
- Some recent tests of the chronometric cosmology. *Proc. Nat. Acad. Sci. U.S.A. 77 (1980), no. 1, part 1, 10-13. (Kenneth Dunn) 80m:85006 85A40*
- Segal, Jack Refinable maps on 2-manifolds. Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977), I. *Topology Proc. 2 (1977), no. 1, 261-263. (John G. Hocking) 80m:57001 57N05 (54C10)*

- (with Dydak, Jerzy) ★Shape theory. An introduction. Lecture Notes in Mathematics, 688. Springer-Verlag, Berlin-New York, 1978. vi+150 pp. ISBN 3-540-08955-1 (S. Mardešić) **80a:54020** 54C56 (54-02, 55-02, 55P55)
- An introduction to shape theory. *Algebraic topology* (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977), pp. 225-242, *Lecture Notes in Math.*, 673, Springer, Berlin, 1978. (Maria Moszyńska) **80c:54014** 54C56 (55P55)
- Segal, S. L.** Combinatorial identities associated with  $\exp \{z\}$ . *Utilitas Math.* 14 (1978), 65-79. (Harald Scheid) **80i:05006a** 05A19
- A second note on Ingham's summation method. *Canad. Math. Bull.* 22 (1979), no. 1, 117-120. (S. Ikehara) **80g:40013** 40G99 (10H25)
- Corrigendum: "Combinatorial identities associated with  $\exp \{z\}$ " [*Utilitas Math.* 14 (1978), 65-79]. *Utilitas Math.* 16 (1979), 302. (Editors) **80i:05006b** 05A19
- Segall, Adrian** Lower estimation error bounds for Gauss-Poisson processes. *Stochastic control theory and stochastic differential systems* (Proc. Workshop, Deutsch. Forschungsgemeinschaft., Univ. Bonn, Bad Honnef, 1979), pp. 559-565, *Lecture Notes in Control and Information Sci.*, 16, Springer, Berlin, 1979. (Ju. A. Nikolaev) **80j:93141** 93E20 (60Hxx)
- Optimal distributed routing for virtual line-switched data networks. *IEEE Trans. Comm.* 27 (1979), no. 1, 201-209. (Authors' summary) **80b:90060** 90B10 (94C05)
- (with Merlin, Philip M.) A failsafe distributed routing protocol. *IEEE Trans. Comm.* 27 (1979), no. 9, 1280-1287. (Authors' summary) **80g:90044** 90B10 (90C35, 94C10)
- Segawa, Shigeo** Functions meromorphic on some Riemann surfaces. *Nagoya Math. J.* 70 (1978), 41-45. (Y. Komatu) **80c:30031** 30D40 (30F20)
- Bounded analytic functions on unbounded covering surfaces. *Pacific J. Math.* 79 (1978), no. 1, 183-187. (William Harvey) **80c:30026** 30F99
- Segeda, Ju. N.** The symmetry group of Sobolev's equation. (Russian. English summary) *Group theoretic methods in mathematical physics* (Russian), pp. 171-174, 195, 203, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (J. S. Joel) **80g:35007** 35A30 (58G35)
- (with Ređenko, G. A.) The invariance of the equations of Newtonian mechanics with respect to transformation of the Schrödinger group. (Russian. English summary) *Group theoretic methods in mathematical physics* (Russian), pp. 175-180, 195, 203, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (Djordje Djukic) **80i:81044** 81C40 (35A30)
- Segel, L. A.** (with Gressel, J.) The paucity of plants evolving genetic resistance to herbicides: possible reasons and implications. *J. Theoret. Biol.* 75 (1978), no. 3, 349-371. (R. G. Stanton) **80b:92003** 92A05
- Segeth, K.** Approximation in the finite element method. I. *The use of finite element method and finite difference method in geophysics* (Proc. Summer School, Liblice, 1977), pp. 61-79, *Česk. Akad. Věd, Prague*, 1978. (R. A. Nicolaides) **80i:65127a** 65N30 (65-02)
- Finite element method. An introductory course. *The use of finite element method and finite difference method in geophysics* (Proc. Summer School, Liblice, 1977), pp. 95-118, *Česk. Akad. Věd, Prague*, 1978. (Authors' summary) **80g:65117** 65N30 (65N20)
- Seghier, A.** Prédiction d'un processus stationnaire du second ordre de covariance connue sur un intervalle fini. *Illinois J. Math.* 22 (1978), no. 3, 389-401. (V. S. Mandrekár) **80j:60060** 60G25 (42A10)
- Seglar, P.** See *Stochastic processes in nonequilibrium systems*, **80c:82001**
- Segoria, Carlos** (with Macías, Roberto A.) On the decomposition into atoms of distribution on Lipschitz spaces. *Proceedings of the Eleventh Brazilian Mathematical Colloquium* (Poços de Caldas, 1977), Vol. I (Portuguese), pp. 247-259, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Richard Roehberg) **80d:46053** 46E30
- (with Macías, Roberto A.) A maximal theory for generalized Hardy spaces. *Harmonic analysis in Euclidean spaces* (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 1, pp. 235-244, *Proc. Sympos. Pure Math.*, XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (C. N. Linden) **80k:30036** 30D55 (30D60, 46E99)
- Segre, Beniamino** On the powers of a square matrix of order  $n > 2$ . Special issue dedicated to the seventieth birthday of Erich Kähler. *Abh. Math. Sem. Univ. Hamburg* 47 (1978), 71-78. (A. Lee) **80f:15014** 15A24 (15A15)
- See also Vesentini, Edoardo, **80a:1047**
- Segré, Gino** (with Goffin, Vincent; Weldon, H. Arthur) Explicit one-loop corrections to the strong CP-violating phase in  $SU(2)_L \times U(1)$ . *Phys. Rev. D* (3) 21 (1980), no. 5, 1410-1423. (Authors' summary) **80m:81097** 81G15
- Seguchi, Yasuyuki** (with Tada, Yukio) Shape determination problems of structures by inverse variational principle. The finite element formulation. *Acta Tech. ČSAV* 24 (1979), no. 2, 139-148. (Hwa-Shan Ho) **80d:73099** 73K25 (49A99, 65N30)
- Ségulier, Pierre** (with Arino, Ovide) Comportement des solutions de  $x'(t) + f(t, x(t)) = \lambda(t-1)$ ,  $x(1) = 0$ . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 20, A937-A939. (Authors' summary) **80b:34086** 34K15
- Séguin, Gérard** Linear ensembles of codes. *IEEE Trans. Inform. Theory* 25 (1979), no. 4, 477-480. (Authors' summary) **80g:94061** 94B25
- Segur, Harvey** (with Ablowitz, Mark J.; Ramani, A.) Nonlinear evolution equations and ordinary differential equations of Painlevé type. *Lett. Nuovo Cimento* (2) 23 (1978), no. 9, 333-338. (From the introduction) **80a:59001** 58A15 (34A30, 70H99)
- Solitons as approximate descriptions of physical phenomena. Conference on the Theory and Application of Solitons (Tucson, Ariz., 1976). *Rocky Mountain J. Math.* 8 (1978), no. 1-2, 15-24. (G. L. Lamb, Jr.) **80i:81024** 81C05 (35Q20)
- (with Ablowitz, Mark J.) On the evolution of packets of water waves. *J. Fluid Mech.* 92 (1979), no. 4, 691-715. (T. Yao-tsu Wu) **80k:76013** 76B15 (35C99, 35Q20)
- Sehmit, Allan** On a problem in forensic science. *Biometrika* 65 (1978), no. 3, 646-648. (A. P. Dawid) **80i:62018** 62F03 (62P99)
- Sehgal, Sudarshan K.** ★Topics in group rings. Pure and Applied Mathematics, 50. Marcel Dekker, Inc., New York, 1978. vi+251 pp. ISBN 0-8247-6755-1 (Uno Kaljula) **80j:16001** 16-02 (16A27, 20C07)
- Sehgal, Surinder** Projectors which are T.I. subgroups. *Comm. Algebra* 6 (1978), no. 14, 1477-1483. (John S. Wilson) **80b:20023b** 20D10
- (with Woltermann, Michael) Equidistributed  $\frac{1}{2}$ -transitive solvable permutation groups. I. II. *Comm. Algebra* 7 (1979), no. 15, 1599-1643, 1645-1672. (Michael Klemm) **80j:20066** 20B99
- Sehgal, V. M.** (with Singh, Sankatha P.) A fixed point theorem for the sum of two mappings. *Math. Japon.* 23 (1978/79), no. 1, 71-75. (Christian Fenske) **80a:47009** 47H10
- (with Husain, S. A.) A theorem on contraction mappings. *Publ. Inst. Math. (Beograd) (N.S.)* 23(37) (1978), 81-83. (S. Swaminathan) **80a:54083** 54H25
- A pointwise contraction criteria for the existence of fixed points. *Internat. J. Math. Math. Sci.* 2 (1979), no. 3, 473-480. (B. Margolis) **80b:54063** 54H25
- Šešter, B. L.** On the question of estimates for the Green function of a two-point boundary value problem. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 6, 1036-1049, 1140. (A. A. Škalikov) **80j:34027** 34B27
- Šešman, V. B.** Reiger-Nishimura ladders. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 6, 1288-1291. (Leo Esakia) **80a:03075** 03G10 (08B99)
- (with Maksimova, L. L.; Skvorcov, D. P.) Impossibility of finite axiomatization of Medvedev's logic of finite problems. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 5, 1051-1054. (G. E. Minc) **80c:03021** 03B55 (03B45)
- Šešman, V. V.** Algebraic K-theory and characteristic classes. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 6(204), 239-240. (H. Gillet) **80k:14030** 14F20 (14C35)
- Correction: "Algebraic K-theory and characteristic classes" [*Uspehi Mat. Nauk* 33 (1978), no. 6(204), 239-240]. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 2(206), 251. (Leonid Krop) **80k:14031** 14F20 (14C35)
- Seibert, Guy Burton, Jr.** (with Drane, J. Wanzar; Owen, Donald B.) The Burr distribution and quantal responses. *Statist. Hefte (N.F.)* 19 (1978), no. 3, 204-210. (Authors' summary) **80b:62113** 62P10
- Seibert, Peter** Some recent developments in stability of general systems. *Applied nonlinear analysis* (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978), pp. 351-371, Academic Press, New York, 1979. (A. Halanay) **80k:34081** 34D20 (34C35, 54H20, 93D05)
- (with Dankert, Gabriele) Asymptoticity of general systems and Liapunov families. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 2 (1979), 59-69. (Roger C. McCann) **80j:54035** 54H20 (34C35)
- Seibt, Helmut** (with Halamešár, Alexander) ★Nikolai Iwanowitsch Lobatschewski. (German) Biographien Hervorragender Naturwissenschaftler, Techniker und Mediziner, 34. BSB B. G. Teubner Verlagsgesellschaft, Leipzig, 1978. 92 pp. (1 plate). (E. J. F. Primrose) **80i:01054** 01A70 (51-03)
- Seibt, Peter** Differential filtrations and symbolic powers of regular primes. *Math. Z.* 166 (1979), no. 2, 159-164. (K. Kiyek) **80g:13001** 13B10 (13F20, 14B99)
- Seichter, Ladislav** A pair of corresponding line congruences of the space  $Sp_3$ . (Czech. English and Russian summaries) *Knižnice Odborn. Věd. Spisů Vysoké. Učeni. Tech. v Brně A* 10 (1976), 255-267 (1978). (Leo Boček) **80c:53006** 53A25 (53A35)
- Seidel, Heidrun** Über das Fortsetzungsproblem für Prozesse mit unabhängigen Zuwächsen. *Z. Wahrsch. Verw. Gebiete* 47 (1979), no. 3, 231-240. (M. G. Šur) **80c:60089** 60J50
- Seidel, J. J.** (with Bussemaker, F. C.; Cvetković, Dragomir M.) Graphs related to exceptional root systems. *Combinatorics* (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. I, pp. 185-191, *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (M. Doob) **80c:05049** 05C50 (14B05, 17B05, 20H15, 51F15)
- Eutactic stars. *Combinatorics* (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II, pp. 983-999, *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (Peter J. Cameron) **80d:05016** 05B20 (05C50)
- The pentagon. *Proceedings, Bicentennial Congress Wiskundig Genootschap (Vrije Univ., Amsterdam, 1978)*, Part I, pp. 81-96 (1 plate), *Math. Centre Tracts*, 100, Math. Centrum, Amsterdam, 1979. (H. S. M. Coxeter) **80i:51008** 51M15 (05C50, 20D06)
- Selden, P. E.** (with Schulman, L. S.) Statistical mechanics of a dynamical system based on Conway's game of life. *J. Statist. Phys.* 19 (1978), no. 3, 293-314. (Authors' summary) **80a:82021** 82A25 (90D45)
- Seldenberg, A.** The origin of mathematics. *Arch. Hist. Exact Sci.* 18 (1977/78), no. 4, 301-342. (E. M. Bruins) **80d:01004** 01A17 (01A32)
- Seldman, Stephen B.** (with Foster, Brian L.) A graph-theoretic generalization of the clique concept. *J. Math. Sociol.* 6 (1978/79), no. 1, 139-154. (Shoji Shinoda) **80j:92014** 92A20 (05C40)
- (with Foster, Brian L.) A note on the potential for genuine cross-fertilization between anthropology and mathematics. *Social Networks* 1 (1978/79), no. 1, 65-72. (From the summary) **80c:92047** 92A20
- Seldman, Thomas I.** Time-invariance of the reachable set for linear control problems. *Control of distributed parameter systems* (Proc. Second IFAC Sympos., Coventry, 1977), pp. 85-89, IFAC, Düsseldorf, 1978. (H. O. Fattorini) **80c:93041** 93B05 (49E15)
- Parameter and state estimation for a diffusion process. *Control of distributed parameter systems* (Proc. Second IFAC Sympos., Coventry, 1977), pp. 239-245, IFAC, Düsseldorf, 1978. (From the text) **80j:93056** 93E10 (35K99)
- Exact boundary control for some evolution equations. *SIAM J. Control Optim.* 16 (1978), no. 6, 979-999. (H. O. Fattorini) **80c:93040** 93B05 (49E15)
- Time-invariance of the reachable set for linear control problems. *J. Math. Anal. Appl.* 72 (1979), no. 1, 17-20. (Authors' summary) **80j:93028** 93B05
- Seldov, Z. F.** Padé approximations and the structure of white dwarfs. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 8, 15-18. (Authors' summary) **80k:85007** 85A15
- (with Kuzamedov, R. H.) New solutions of the Lane-Emden equation. *Astronom. Ž.* 55 (1978), no. 6, 1250-1255 (Russian); translated as *Societ Astronom.* 22 (1978), no. 6, 711-714. (Alexander Alenicyan) **80i:85007** 85A15 (34A50)
- Seldova, E. R.** On the question of the convergence of the method of lines. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 170-179, 317, *Irkutsk. Gos. Univ., Irkutsk*, 1976. (Authors' summary) **80k:65096** 65N40
- Selert, C. J.** (with Diestel, Joe) The Banach-Saks ideal. I. Operators acting on  $C(I)$ . Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 1 (1978), 109-118. (K. Sundaresan) **80a:47070** 47D15 (46E99, 47B99, 47D30)
- (with Diestel, Joe) Errata to the paper: "The Banach-Saks ideal. I. Operators acting on  $C(I)$ " [*Comment. Math. Special Issue* 1 (1978), 109-118; MR 80a:47070]. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 2 (1979), 343-344. (K. Sundaresan) **80j:47055** 47D30



- Selfert, G. H.** (with Reinermann, Jochen; Stallbohm, Volker) Two further applications of the Edelstein fixed point theorem to initial value problems of functional equations. *Numer. Funct. Anal. Optim.* **1** (1979), no. 3, 233–254. (Seppo Heikkilä) **80g:47067** 47H10 (34K05)
- Selfert, H. G.** Two-person zero-sum games with non-Archimedean preferences. *First Symposium on Operations Research (Univ. Heidelberg, Heidelberg, 1976)*, Teil 2, pp. 738–746, *Operations Research Verfahren, XXVI*, Hain, Königstein, 1977. (Ernst-Wilhelm Zachow) **80g:90160** 90D05
- Selfert, I.** (with Riedel, M.) Uniqueness of two factorization problems. (Russian summary) *Teor. Verojatnost. i Primenen.* **24** (1979), no. 1, 207–211. (H. Bergström) **80c:60026** 60E05 (60E10)
- Selford, L.** (with Yu, P. L.) Potential solutions of linear systems: the multi-criteria multiparty constraint levels program. *J. Math. Anal. Appl.* **69** (1979), no. 2, 283–303. (K. G. Murty) **80f:90078** 90C05
- Seifullae, R. K.** Relationship of the number of linearly independent solutions of a Riemann boundary value problem to properties of the jump curve. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* **1978**, no. 6, 14–20. (V. B. Dybin) **80m:30051** 30E25
- Seikkala, Seppo** (with Heikkilä, Seppo) On fixed points in uniform spaces with applications to probabilistic metric spaces. *Acta Univ. Oulu. Ser. A Sci. Rerum Natur. Math. No. 18* (1978), 18 pp. (I. A. Rus) **80d:54056** 54H25
- On the method of successive approximations for nonlinear equations in spaces of continuous functions. *Acta Univ. Oulu. Ser. A Sci. Rerum Natur. Math. No. 19* (1978), 94 pp. (Hans Kaper) **80a:47104** 47H17 (60H20, 65J15)
- Seller, Erhard** (with Osterwalder, Konrad) Lattice gauge theories. *Mathematical problems in theoretical physics (Proc. Internat. Conf., Univ. Rome, Rome, 1977)*, pp. 26–36, *Lecture Notes in Phys.*, **80**, Springer, Berlin, 1978. (P. Rudra) **80c:81083** 81E15 (22E70, 28Dxx, 58G35, 82A05)
- (with Garber, Wolf-Dieter; Ruijsenaars, Simon N. M.; Burns, Dan) On finite action solutions of the nonlinear  $\sigma$ -model. *Ann. Physics* **119** (1979), no. 2, 305–325. (H. Rund) **80c:81059** 81E10 (58E20)
- (with Brydges, David; Fröhlich, Jürg) On the construction of quantized gauge fields. I. General results. *Ann. Physics* **121** (1979), no. 1–2, 227–284. (Thomas Spencer) **80k:81081** 81E10
- (with Brydges, David; Fröhlich, Jürg) Diamagnetic and critical properties of Higgs lattice gauge theories. *Nuclear Phys. B* **152** (1979), no. 3–4, 521–532. (Franco Strocchi) **80c:81121** 81G20
- See also Gallavotti, Giovanni; et al., **80g:82021**
- Seller, R.** (with Hogreve, H.; Schrader, R.) A conjecture on the spinor functional determinant. *Nuclear Phys. B* **142** (1978), no. 4, 525–534. (Pierre Hillion) **80a:81072** 81E10 (00A89)
- (with Heidenreich, R.; Uhlenbrock, D. A.) The Luttinger model. *J. Statist. Phys.* **22** (1980), no. 1, 27–57. (Authors' summary) **80k:82066** 82A65 (81M05)
- Sell, Aye** (with Lee, Sin Min) On some extreme properties of a class of simple groupoids. *Math. Balkanica* **6** (1976), 227–229 (1978). (Jaroslav Jezek) **80k:20055** 20L05
- Selinauskas, R. I.** Classification and computer-aided representation of data. *Programirovanie* **1979**, no. 1, 31–38, 95 (Russian); translated as *Programming and Comput. Software* **5** (1979), no. 1, 24–29. (Author's summary) **80k:68017** 68B15
- Selinfeld, John H.** (with Gelbard, Fred) Numerical solution of the dynamic equation for particulate systems. *J. Comput. Phys.* **28** (1978), no. 3, 357–375. (Authors' summary) **80a:82044** 82A70 (65P05, 65R10)
- (with Bencala, Kenneth E.) Distributed parameter filtering: boundary noise and discrete observations. *Internat. J. Systems Sci.* **10** (1979), no. 5, 493–512. (Yaakov Yavin) **80h:93060** 93E11
- (with Koda, Masato; Dogru, Ali H.) Sensitivity analysis of partial differential equations with applications to reaction and diffusion processes. *J. Comput. Phys.* **30** (1979), no. 2, 259–282. (Authors' summary) **80k:49023** 49B50 (65P05)
- Selmin, O. B.** (with Bałmakova, I. G.; Gnedenko, B. V.; Kuziņeva, Z. A.; Medvedev, F. A.; Ožigova, E. P.; Paršin, A. N.; Rudakov, A. N.; Slavutin, E. I.; Juškevič, A. P.) ★Математика XIX века. (Russian) [XIXth century mathematics] МАТЕМАТИЧЕСКАЯ ЛОГИКА. Алгебра. Теория чисел. Теория вероятностей. [Mathematical logic. Algebra. Number theory. Probability theory] Edited by A. N. Kolmogorov and A. P. Juškevič. "Nauka", Moscow, 1978, 255 pp. (I. Grattan-Guinness) **80i:01010** 01A55
- Probability theory before P. L. Čebyšev. (Russian) *Istor.-Mat. Issled.* **23** (1978), 284–306, 359. (H. Freudenthal) **80i:01004** 01A35 (01A40, 01A55, 60–03)
- C. F. Gauss and the theory of errors. *Arch. Hist. Exact Sci.* **20** (1979), no. 1, 21–72. (E. Seneta) **80m:62001** 62–03 (01A55)
- Selmann, O. K.** Duality in certain discrete minimization problems. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 2(200), 211. (R. Bolstein) **80k:90026** 90C05 (90C10, 90C48)
- Selmo, Masaru** Some considerations on fibred spaces with certain almost complex structures. *Hokkaido Math. J.* **7** (1978), no. 2, 198–205. (D. I. Papuc) **80c:53039** 53C15
- Seip, Ulrich** A convenient setting for differential calculus. *J. Pure Appl. Algebra* **14** (1979), no. 1, 73–100. (Peter Michor) **80b:58013** 58C20 (18D15, 26E10, 46G05)
- Seiranjan, A. P.** A study of an extremum in the optimal problem of a vibrating circular plate. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* **13** (1978), no. 6, 113–118 (Russian); translated as *Mech. Solids* **13** (1978), no. 6, 99–104. (From the summary and introduction) **80h:73045** 73K10
- Seinor, Ju. B.** Optimality of controls in the presence of phase constraints. (Russian. Turkmen and English summaries) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* **1978**, no. 4, 3–8. (Editors) **80a:49022** 49B05
- (with Oleinikov, V. A.; Handovlevot, M.) Sufficient second order conditions for optimality. (Russian. English summary) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* **1978**, no. 5, 8–11. (M. Junusov) **80a:49020** 49B05
- (with Šalyev, Č.) Convexity conditions of sets of attainability. (Russian. Turkmen and English summaries) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* **1978**, no. 6, 3–8. (Authors' summary) **80c:49009** 49A50 (93B99)
- Seltz, G.** (with Aschbacher, Michael) Correction to: "Involutions in Chevalley groups over fields of even order" (Nagaya Math. J. **63** (1976), 1–91). *Nagaya Math. J.* **72** (1978), 135–136. (Bhama Srinivasan) **80b:20058** 20G40
- Sekanina, M.** Hamiltonian lines in powers of infinite graphs. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 1001–1015, *Colloq. Math. Soc. János Bolyai*, **18**, North-Holland, Amsterdam, 1978. (Carsten Thomassen) **80g:05045** 05C38
- Sekerš-Zenković, S. Ja.** Fundamental solution of the interior wave operator. (Russian) *Dokl. Akad. Nauk SSSR* **246** (1979), no. 2, 286–289. (M. M. Skriyanov) **80h:35029** 35E05 (76C99)
- Sekigawa, Hisao** The outradius of the Teichmüller space. *Tōhoku Math. J. (2)* **30** (1978), no. 4, 607–612. (Helmut Köditz) **80a:30052** 30F35 (32G15)
- Schwarzian derivatives of some conformal mappings. *Tōhoku Math. J. (2)* **31** (1979), no. 3, 309–318. (G. Schober) **80j:30029** 30C75 (30F35)
- Sekigawa, Kōsei** Notes on homogeneous almost Hermitian manifolds. *Hokkaido Math. J.* **7** (1978), no. 2, 206–213. (Hillel Gauchman) **80a:53057** 53C30 (53C15)
- (with Sawaki, Sumio)  $\sigma$ -hypersurfaces in a locally symmetric almost Hermitian manifold. *Tōhoku Math. J. (2)* **30** (1978), no. 4, 543–551. (T. Nagano) **80b:53013** 53B20
- Sekiguchi, Jirō** (with Yano, Tamaki) The algebra of invariants of the Weyl group  $W(F_4)$ . *Sci. Rep. Saitama Univ. Ser. A* **9** (1979), no. 2, 21–32. (E. Vinberg) **80k:32011** 32B30 (14L30, 20H15)
- (with Yano, Tamaki) A note on the Coxeter group of type  $H_2$ . *Sci. Rep. Saitama Univ. Ser. A* **9** (1979), no. 2, 33–44. (E. Vinberg) **80k:32012** 32B30 (14L30, 20H15)
- Sekiguchi, Tsutomu** On the cubics defining abelian varieties in every characteristic. *Bull. Fac. Sci. Engrg. Chuo Univ.* **21** (1978), 29–36. (Jayant M. Shah) **80g:14034** 14K05
- On the cubics defining abelian varieties. *J. Math. Soc. Japan* **30** (1978), no. 4, 703–721. (T. Oda) **80i:14013** 14K05
- On the normal generation by a line bundle on an Abelian variety. *Proc. Japan Acad. Ser. A Math. Sci.* **54** (1978), no. 7, 185–188. (Toshiyuki Maebashi) **80c:14026** 14K05
- Sekita, Yasuyoshi** (with Tabata, Yoshio) A health status index model using a fuzzy approach. *European J. Oper. Res.* **3** (1979), no. 1, 40–49. (V. D. Dimitrov) **80d:92009** 92A07
- Sekiya, T.** (with Tanaka, K.; Horie, T.) Mean temperature field variations in heterogeneous media. (German summary) *Acta Mech.* **32** (1979), no. 1–3, 153–164. (Authors' summary) **80c:73070** 73U05
- Sekiya, Hideo** Trivial extension of a ring with balanced condition. *Proc. Amer. Math. Soc.* **77** (1979), no. 1, 1–6. (Victor Camillo) **80j:16012** 16A36
- Seksenbaev, K. S.** The lower central order of a wreath product of finite abelian groups. (Russian) *Vestnik Akad. Nauk Kazah. SSR* **1978**, no. 3, 77–78. (N. G. Šahova) **80c:20048** 20E22 (20F22)
- Selak, Stjepan** Interpretation of the metric tensor components based on possible astrophysical implications. *Astrophys. and Space Sci.* **56** (1978), no. 2, 275–284. (D. K. Sen) **80d:85009** 85A40 (53B50, 83F05)
- A model of expanding universe with continuous mass-creation. *Astrophys. and Space Sci.* **60** (1979), no. 2, 465–474. (Author's summary) **80i:83058** 83F05
- Selberg, Henrik L.** Über das Verhalten einer Potenzreihe am Rande des Konvergenzkreises. *Ark. Mat.* **16** (1978), no. 2, 287–296. (C. Tanaka) **80a:30001** 30B30
- Selbu, Hasan** (with Başar, Tamer) Closed-loop Stackelberg strategies with applications in the optimal control of multilevel systems. *IEEE Trans. Automat. Control* **24** (1979), no. 2, 166–179. (E. O. Roxin) **80j:90120** 90D20
- Selby, M. A.** On completeness with respect to a Carathéodory-like metric. *Colloq. Math.* **39** (1978), no. 1, 87–94. (R. B. Burckel) **80a:46027** 46J15 (41A20)
- Selden, Larry** (with Rossman, Michael) Time preferences, conditional risk preferences, and two-period cardinal utility. *J. Econom. Theory* **19** (1978), no. 1, 64–83. (Ernst-Wilhelm Zachow) **80a:90011** 90A06 (90A10)
- An OCE analysis of the effect of uncertainty on saving under risk preference independence. *Rev. Econom. Stud.* **46** (1979), no. 1, 73–82. (Edwin H. Neave) **80k:90016** 90A06 (90A10, 90A16)
- Seldin, Jonathan P.** Recent advances in Curry's program. *Rend. Sem. Mat. Univ. Politec. Torino* **35** (1977/78), 77–88 (1978). (Henk Barendregt) **80a:03002b** 03–02 (03B40)
- A sequent calculus formulation of type assignment with equality rules for the  $\lambda$ -calculus. *J. Symbolic Logic* **43** (1978), no. 4, 643–649. (R. Hindley) **80c:03012** 03B40
- Selpev, V. Ju.** (with Bazali, B. V.) The asymptotic behavior of the solution of a Stefan problem. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1978**, no. 12, 1059–1061, 1150. (Authors' summary) **80b:35015** 35B40 (35K10)
- Selzev, I. P.** An arithmetic-logical device for symbol data processing. (Russian. English summary) *US i M—Upravljajusie Sistemy i Mašiny* **1978**, no. 5(37), 98–103, 149–150. (Author's summary) **80c:94028** 94C10
- Selzev, O. V.** Problems of projection and classification of multidimensional normal observations. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1978**, no. 3, 39–46. (Vitalij Pikelis) **80c:62036** 62H10
- Selzev, I. T.** (with Jakovlev, V. V.) ★Дифракция волн на симметричных неоднородностях. (Russian) [Wave diffraction by symmetric nonhomogeneities] "Naukova Dumka", Kiev, 1978, 145 pp. (Vadim Komkov) **80c:76042** 76Q05 (35Q99, 78A45)
- Selridge, J. L.** (with Devitt, John S.; Guy, Richard K.) Third report on aliquot sequences. *Proceedings of the Sixth Manitoba Conference on Numerical Mathematics (Univ. Manitoba, Winnipeg, Man., 1976)*, pp. 177–204, *Congress. Numer., XVIII, Utilitas Math., Winnipeg, Man., 1977*. (Stefan A. Burr) **80d:10001** 10–04 (10A40)
- (with Ecklund, E. F., Jr.; Eggleston, R. B.; Erdős, Paul) On the prime factorization of binomial coefficients. *J. Austral. Math. Soc. Ser. A* **26** (1978), no. 3, 257–269. (H. London) **80c:10009** 10A25
- Selgrade, James F.** (with Franke, John E.) Hyperbolicity and cycles. *Trans. Amer. Math. Soc.* **245** (1978/79), 251–262. (Charles C. Conley) **80b:58047** 58F15 (34C35)
- Mathematical analysis of a cellular control process with positive feedback. *SIAM J. Appl. Math.* **36** (1979), no. 2, 219–229. (Uwe an der Heiden) **80g:34046** 34D05 (58F10, 92A05)
- (with Franke, John E.) A computer method for verification of asymptotically stable periodic orbits. *SIAM J. Math. Anal.* **10** (1979), no. 3, 614–628. (Leo Jonker) **80b:34053** 34C35 (58F10, 65L99)

- Selick, Paul Odd primary torsion in  $\pi_2(S^2)$ . *Topology* 17 (1978), no. 4, 407-412. (Donald W. Kahn) **80c:55010** 55Q40 (55P40)
- Seligman, George B. See Robinson, Abraham, **80b:01039a**
- Seligman, T. H. (with Moshinsky, Marcos) Ambiguities in canonical transformations of classical systems and the spectra of quantum observables. *Differential geometrical methods in mathematical physics, II* (Proc. Conf., Univ. Bonn, Bonn, 1977), pp. 435-457, *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (Virendra Singh) **80d:81057** 81D99
- (with Moshinsky, Marcos) Canonical transformations to action and angle variables and their representation in quantum mechanics. II. The Coulomb problem. *Ann. Physics* 120 (1979), no. 2, 402-422. (Virendra Singh) **80j:81028** 81C40
- (with Moshinsky, Marcos) Canonical transformations to action and angle variables and their representations. *J. Phys. A* 12 (1979), no. 6, L135-L139. (Authors' summary) **80c:81044** 81C99 (22E70, 58F06)
- Selmin, M. S. A nonlinear loaded boundary value problem of Hilbert's type. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1978, no. 6, 84-89. (V. B. Dybin) **80m:30052** 30E25
- Abdoun Selmin, Michel See Abdoun Selmin, Michel
- Selivanov, I. A. (with Gorskiĭ, N. M.) Quasilinear hyperbolic equations that are described by problems of filtration theory. (Russian) *Akad. Nauk SSSR Sibirsk. Otdel. Vychisl. Centr. Preprint No. 90* (1978), 19 pp. (E. Ungureanu-David) **80c:76054** 76S05 (35L99)
- Selivanov, Ju. A. A survey of ordered loops. I. *Nepali Math. Sci. Rep.* 3 (1978), no. 1, 36-45. **80c:06024a** 06F25
- A survey of ordered loops. II. *Nepali Math. Sci. Rep.* 3 (1978), no. 2, 87-95. **80c:06024b** 06F25
- Selivanov, Ju. V. Projectivity of certain Banach modules and the structure of Banach algebras. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 1(188), 110-116. (Z. Słodkowski) **80g:46046** 46H25 (46M20)
- Selivanov, Yuri A. See Selivanov, Ju. A.
- Seljugin, A. A. (with Kaipov, V. H.) Classification in a space of fuzzy variables. (Russian) *Izv. Akad. Nauk Kirgiz. SSR* 1979, no. 5, 12-17, 94. (Authors' summary) **80m:94121** 94D05 (03E72)
- Selkäläaho, Kalevi On measures induced by vector-valued Gaussian processes. Dissertation, University of Jyväskylä, Jyväskylä, 1977. *Ber. Univ. Jyväskylä Math. Inst. No. 19* (1977), 44 pp. (From the introduction) **80j:60048** 60G12 (60G30)
- Sellow, Stanley M. (with Christen, Claude A.) Some perfect coloring properties of graphs. *J. Combin. Theory Ser. B* 27 (1979), no. 1, 49-59. (Carsten Thomassen) **80k:05055** 05C15
- Sell, George R. Hyperbolic structures for linear Volterra differential equations. *Volterra equations* (Proc. Helsinki Sympos. Integral Equations, Otaniemi, 1978), pp. 271-280, *Lecture Notes in Math.*, 737, Springer, Berlin, 1979. (D. Bainov) **80m:45014** 45J05 (34K05)
- Selleri, F. (with Tarozzi, G.) Nonlocal theories satisfying Bell's inequality. (Italian summary) *Nuovo Cimento B* 11 (48) (1978), no. 1, 120-130. (Authors' summary) **80b:81014** 81B99 (83C99)
- (with Schiavulli, L.) Further consequences of Einstein locality. *Found. Phys.* 9 (1979), no. 5-6, 339-352. (Authors' summary) **80a:81092** 81M05
- Sellers, Peter H. ★Combinatorial complexes. A mathematical theory of algorithms. Mathematics and its Applications, 2. D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1979. xv + 184 pp. ISBN 90-277-1000-7 (Henry S. Warren, Jr.) **80m:68005** 68-02 (05-02, 68C05)
- Pattern recognition in genetic sequences. *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 7, 3041. (Author's summary) **80c:68226** 68G10 (92A10)
- Sellsted, Bo (with Näslund, Bertil) ★Neo-Ricardian theory. With applications to some current economic problems. Lecture Notes in Economics and Mathematical Systems, 156. Springer-Verlag, Berlin-New York, 1978. vi + 165 pp. ISBN 3-540-08763-X (J. A. Rickard) **80c:90029** 90A15
- Selman, Alan L. Polynomial time enumeration reducibility. *SIAM J. Comput.* 7 (1978), no. 4, 440-457. (John T. Gill) **80d:68059** 68C25
- (with Baker, Theodore P.) A second step toward the polynomial hierarchy. *Theoret. Comput. Sci.* 8 (1979), no. 2, 177-187. (Pavel Pudlák) **80g:68052** 68C25 (03D15, 03D20)
- Selmer, Ernst S. Unit fraction expansions and a multiplicative analogue. (Norwegian. English summary) *Nordisk Mat. Tidsskr.* 25/26 (1978), no. 2, 91-109, 112. (K. E. Hirst) **80c:10012** 10A30
- Selmi, Giovanni The group of operators that leave invariant the canonical representation of a particular class of doubly covariant tensors with noncoincident kernels. (Italian) *Pubbl. Istit. Mat. Appl. Fac. Ingeg. Univ. Stud. Roma Quaderno No. 11* (1978), 13-24. (M. Pearl) **80c:15008** 15A21 (15A36)
- Necessary and sufficient conditions for the existence of subspaces invariant for  $A^k$  but not for  $A$ . (Italian) *Pubbl. Istit. Mat. Appl. Fac. Ingeg. Univ. Stud. Roma Quaderno No. 12* (1978), 21-23. (Werner Bani) **80a:15002** 15A03 (15A18)
- Seltman, Muriel (with Seltman, P. E. J.) Growth processes and formal logic. Comments on history and mathematics regarded as combined educational tools. *Internat. J. Math. Ed. Sci. Tech.* 9 (1978), no. 1, 15-29. (Phillip S. Jones) **80a:00014** 00A25 (01A99)
- Seltman, P. E. J. (with Seltman, Muriel) Growth processes and formal logic. Comments on history and mathematics regarded as combined educational tools. *Internat. J. Math. Ed. Sci. Tech.* 9 (1978), no. 1, 15-29. (Phillip S. Jones) **80a:00014** 00A25 (01A99)
- Selutkin, V. V. Stabilization of the solution of a model problem on the motion of a piston in a viscous gas. (Russian) *Dinamika Splošn. Sredy No. 33 Nekotorye Problemy Mat. i Meh.* (1978), 134-146, 173. (Author's summary) **80c:76042** 76N15
- Selutskii, V. M. (with Roltenberg, E. Ja.) Observability of nonlinear discrete systems. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 5, 68-73. (From the summary) **80c:93036** 93B07
- Selvalakshmi, A. P. S. The interaction between a rigid circular punch on an elastic halfspace and a Mindlin force. *Mech. Res. Comm.* 5 (1978), no. 2, 57-64. (Author's introduction) **80c:73016** 73C35
- Semadeni, Zbigniew (with Wiweger, Antoni) ★Wstęp do teorii kategorii i funktorów. (Polish) [Introduction to the theory of categories and functors] Second revised edition. Biblioteka Matematyczna [Mathematics Library], 45. Państwowe Wydawnictwo Naukowe (PWN), Warsaw, 1978. 299 pp. (errata insert). (V. Topenčarov) **80k:18002** 18-01
- (with Zidenberg-Spiridonov, H.) Functors on categories of ordered topological spaces. *Categorical topology* (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978), pp. 358-370, *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (Bernard L. Madison) **80m:54016** 54B30 (18B30, 54F05)
- Sember, John J. (with Freedman, Allen R.; Raphael, Marc) Some Cesàro-type summability spaces. *Proc. London Math. Soc.* (3) 37 (1978), no. 3, 508-520. (E. Järnå) **80c:40007** 40H05 (40D09)
- (with Raphael, Marc) The unrestricted section properties of sequences. *Canad. J. Math.* 31 (1979), no. 2, 331-336. (N. J. Kalton) **80j:46021** 46A45
- Semenov, O. V. Linear equations over lattice-ordered rings. (Russian) *Izv. Severo-Kavkaz. Nauch. Centra Vysš. Školy Ser. Estest. Nauk.* 1978, no. 3, 10-12, 116. (O. Kopeček) **80g:06022** 06F25 (15A06)
- Semenčuk, N. P. Some ordering relations for the approximation of functions representable by Fourier integrals, using normal Zygmund means. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1978, no. 5, 50-56, 143. (Paul Neva) **80j:42022** 42A38
- Semenčuk, V. N. Finite groups with given properties of subgroups. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 1, 12-15, 91. (B. K. Durakov) **80d:20039** 20F16 (20D10)
- Semenčuk, A. A. (with Markus, A. S.) Operators that weakly perturb the spectrum. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 3, 646-653, 718. (R. M. Džabar-Zade) **80b:47015** 47A55 (47B37)
- Semenko, E. V. (with Denisov, A. M.; Haleeva, I. V.) The incorrectness of the inverse scattering problem. (Russian) *Vestnik Moskov. Univ. Ser. XV Vychisl. Mat. Kibernet.* 1978, no. 2, 77-81. (Jan Bochenek) **80a:34021** 34B25 (35R30)
- Semenov, A. L. Some algorithmic problems for systems of algorithmic algebras. (Russian) *Dokl. Akad. Nauk SSSR* 239 (1978), no. 5, 1063-1066. (G. Asser) **80a:03055** 03D04 (03G25, 68C05)
- Semenov, A. T. Bemerkungen zur Walschen Identität. *Wiss. Z. Tech. Univ. Dresden* 27 (1978), no. 2, 359-360. (H.-J. Engelbert) **80b:60064** 60C40
- Semenov, E. M. Equivalence in  $\mathcal{P}_p$  of permutations of the Haar system. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 6, 1258-1260. (J. Albrecht) **80m:46025** 46E30
- (with Rodin, V. A.) The complementability of a subspace that is generated by the Rademacher system in a symmetric space. (Russian) *Funkcional. Anal. i Prilozhen.* 13 (1979), no. 2, 91-92. (Aleksandr Mekler) **80j:46048** 46E30
- Semenov, Ju. A. Wave operators for the Schrödinger equation with strongly singular short-range potentials. *Lett. Math. Phys.* 1 (1975/77), no. 6, 457-461. (T. Kato) **80i:35139** 35P10
- On the theory of eigenfunctions expansion of the Schrödinger operator. *Lett. Math. Phys.* 1 (1975/77), no. 6, 463-465. (Teruo Ikebe) **80f:35093** 35P10 (81C10)
- (with Kovalenko, V. F.) Some questions on expansions in generalized eigenfunctions of a Schrödinger operator with strongly singular potentials. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 4(202), 107-140, 255. (A. Ramm) **80i:35092** 35P10 (35J10)
- On the problem of convergence of a bounded-below sequence of symmetric forms for the Schrödinger operator. *Studia Math.* 64 (1979), no. 1, 77-85. (Richard B. Lavine) **80j:35080** 35P25 (35J10, 47F05)
- Semenov, P. V. James-Orlicz spaces. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 4(208), 209-210. (M. M. Day) **80a:46042** 46E40 (46B10)
- Semenov, S. P. Study of the correctness of a model of an ideal fluid taking account of the effect of temperature. (Russian) *Dinamika Splošn. Sredy No. 36 Dinamika Židkosti so Svobodnymi Granicami* (1978), 108-119, 162. (Author's summary) **80d:35131** 35Q20
- Semenov, V. I. On the representation of the superposition of certain classes of mappings. (Russian) *Dokl. Akad. Nauk SSSR* 239 (1978), no. 1, 54-55. (Ju. Ju. Trohimčuk) **80j:57036** 57S05 (26B40, 58C05)
- Semenov, Yu. A. See Semenov, Ju. A.
- Semenova, N. N. Existence of homoclinic points in the neighborhood of a center. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, no. 2, 114-115, 122. (M. Bertolino) **80i:34046** 34C05
- Semenov-Tjan-Schanskii, M. A. (with Izergin, A. G.; Korepin, V. E.; Faddeev, L. D.) Gauge conditions for a Yang-Mills field. (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 1, 3-14. (G. Lassar) **80j:81048** 81E10 (53C05, 58D25)
- Sementovskii, V. G. Classes of conjugate abnormal  $\bar{y}$ -projectors of  $\Sigma$ -solvable groups. I. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1978, no. 5, 11-16, 141. (Charles S. Holmes) **80g:20033a** 20D10
- Classes of conjugate abnormal  $\bar{y}$ -projectors of  $\Sigma$ -solvable groups. II. Dispersive  $\pi$ -decomposable projectors of  $\pi$ -solvable groups. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1978, no. 6, 16-19, 138. (Charles S. Holmes) **80g:20033b** 20D10
- Semenzato, Roberto (with Ipsier, James R.) A connection between stability and the nonexistence of unstable proper normal modes for certain classes of perturbations of gravitating systems. *Astrophys. J.* 227 (1979), no. 2, part 1, 590-595. (L. F. Oster) **80d:83012** 83C05 (35B20)
- Seminara, Giovanni On Rayleigh's criterion for slowly varying flows. *J. Fluid Mech.* 91 (1979), no. 3, 547-562. (Author's summary) **80c:76021** 76E10 (34E20)
- Šemjakín, E. I. (with Revuzhenko, A. F.) Some formulations of boundary value problems of  $L$ -plasticity. (Russian) *Ž. Prikl. Meh. i Tehn. Fiz.* 1979, no. 2, 128-137, 183. (Authors' summary) **80c:73029** 73E99
- Semjonov, A. T. See Semenov, A. T.
- Semko, A. V. A graph component of the  $q$ -transformation. (Russian) *Graph theory* (Russian), pp. 82-84, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1977. (E. Hakimullin (RZMat 1978:12 V1027)) **80f:05041** 05C10 (05C45)
- Semon, Mark D. (with Harris, Jonathan H.) A review of the Aharonov-Carmi thought experiment concerning the inertial and electromagnetic vector potentials. *Found. Phys.* 10 (1980), no. 1-2, 151-162. (Authors' summary) **80m:78007** 78A25
- Semovskii, S. V. Operator-stable distributions. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 4, 836-839. (V. J. Paulauskas) **80c:60025** 60E07
- The central limit theorem for sums of random vectors that are normalized by linear operators. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 4, 795-798. (A. Weron) **80f:60028** 60F05



- Sen, Carlo** On the limit of the entropies with error. (Italian summary) *Rend. Mat.* (6) 11 (1978), no. 1, 131-140. (K. Jacobs) **80a:94017** 94A17
- Sen, A. R.** (with Smith, G. E. J.; Butler, G. J.) On a basic assumption in the line transect method. (German summary) *Biometrical J.* 20 (1978), no. 4, 363-369. (Tore Schweder) **80a:62041** 62F10 (62P10)
- (with Tourigny, J.; Smith, G. E. J.) Corrections to: "On the line transect sampling method" (*Biometrics* 30 (1974), 329-340). *Biometrics* 34 (1978), no. 2, 328-329. (Editors) **80b:62119** 62P99
- Corrigendum: "Some theory of sampling on successive occasions" [*Austral. J. Statist.* 15 (1973), 105-110; MR 49 #6432]. *Austral. J. Statist.* 21 (1979), no. 1, 92. (Editors) **80c:62021** 62D05
- Sen, Amiya K.** Feedback control of a class of plasma instabilities. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 272-276. (P. K. C. Wang) **80b:93040** 93B15
- Sen, Dilip Kumar** The closure of the numerical range contains the spectrum. *An. Stiint. Univ. "Al. I. Cuza" Iași Sect. I a Mat. (N.S.)* 23 (1977), no. 2, 267-269. (A. T. Dash) **80c:47003** 47A10
- Sen, K. K.** (with Wilson, S. J.; Wan, F. S.) On the moment method for radiative transfer in spherical dust shells with a core. *Astrophys. and Space Sci.* 67 (1980), no. 1, 99-103. (Authors' summary) **80m:85002** 85A05
- Sen, Kanwar** (with Saran, Jagdish) Joint distributions based on runs and on the number of sojourns and intersections. *Studia Sci. Math. Hungar.* 11 (1976), no. 1-2, 121-129 (1978). (S. G. Mohanty) **80i:60095** 60J15 (60C05, 62G10)
- (with Saran, Jagdish) On some joint distributions in fluctuation theory. *J. Statist. Plann. Inference* 3 (1979), no. 3, 215-223. (I. Vincze) **80m:60078b** 60J15
- (with Saran, Jagdish) On the fluctuations of partial sums. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 2, 291-298. (I. Vincze) **80m:60078a** 60J15
- (with Nain, R. B.) Transition probability matrices for correlated random walks. *J. Appl. Probab.* 17 (1980), no. 1, 253-258. (J. Gillis) **80m:60077** 60J15
- de la Sen, M.** (with Dormido, S.) A note on the transmission of relative errors in the observability problem. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 634-635. (Kimio Kanai) **80i:93044** 93B40
- Sen, M. K.** (with Dutta, T. K.) On some properties of generalized semi-ideals of a semigroup. *An. Stiint. Univ. "Al. I. Cuza" Iași Sect. I a Mat. (N.S.)* 24 (1978), no. 2, 227-230. (Sarawathi Subbiah) **80g:20077** 20M12
- Sen, Pranab Kumar** On jackknifing in estimating the finite end-points of a distribution. *Calcutta Statist. Assoc. Bull.* 26 (1977), no. 101-104, 17-24 (1978). (Rudolph J. Beran) **80c:62015** 62F10
- Nonparametric repeated significance tests. *Developments in statistics, Vol. 1*, pp. 227-265, Academic Press, New York, 1978. (Z. Šidák) **80c:62027** 62G10
- (with Majumdar, Hiranmay) Invariance principles for jackknifing  $U$ -statistics for finite population sampling and some applications. *Comm. Statist. A—Theory Methods* 7 (1978), no. 11, 1007-1025. (George W. Williams) **80m:62015** 62D05 (62G05, 62L12)
- Invariance principles for the coupon collector's problem: a martingale approach. *Ann. Statist.* 7 (1979), no. 2, 372-380. (Lars Holst) **80c:60034** 60F05 (60G42, 62D05)
- Weak convergence of some quantile processes arising in progressively censored tests. *Ann. Statist.* 7 (1979), no. 2, 414-431. (Jon A. Wellner) **80g:60022** 60F05 (62G30, 62L99)
- Asymptotic properties of maximum likelihood estimators based on conditional specification. *Ann. Statist.* 7 (1979), no. 5, 1019-1033. (Lionel Weiss) **80f:62037** 62F12 (62F35)
- (with Sinha, Agam Nath) Progressively censored tests for clinical experiments and life testing problems based on weighted empirical distributions. *Comm. Statist. A—Theory Methods* 8 (1979), no. 9, 871-897. (George W. Williams) **80k:62065** 62G10 (62L10)
- (with Saleh, A. K. Md. Ehsanes) Nonparametric estimation of location parameter after a preliminary test on regression in the multivariate case. *J. Multivariate Anal.* 9 (1979), no. 2, 322-331. (Vijaya Prakash Gupta) **80k:62066** 62G20 (62H99)
- Sen, Prodip** (with Athreya, K. B.) On stochastic approximation procedures in continuous time. *J. Indian Inst. Sci.* 60 (1978), no. 3, 135-147. (V. Dupac) **80c:62102** 62L20
- Sen, R. N.** Bundle representations and their applications. *Differential geometrical methods in mathematical physics. II* (Proc. Conf., Univ. Bonn, Bonn, 1977), pp. 151-160, *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (J. F. Cornwell) **80c:22003** 22A25 (22D35, 81C40)
- Theory of symmetry in the quantum mechanics of infinite systems. I. The state space and the group action. *Phys. A* 94 (1978), no. 1, 39-54. (José F. Cariñena) **80k:81031a** 81C40 (22D12)
- Theory of symmetry in the quantum mechanics of infinite systems. II. Isotropic representations of the Galilei group and its central extensions. *Phys. A* 94 (1978), no. 1, 55-70. (Authors' summary) **80k:81031b** 81C40
- Sen, Rabinathan** On a variant of Newton's method under relaxed differentiability conditions. *Mathematica (Cluj)* 16(39) (1974), no. 2, 305-310 (1977). (C. Ilie) **80a:65113** 65J05
- (with Mukherjee, Sulekha) Solution by iteration of bounded linear operator equations in a supermetric linear space. *Bull. Calcutta Math. Soc.* 70 (1978), no. 2, 73-87. (T. I. Seidman) **80f:65066** 65J10 (47A50)
- On the iterative process of solving nonlinear operator equations in PTL-spaces. *Mat. Vesnik* 2(15)(30) (1978), no. 1, 25-30. (A. J. B. Potter) **80a:47105** 47H17 (65J15)
- Sen, S.** On generalised fixedpoints of transcendental entire functions. *Indian J. Mech. Math.* 15 (1977), no. 1-2, 1-5 (1979). (Authors' summary) **80i:30045** 30D20
- Sen, S. K.** (with Shamim, A. A.) Integral solution of linear equations using integer arithmetic. *J. Indian Inst. Sci.* 60 (1978), no. 3, 111-118. (Frank J. Hall) **80a:15006** 15A09
- (with Shamim, A. A.) An integer arithmetic method to compute generalized matrix inverse and solve linear equations exactly. *Proc. Indian Acad. Sci. Sect. A* 87 (1978), no. 9, 161-168. (Authors' summary) **80c:65030** 65F05 (65F20)
- Nonnegative solution of linear equations. *J. Indian Inst. Sci.* 61 (1979), no. 1, 41-50. (Authors' summary) **80b:90090** 90C05 (65F05)
- Sen, Swapna Kumar** A note on the oscillatory motion of Rivlin-Ericksen fluid between two co-axial circular cylinders. *Acta Cienc. Indica* 5 (1979), no. 3, 143-145. (P. D. S. Verma) **80k:76005** 76A05
- Seniav, S. I.** Group classification of the equations of ideal plasticity of inhomogeneous bodies. (Russian) *Dinamika Sploin. Sredy No. 33 Nekotorye Problemy Mat. i Meh.* (1978), 93-101, 172. (Authors' summary) **80a:73032** 73E99 (35A30)
- Group classification of equations of ideal plasticity with a fluidity condition of a general form. (Russian) *Dinamika Sploin. Sredy No. 37 Nestacionarnyye Problemy Mekhaniki* (1978), 101-112, 151. (S. Matysyak) **80g:73031** 73E05 (58H10)
- Senbet, Lemma W.** On the theory of the firm under uncertainty and the cost of capital. *Econom. Lett.* 2 (1979), no. 1, 73-78. (Authors' summary) **80d:90014** 90A11 (90A16)
- Senchenko, I. K.** (with Karnauhov, V. G.) Some variational formulas of boundary value problems of nonlinear viscoelasticity. (Russian) *Prikl. Meh.* 14 (1978), no. 8, 16-21. (Editors) **80c:73037** 73F99 (49B99)
- (with Karnauhov, V. G.) On the theory of integro-differential type media. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 4* (1979), 288-293. (Authors' summary) **80f:73006** 73B30 (35Q20, 45J05)
- (with Karnauhov, V. G.) The principal thermomechanical theory of viscoelasticity for generalized thermorheologically simple materials. (Russian) *Prikl. Meh.* 15 (1979), no. 2, 41-48, 110. (Authors' summary) **80c:73028** 73F99
- Sendaula, Miroslav** A state-space realization algorithm for two-dimensional recursive digital filters. 1978 *IEEE International Symposium on Circuits and Systems* (New York, 1978), pp. 318-323, IEEE, New York, 1978. (Authors' summary) **80d:94003** 94A12
- Senderovich, Rikva** On convexity preserving operators. *SIAM J. Math. Anal.* 9 (1978), no. 1, 157-159. (Paul S. Muhly) **80c:42006** 42A85
- Sendler, Wolfgang** On zero-one laws. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes* (Prague, 1978), Vol. B, pp. 181-191, Reidel, Dordrecht, 1978. (J. R. Blum) **80c:60045** 60F20
- Sendov, Blagovest** (with Tasev, Spas P.; Petrushev, P. P.) Characterization of  $S$ -derivatives of Lipschitz functions. (Russian) *Serdica* 4 (1978), no. 2-3, 260-266. (J. S. Lipitaki) **80i:26008** 26A24
- (with Il'in, V. A.; Sadovnicil, V. A.) ★Математический анализ. (Russian) [Mathematical analysis] "Nauka", Moscow, 1979, 719 pp. (R. P. Boas, Jr.) **80a:26001** 26-01
- ★Хансдорфовы приближения. (Russian) [Hausdorff approximations] *Bolgar. Akad. Nauk, Sofia*, 1979, 372 pp. (D. D. Stancu) **80i:41004** 41-02
- (with Andreev, Andrei S.; Popov, V. A.) Some estimates for a numerical solution of a boundary problem for ordinary differential equations of a second order. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 8, 1023-1026. (William B. Day) **80k:65066** 65L10
- Senecalle, David A.** Measuring flatness in linear spaces. *J. Funct. Anal.* 27 (1978), no. 2, 203-214. (Robert E. Huff) **80a:46030** 46B20
- Seneta, E.** (with Hoppe, F. M.) Analytical methods for discrete branching processes. *Branching processes (Conf., Saint Hippolyte, Que., 1976)*, pp. 219-261, *Advances in Probability and Related Topics*, 5, Dekker, New York, 1978. (S. Dubuc) **80d:60109** 60I80
- Coefficients of ergodicity: structure and applications. *Adv. in Appl. Probab.* 11 (1979), no. 3, 576-590. (Richard Madsen) **80d:60088** 60J10
- Sengupta, Jati K.** Adaptive decision rules for stochastic linear programming. *Internat. J. Systems Sci.* 9 (1978), no. 1, 97-109. (Authors' summary) **80a:90106** 90C15
- Evaluation of linearized stabilization policies. *Internat. J. Systems Sci.* 9 (1978), no. 12, 1341-1350. (A. K. Mahalanabis) **80c:93047** 93D05 (90A16)
- A class of bilinear models in stochastic programming with applications. *Internat. J. Systems Sci.* 10 (1979), no. 3, 307-320. (I. M. Stancu-Minasian) **80c:90108** 90C15
- Bilinear models in stochastic programming. *J. Cybernet.* 9 (1979), no. 2, 161-168. (Authors' summary) **80c:90116** 90C15
- Optimal resource allocation under stochastic prices and yields. *Z. Nationalökonom.* 39 (1979), no. 1-2, 83-104. (From the introduction) **80m:90041** 90A99 (90D40)
- Selecting an optimal solution in stochastic linear programming. *Internat. J. Systems Sci.* 11 (1980), no. 1, 33-47. (Authors' summary) **80m:90071** 90C15
- Sengupta, Manilay** On a difficulty in the analysis of strategic voting. *Econometrica* 46 (1978), no. 2, 331-343. (Prasanta K. Pattanaik) **80c:90020** 90A08
- (with Dutta, Bhaskar) A condition for Nash-stability under binary and democratic group decision functions. *Methodological developments in social sciences. Theory and Decision* 10 (1979), no. 1-4, 293-309. (Rubin Saposnik) **80m:90017** 90A08
- Sen Gupta, Nanda Dulal** On mutually anti-commuting matrices. (Italian summary) *Rend. Mat.* (6) 11 (1978), no. 4, 627-634 (1979). (M. F. Smiley) **80c:15011** 15A27
- Sengupta, P. R.** (with Ghosh, B. C.) Solution of the source problem for a finite three-dimensional source in a micropolar elastic solid. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 26 (1978), no. 5, 455-465. (V. Gheorghijă) **80c:73006** 73B25
- (with Ghosh, B. C.) Disturbance in a micropolar elastic half-space due to axially symmetric source of finite length. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 26 (1978), no. 5, 467-480. (V. Gheorghijă) **80c:73007** 73B25 (73C99)
- (with Acharya, D.) The influence of gravity on the propagation of waves in a thermo-elastic layer. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* 24 (1979), no. 3, 395-406. (K. S. Harinath) **80f:73070** 73U05 (73D25)
- Sen Gupta, Prabir Kumar** (with Chakravarty, N. K.) On the distribution of the eigenvalues of a matrix differential operator. *J. Indian Inst. Sci.* 61 (1979), no. 2, 19-42. (M. S. P. Eastham) **80g:34022** 34B25
- Sengupta, Uday K.** (with Gerlach, Ulrich H.) Relativistic equations for aspherical gravitational collapse. *Phys. Rev. D* (3) 18 (1978), no. 6, 1789-1797. (L. F. Oster) **80d:83010** 83C05 (53C25, 85A15)
- Senickil, Ju. E.** Finite integral transformations in problems of the dynamics of elastic and viscoelastic systems. (Russian. Bulgarian and English summaries) *Teoret. Prikl. Meh.* 9 (1978), no. 3, 43-49, 4. 8. (S. Matysyak) **80c:73061** 73F15 (73C99)
- Senjanovic, Goran** (with Mohapatra, R. N.) Are there limits on gauge hierarchies? *Hadronic J.* 1 (1978), no. 3, 903-915. (Philip Huddleston) **80a:81053** 81D20 (22E70)
- Spontaneous breakdown of parity in a class of gauge theories. *Nuclear Phys. B* 153 (1979), no. 3-4, 334-364. (Authors' summary) **80f:81084** 81E15
- Senk, D.** Solution of the Cauchy problem and asymptotic behavior of the spectral function of the Schrödinger operator in the case of a singular potential. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 1, 49-51. (Woodford W. Zachary) **80i:35143** 35P20 (35L15)

- Sen'kin, E. P. Bending of convex surfaces. (Russian) *Problems in geometry*, Vol. 10 (Russian), pp. 193-222, 224, *VINITI*, Moscow, 1978. (V. T. Fomenko) **80g:53046** 53C45
- Senkus, Algimantas The determination of the change point in an autoregressive sequence. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes* (Prague, 1978), Vol. B, pp. 193-200, Reidel, Dordrecht, 1978. (Ian B. MacNeill) **80m:62093** 62M10
- Sennott, L. I. A necessary condition for a Dugundji extension property. *Proceedings of the 1977 Topology Conference* (Louisiana State Univ., Baton Rouge, La., 1977), I. *Topology Proc.* 2 (1977), no. 1, 265-280 (1978). (V. J. Mancuso) **80k:54025** 54C20 (54C25, 54C35)
- Some remarks on  $M$ -embedding. *Proceedings of the 1978 Topology Conference* (Univ. Oklahoma, Norman, Okla., 1978), II. *Topology Proc.* 3 (1978), no. 2, 507-520 (1979). (J. van Mill) **80k:54049** 54E18 (54C25)
- Sentilles, F. Dennis (with Miller, Douglas R.) Weak convergence of probability measures relative to incompatible topology and  $\sigma$ -field with applications to renewal theory. *Z. Wahrsch. Verw. Gebiete* 45 (1978), no. 3, 239-256. (David Pollard) **80b:60008** 60B10 (60K05)
- (with Graves, William H.) The extension and completion of the universal measure and the dual of the space of measures. *J. Math. Anal. Appl.* 68 (1979), no. 1, 228-264. (Ion Chijesiu) **80j:28014** 28B05 (46G10)
- Sentis, Rémi Équations différentielles à second membre mesurable. (English summary) *Boll. Un. Mat. Ital. B* (5) 15 (1978), no. 3, 724-742. (Pavel Krbeč) **80d:34014** 34A60 (34A10)
- Approximation et homogénéisation d'un processus de transport. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 11, A567-A570. (Author's summary) **80k:60098** 60J60 (35R60, 82A70)
- Seo, Koichi (with Okawa, Masanori; Sugamoto, Akio) Dual transformation in non-Abelian gauge theories. *Phys. Rev. D* (3) 19 (1979), no. 12, 3744-3753. (T. F. Morris) **80g:81048** 81E10 (53C80)
- about el-Second, M. S. See Abou El-Second, M. S.
- Šepilov, M. A. The penalty method for convex programming problems. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 889-895, 1081. (E. G. Gol'shtein) **80j:90090** 90C25
- Seppälä, Mika Teichmüller spaces of Klein surfaces. *Ann. Acad. Sci. Fenn. Ser. A I Math. Dissertationes* No. 15 (1978), 37 pp. (N. L. Alling) **80g:32043** 32G15 (14G30, 14H15, 30F10)
- Seppälä, Velkko On infinitesimal calculus within a class of topological near-algebras. (French summary) *Rend. Mat.* (6) 11 (1978), no. 3, 455-478 (1979). (Sadayuki Yamamoto) **80d:58008** 58C20 (26E15)
- Serafini, S. On maximal subgroups in semigroups of partial transformations. *Zeszyt Nauk. Univ. Jagielloń. Prace Mat.* No. 21 (1979), 105-107. (Heinrich Seidel) **80k:20069** 20M20
- (with Piechowicz, L.) Solution of the translation equation on some structures. *Zeszyt Nauk. Univ. Jagielloń. Prace Mat.* No. 21 (1979), 109-114. (V. Sathyabhama) **80g:39007** 39B50
- Seraji, M. Pole placement using output feedback. *Electron. Lett.* 14 (1978), no. 23, 739-741. (Author's summary) **80g:93123** 93D15
- Serapioni, Raul (with Gonzalez, Eduardo) A global property of sets minimizing perimeter in  $\mathbb{R}^n$ . (Italian summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 2, 389-394. (J. E. Rubio) **80a:49075** 49F99
- Šerbat, A. I. (with Zadaeva, N. G.) Solution of a boundary value problem for a system of nonlinear equations by the grid method. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 1, 24-28, 138. (Jaroslav Jeřábek) **80k:65082** 65N10
- Serbin, Steven M. (with Enright, W. H.) A note on the efficient solution of matrix pencil systems. *BIT* 18 (1978), no. 3, 276-281. (David R. Hill) **80d:65049** 65F35
- Serbo, V. G. (with Kotkin, G. L.) ★Сборник задач по классической механике. (Russian) [Collection of problems in classical mechanics] Second edition, revised and augmented. "Nauka", Moscow, 1977. 320 pp. (Vadim Komkov) **80f:70001** 70-01 (34-01, 35-01)
- Serdjukov, A. I. Some extremal bypasses in graphs. (Russian) *Upravljajemye Sistemy* No. 17 (1978), 76-79. (Author's summary) **80g:90046** 90B10 (68E10, 90C35)
- The traveling salesman problem in the presence of exclusions. (Russian) *Upravljajemye Sistemy* No. 17 (1978), 80-86, 89. (K. V. Šahbazjan) **80k:90017** 90B10 (90C08)
- Serdobol'skii, V. I. (with Pronin, V. G.) Properties of probabilistic languages. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 1(188), 117-122. (R. G. Buharaev) **80d:68097** 68F05
- (with Melalkin, L. D.) Classification errors in the case of multivariate observations. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 4, 772-781. (László Györfi) **80f:62062a** 62H30
- Errors of classification based on sampled data. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 1, 130-143. (László Györfi) **80f:62062b** 62H30
- Serebrennikov, V. B. (with Šabad, A. E.; Smorodinskii, Ja. A.)  $O_4$ -covariant Hamiltonian formalism for bounded motion in a central field of force. (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 3, 333-358. (Charles L. Hammer) **80d:70032** 70H05
- Serebrovskii, A. P. (with Miller, B. M.) Optimal control of linear system with singular quadratic performance criterion. *Automat. i Telemekh.* 1979, no. 3, 23-34 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 3, part 1, 338-348. (Authors' summary) **80g:93038** 93C10
- Seredinskiĭ, F. (with Varšavskii, V. I.; Zabolotnyi, A. M.) Homogeneous games with an associated exchange process. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1977, no. 6, 132-134 (Russian); translated as *Engng. Cybernetics* 15 (1977), no. 6, 99-101 (1978). (Authors' summary) **80b:90169** 90D30 (68A05)
- Serednjak, Z. L. (with Lenjuk, M. P.) General temperature fields in continuous parachute bodies. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 37 (1979), 58-65, 142. (Authors' summary) **80d:80024** 80A99
- Seremeta, M. M. The Wiman-Valiron method for entire functions that are given by Dirichlet series. (Russian) *Dokl. Akad. Nauk SSSR* 238 (1978), no. 6, 1307-1309. (G. Halász) **80b:30018** 30D10 (30B50)
- The Wiman-Valiron method for entire functions that are defined by Dirichlet series. (Russian) *Dokl. Akad. Nauk SSSR* 240 (1978), no. 5, 1036-1039. (A. V. Bratišev) **80a:30004** 30B50 (30D20)
- The Wiman-Valiron method for Dirichlet series. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 4, 488-497, 571. (H. Tornehave) **80b:30005** 30B50 (30D15)
- Application of the Wiman-Valiron method to Dirichlet series. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 3* (1979), 179-182, 238. (Shlomo Strelitz) **80k:30007** 30B50
- Analogues of Wiman's theorem for Dirichlet series. (Russian) *Mat. Sb. (N.S.)* 110(152) (1979), no. 1, 102-116, 160. (A. V. Bratišev) **80k:30024** 30D15 (30B50)
- Serena, Luigi (with Gilotti, Anna Luisa)  $p$ -injectors and finite supersoluble groups. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 34, 164-169 (1978). (John S. Wilson) **80e:20026** 20D10
- Serene, Eileen F. Robert Grosseteste on induction and demonstrative science. *Synthese* 40 (1979), no. 1, 97-115. (A. G. Molland) **80i:01005** 01A35 (01A20, 03-03)
- Šereševskii, I. A. Quantization in cotangent bundles. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 5, 1057-1060. (Eugene Gutkin) **80b:58009** 58A99 (58F06, 81D05)
- Šeretov, V. G. On the theory of extremal quasiconformal mappings. (Russian) *Mat. Sb. (N.S.)* 107(149) (1978), no. 1, 146-158, 160. (H. Renelt) **80d:30015** 30C60
- Serfling, R. J. (with Longnecker, M.) Moment inequalities for  $S_n$  under general dependence restrictions, with applications. *Z. Wahrsch. Verw. Gebiete* 43 (1978), no. 1, 1-21. (F. Móricz) **80k:60035** 60F15
- Serfozo, R. F. See Kallin, Dieter, **80a:90142**
- Sergant, M. Réflexions sur un système de matrices à huit valeurs proposé par N. D. Belnap. *Logique et Anal. (N.S.)* 21 (1978), no. 84, 421-436. (David Makinson) **80m:03045** 03B45 (03B50)
- Sergeev, É. A. An integral basis for pure cubic extensions of one-class quadratic fields. (Russian) *Mat. Zametki* 24 (1978), no. 2, 175-181, 301. (J. Browkin) **80b:12003** 12A40
- Sergeev, S. L. (with Zubov, V. I.; Ermolin, V. S.; Smirnov, E. Ja.) ★Управление вращательным движением твердого тела. (Russian) [Control of the rotary motion of a solid body] *Leningrad. Univ., Leningrad*, 1978. 200 pp. (Editors) **80h:93012** 93A99 (70E15)
- Sergeev, V. S. The stability of a constant gyrostator rotation around the main axis of inertia. (Russian. Bulgarian and English summaries) *Teoret. Prikl. Meh.* 9 (1978), no. 3, 30-35, 3, 8. (V. E. Šestopal) **80f:70006** 70E15 (58F05)
- A method for obtaining estimates for regions of attraction with the aid of Ljapunov functions constructed by a numerical method. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1154-1161, 1355. (H. Shintani) **80d:65102** 65L99
- Sergeeva, N. D. (with Rozenfeld, B. A.) The astronomical treatises of al-Khwārizmī. (Russian) *Istor.-Astronom. Issled.* No. 13 (1977), 201-218. (E. S. Kennedy) **80a:01006** 01A30
- Sergent, Pierre (with Coudray, Christiane) The inverse problem at fixed energy for finite range complex potentials. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 29 (1978), no. 2, 179-205. (D. S. F. Crothers) **80c:81099** 81F05 (34B25)
- Sergienko, I. V. (with Lebedeva, T. T.) The method of directed vicinities. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 8, 741-744. (G. Šerškyns) **80b:90098** 90C10 (90C25)
- Sergienko, L. N. Geodesic lines of a system of integral curves of two Monge equations in  $E_4$ . (Russian) *Ukrain. Geom. Sb.* No. 22 (1979), 128-131, 6. (M. C. Chaki) **80j:53007** 53A05
- Serles, Caroline The Rohlin tower theorem and hyperfiniteness for actions of continuous groups. *Israel J. Math.* 30 (1978), no. 1-2, 99-122. (R. K. Thomas) **80j:28025** 28D05 (22D40)
- Serik, A. E. Organizing of computations in informationally connected programs. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 4, 122-126 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 4, 90-94 (1979). (Author's summary) **80f:68030** 68B20
- Serikbaev, A. U. A two-dimensional inverse problem of the logarithmic potential of a simple layer that is close to a given one. (Russian) *Direct and inverse problems for partial differential equations and their applications* (Russian), pp. 159-169, 187, "Fan", Tashkent, 1978. (P. A. Mišnaevskii) **80i:35182** 35R30 (31A25)
- Serio, Gabriella (with Capasso, Vincenzo) A generalization of the Kermack-McKendrick deterministic epidemic model. *Math. Biosci.* 42 (1978), no. 1-2, 43-61. (Authors' summary) **80i:92010** 92A15
- Šerukuziev, M. (with Mihailovskii, V. I.) The analytic rigidity of developable surfaces fastened along a line on a surface relative to two points. (Russian) *Ukrain. Geom. Sb.* No. 21 (1978), 92-99, 3. (Hillel Gauchman) **80e:53059** 53C45
- Šerman, A. I. An algorithm for the approximate solution of integer linear programming problems. (Russian) *Mathematical methods and computer science in mining* (Russian), pp. 142-168, 227, "Nauka" Kazah. SSR, Alma-Ata, 1978. (Author's summary) **80g:90085** 90C10
- Šerman, D. I. See Parton, V. Z.; et al., **80a:73001**
- Sermange, M. Une méthode numérique en bifurcation—application à un problème à frontière libre de la physique des plasmas. (English summary) *Appl. Math. Optim.* 5 (1979), no. 2, 127-151. (Tassilo Küpper) **80c:65120** 65J05 (47H10, 65N99)
- Sermange, Michel Study of a few equations based on the Hodgkin-Huxley model. *Math. Biosci.* 36 (1977), no. 1-2, 45-60. (Author's summary) **80a:92021** 92A05
- Šermatov, N. On the question of the basis of the method of fundamental nomograms. (Russian) *Nomography collection*, No. 12 (Russian), pp. 26-34, 113, *Akad. Nauk SSSR, Vychisl. Centr. Moscow*, 1978. (Author's summary) **80g:65134** 65S05
- sanz Serna, Jesús M.\* See Sanz Serna, Jesús M.\*
- Sernesi, Edoardo (with Arbarello, Enrico) Petri's approach to the study of the ideal associated to a special divisor. *Invent. Math.* 49 (1978), no. 2, 99-119. (Werner Kleiner) **80c:14020** 14H45 (14H20)
- (with Arbarello, Enrico) The equation of a plane curve. *Duke Math. J.* 46 (1979), no. 2, 469-485. (R. F. Lax) **80e:14008** 14H10
- Sero-Guillaume, Olivier Problème à frontière libre de type Stefan. (English summary) *C. R.*



- Acad. Sci. Paris Sér. A-B* 287 (1978), no. 10, A759-A761. (Author's summary) 80b:35072 35K05
- Serov, V. S. Absolute convergence of spectral expansions in generalized Besov classes. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 2, 293-302, 381. (V. V. Kovrizkin) 80g:35094 35P10
- Serpe, J. (with Beckers, J.; Jaminon, M.) Invariant tensors for some maximal subgroups of the conformal group of space-time. *J. Phys. A* 12 (1979), no. 9, 1341-1356. (Helmuth K. Urbantke) 80g:83024 83C99 (57S25)
- Serpinov, G. V. (with Petrov, B. N.; Aleksandrov, A. D.; Andreev, V. P.; Bulekov, V. P.; Viktorov, B. V.; Izvol'skii, E. G.; Kudrjavcev, P. S.; Kuzin, V. P.; Mahan'ko, A. V.; Mihailov, F. A.; Muravleva, G. A.; Nikolaev, Ju. P.; Pobedonosev, G. V.; Pohvalenskii, V. L.; Sadykov, F. R.; Salikova, I. M.; Ul'jačenko, A. E.; Frolov, P. A.; Červjakov, V. P.; Satorjan, K. T.) ★Многорежимные и нестационарные системы автоматического управления. (Russian) [Multistate and nonstationary automatic control systems] "Машиностроение", Moscow, 1978. 240 pp. (Publisher's summary) 80c:93073 93C40
- Serra, Jean (with Miles, Roger E.) En Matière d'introduction. *Geometrical probability and biological structure: Buffon's 200th anniversary* (Proc. Buffon Bicentenary Sympos., Paris, 1977), pp. 3-28. *Lecture Notes in Biomath.*, 23, Springer, Berlin, 1978. (L. A. Santaló) 80c:60020 60D05 (01A55, 60-03)
- See also *Geometrical probability and biological structures: Buffon's 200th anniversary*, 80a:92003
- Serre, Denis Prolongement analytique et nombre de solutions d'une équation aux dérivées partielles elliptique non linéaire paramétrée. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 15, A1021-A1023. (Author's summary) 80a:35052 35J65 (35B99)
- Les invariants du premier ordre de l'équation d'Euler en dimension 3. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 4, A267-A270. (Author's summary) 80i:35164 35Q20 (76B10)
- Prolongement analytique d'une branche de solutions d'une équation aux dérivées partielles non linéaire paramétrée. Applications. (English summary) *Comm. Partial Differential Equations* 4 (1979), no. 9, 1035-1066. (J. L. Kazdan) 80h:35011 35B30 (35J60)
- Serre, Jean-Pierre ★Représentations linéaires des groupes finis. Third revised edition. Hermann, Paris, 1978. 182 pp. ISBN 2-7056-5630-8 (Editors) 80f:20001 20-01 (20C99)
- Une "formule de masse" pour les extensions totalement ramifiées de degré donné d'un corps local. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 22, A1031-A1036. (Author's summary) 80a:12018 12B25
- See also Krasner, Marc, 80k:12023
- Serrin, James (with Weinberger, H. F.) Optimal shapes for brittle beams under torsion. (Russian summary) *Complex analysis and its applications* (Russian), pp. 88-91, 665, "Nauka", Moscow, 1978. (Vadim Komkov) 80d:73106 73K99 (49F99)
- The concepts of thermodynamics. *Contemporary developments in continuum mechanics and partial differential equations* (Proc. Internat. Sympos., Inst. Mat., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977), pp. 411-451. *North-Holland Math. Studies*, 30, North-Holland, Amsterdam, 1978. (S. Harris) 80g:80002 80A05 (58E05)
- (with Fosdick, Roger L.) On the impossibility of linear Cauchy and Piola-Kirchhoff constitutive theories for stress in solids. *J. Elasticity* 9 (1979), no. 1, 83-89. (J. Dunwoody) 80f:73004 73B05
- Serstnev, A. N. Measures on the ideals of the orthoprojectors of a von Neumann algebra. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 10(197), 108-109. (J. Benkő) 80k:46075 46L50
- See also *Constructive theory of functions and functional analysis*, 80d:00006
- Servade, T. L. Inequalities for the characteristic function of an absolutely continuous distribution. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* 91 (1978), no. 3, 533-536. (S. G. Maloševskii) 80k:60025 60E10
- Servedio, Frank J. Principal irreducible Lie-algebra modules. *Canad. Math. Bull.* 21 (1978), no. 4, 483-489. (David Birkes) 80c:17008 17B10
- Canonical reducible cubic forms in  $n > 3$ -variables and their infinite orthogonal groups. *J. Pure Appl. Algebra* 15 (1979), no. 3, 283-291. (V. L. Popov) 80h:10031a 10C10 (10C30, 15A72)
- Erratum to: "Canonical reducible cubic forms in  $n > 3$ -variables and their infinite orthogonal groups" (*J. Pure Appl. Algebra* 15 (1979), no. 3, 283-291). *J. Pure Appl. Algebra* 16 (1980), no. 1, 109. (Editors) 80h:10031b 10C10
- Fischer-Servi, Gisèle See Fischer-Servi, Gisèle
- Servi, Mario An axiomatization of existential lattices. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 2, 298-301. (S. Rudeanu) 80g:03061 03G15 (06D99)
- Servizi, G. (with Mainardi, F.; Turchetti, G.) Application of Padé approximants to elastic wave propagation problems. *Modern problems in elastic wave propagation* (Proc. IUTAM Sympos., Northwestern Univ., Evanston, Ill., 1977), pp. 103-119. Wiley, New York, 1978. (T. Bryant Moodie) 80k:73020 73D15 (86A15)
- Seryh, N. D. (with Ginzburg, B. N.) Algebraic zero surfaces of entire characteristic functions of multivariate-dimensional probabilistic distributions. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* No. 30 (1978), 30-36. (R. Cuppens) 80d:60022 60E10 (32A15)
- Seshadri, Venkita (with Lakatos-Lindenberg, Katja) Analytic theory of extrema. I. Asymptotic theory for Fokker-Planck processes. *J. Chem. Phys.* 71 (1979), no. 10, 4075-4084. (S. K. Srinivasan) 80f:60113 60J70 (82A05)
- (with West, B. J.; Bulsara, A. R.; Lakatos-Lindenberg, Katja; Shuler, K. E.) Stochastic processes with nonadditive fluctuations. I. Itô and Stratonovich calculus and the effects of correlations. *Phys. A* 97 (1979), no. 2, 211-233. (Authors' summary) 80c:82015a 82A05
- (with Bulsara, A. R.; Lakatos-Lindenberg, Katja; Shuler, K. E.; West, B. J.) Stochastic processes with nonadditive fluctuations. II. Some applications of Itô and Stratonovich calculus. *Phys. A* 97 (1979), no. 2, 234-243. (Authors' summary) 80c:82015b 82A05
- Sesiano, Jacques Les méthodes d'analyse indéterminée chez abū Kāmil. *Cientibus* 21 (1977), no. 2, 89-105. (Y. Dold) 80k:01014 01A30
- Šetka, M. A. Approximate solution of the Riemann boundary value problem with discontinuous coefficients. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 4(191), 91-103. (S. A. Tersenov) 80d:30040 30E25
- A cubature formula for a two-dimensional integral with Cauchy kernels. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1978, no. 5, 39-46, 142. (J. Kofroň) 80c:65065 65D32
- (with Mastjanica, V. S.) Construction of a quadrature formula for the integral with a Cauchy kernel with the aid of polygons. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* 1978, no. 3, 18-21, 86. (H. M. Möller) 80b:65025 65D30
- Convergence of cubature processes for a two-dimensional singular integral. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 4, 293-297, 380. (Walter Gautschi) 80g:65027 65D32
- Sesma, J. (with Cruz, A.) Convergence of the Debye expansion for the S matrix. *J. Math. Phys.* 20 (1979), no. 1, 126-131. (Authors' summary) 80b:81098 81F99
- Šestakov, A. A. (with Stepanov, A. N.) Index and divergence criteria for the stability of a singular point of an autonomous system of differential equations. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 4, 650-661, 764. (A. I. Perov) 80g:34047 34D05 (34C05)
- (with Merenkov, Ju. N.) Ljapunov stability and attracting sets relative to a nonautonomous differential system. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 5, 815-827, 956. (Z. Vorel) 80j:34062 34D20 (58F12)
- (with Merenkov, Ju. N.) Examples of Ljapunov unstable points of positive attraction. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 6, 1028-1035, 1149. (Pavel Krčec) 80c:34034 34D20
- Šestakov, I. P. (with Ževlakov, K. A.; Slin'ko, A. M.; Širšov, A. I.) ★Кольца, близкие к ассоциативным. (Russian) [Rings that are nearly associative] *Современная Алгебра*. (Monographs in Modern Algebra) "Nauka", Moscow, 1978. 431 pp. (Harry F. Smith) 80h:17002 17-02 (17Cxx, 17Dxx)
- Šestakov, V. I. A method for the symbolic representation of cascade and parallel conjunctions of n-wire circuits. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* 20 (1979), no. 4, 45-55, 125. (Author's summary) 80a:94079 94C05
- Šestakova, G. P. The homological determination of torsion modules. (Russian) *Mat. Sb.* (N.S.) 109(151) (1979), no. 3, 469-477, 480. (Chr. U. Jensen) 80h:12020 12C99 (12B20, 13D99)
- Homological determination of modules with torsion. (Russian) *Algebraic numbers and finite groups. Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 86 (1979), 180-184, 192. (L. A. Koifman) 80g:13009 13D99 (16A62)
- Sestier, André Note on a theorem of Berlinskii. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 358-360. (Wolfgang Bühning) 80k:34041 34C05
- Šestopal, A. F. A spectral problem for the Laplace operator in domains of mirror-symmetric polyhedra. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 4, 725-731, 766. (P. Günther) 80c:35049 35P20 (10J25, 58G25)
- Šestopalov, Ju. V. The justification of a method for calculating normal waves in microstrip devices. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyšš. Mat. Kibernet.* 1979, no. 1, 14-20, 69. (Author's summary) 80d:78032 78A50
- Šestopalov, V. P. (with Vinogradov, S. S.; Tučkin, Ju. A.) An effective solution to paired summator equations with the kernel in the form of adjoint Legendre functions. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 1, 80-83. (B. A. Bondarenko) 80g:33014 33A45 (39B40)
- (with Tučkin, Ju. A.) A numerical method for the solution of operator equations. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 3, 570-573. (I. K. Marek) 80a:65124 65J15 (47A50)
- (with Košparěnek, V. N.) A rigorous solution of the problem of the perturbation of two circular cylinders with longitudinal slits. (Russian) *Ž. Vyšš. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1196-1213, 1356. (Authors' summary) 80f:78004 78A25 (35C99, 65P05)
- Seth, B. R. Transonic operator and number. (Russian summary) *Complex analysis and its applications* (Russian), pp. 534-536, 671, "Nauka", Moscow, 1978. (Author's summary) 80h:76040 76H05 (35Q99)
- Sethi, I. K. Fast sequential evaluation of monotonic Boolean functions. *Inform. Sci.* 20 (1980), no. 2, 101-113. (Author's summary) 80h:94102 94C10
- Sethi, Ravi (with Bruno, John) Task sequencing in a batch environment with setup times. *Found. Control Engrg.* 3 (1978), no. 3, 105-117. (Authors' summary) 80c:90081 90B35
- Sethi, Suresh P. A survey of management science applications of the deterministic maximum principle. *Applied optimal control*, pp. 33-68. *Studies in the Management Sci.*, 9, North-Holland, Amsterdam, 1978. (Author's summary) 80b:90144 90C50
- (with Staats, Preston W.) Optimal control of some simple deterministic epidemic models. *J. Oper. Res. Soc.* 29 (1978), no. 2, 129-136. (R. Fischler) 80f:92023 92A15
- Optimal quarantine programmes for controlling an epidemic spread. *J. Oper. Res. Soc.* 29 (1978), no. 3, 265-268. (R. Fischler) 80c:92042 92A15 (93C99)
- (with Deal, K.; Thompson, G. L.) A bilinear-quadratic differential game in advertising. *Control theory in mathematical economics* (Proc. Third Kingston Conf., Part B, Univ. Rhode Island, Kingston, R.I., 1978), pp. 91-109. *Lecture Notes in Pure and Appl. Math.*, 47, Dekker, New York, 1979. (Authors' summary) 80g:90137 90D40 (90D25)
- Optimal depletion of an exhaustible resource. *Appl. Math. Modelling* 3 (1979), no. 5, 367-378. (Author's summary) 80c:90056 90A30 (93C99)
- (with Chand, Suresh) Planning horizon procedures for machine replacement models. *Management Sci.* 25 (1979/80), no. 2, 140-161. (Masafumi Sasaki) 80f:90064 90B25
- Sethna, P. R. (with Bajaj, A. K.) Bifurcations in dynamical systems with internal resonance. *Trans. ASME Ser. E J. Appl. Mech.* 45 (1978), no. 4, 895-902. (R. K. Rathy) 80c:34029 34C35 (34C29, 58F14, 70K30)
- Sethuraman, Jayaram (with Jones, Douglas H.) Bahadur efficiencies of the Student's t-tests. *Ann. Statist.* 6 (1978), no. 3, 559-566. (M. Raghavachari) 80f:62037 62G20 (60F10)
- (with Hollander, Myles) Testing for agreement between two groups of judges. With comments by William R. Schucany and a reply by the authors. *Biometrika* 65 (1978), no. 2, 403-411. (Ludger Rüschendorf) 80a:62056 62G10
- (with El-Newehi, Emad; Proschian, Frank) Multistate coherent systems. *J. Appl. Probab.* 15 (1978), no. 4, 675-688. (Benjamin Epstein) 80a:62162 62N05

- Setlur, Rangaswamy V.** (with Kodandapani, K. L.) A cellular array for multivalued logic functions. *IEEE Trans. Comput.* **27** (1978), no. 11, 1055-1059. (Authors' summary) **80a:94057** 94C10 (93A99)
- Seto, Richard** (with Gibbs, Alan G.) The transport equation with anisotropic scattering in finite slab geometry. *J. Math. Phys.* **19** (1978), no. 12, 2591-2604. (M. Drăganu) **80a:82045** 82A70 (45K05)
- Sette, A. M.** (with Sette, J. S.) Functorialization of first-order language with finitely many predicates. *Mathematical logic (Proc. First Brazilian Conf., State Univ. Campinas, Campinas, 1977)*, pp. 293-303, *Lecture Notes in Pure and Appl. Math.*, **39**, Dekker, New York, 1978. (A. Preller) **80a:10003** 18B99 (03C99)
- Sette, J. S.** (with Sette, A. M.) Functorialization of first-order language with finitely many predicates. *Mathematical logic (Proc. First Brazilian Conf., State Univ. Campinas, Campinas, 1977)*, pp. 293-303, *Lecture Notes in Pure and Appl. Math.*, **39**, Dekker, New York, 1978. (A. Preller) **80a:10003** 18B99 (03C99)
- Setzer, C. Bennett** The structure of minima for binary quadratic forms. *Illinois J. Math.* **23** (1979), no. 3, 352-362. (T. H. Jackson) **80a:10030** 10C25 (10E20)
- Arithmetic progressions in the values of a quadratic polynomial. *Rocky Mountain J. Math.* **9** (1979), no. 2, 361-363. (J. W. S. Cassels) **80d:10032** 10B15
- Servat'janov, E. A.** Rational approximation and absolute convergence of Fourier series. (Russian) *Mat. Sb. (N.S.)* **107**(149) (1978), no. 2, 227-244, 317. (J. Németh) **80a:42008** 42A28 (41A20)
- Servat'janov, S. V.** Optimization of the servicing of the construction of linear objects. (Russian) *Upravljayemye Sistemy* No. 17 (1978), 67-75, 88. (Author's summary) **80g:90121** 90C50
- Ševčenko, A. V.** Practical methods for approximate calculations. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 37 (1979), 124-130, 144. (Hans-Jürgen Albrand) **80a:65043** 65D99
- Ševčenko, E. N.** (with Homenko, M. P.) On the problem of identifying and enumerating. II. (Russian) *Graph theory (Russian)*, pp. 157-175, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev, 1977*. (From the introduction) **80f:05051** 05C30 (05C10)
- (with Homenko, M. P.) An inductive method of constructing determining matrices. II. (Russian) *Graph theory (Russian)*, pp. 180-186, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev, 1977*. (E. Hakimullin (RZMat 1978:12 V982)) **80a:05036** 05C50
- On the question of constructing determining matrices. (Russian) *Graph theory (Russian)*, pp. 187-188, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev, 1977*. (E. Hakimullin (RZMat 1978:12 V983)) **80a:05036** 05C50
- (with Homenko, M. P.) A complete system of invariants of the KVP-graph. (Russian) *Graph theory (Russian)*, pp. 189-196, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev, 1977*. (From the introduction) **80f:05035** 05C10
- A group of the KVP-graph. (Russian) *Graph theory (Russian)*, pp. 197-201, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev, 1977*. (From the introduction) **80f:05050** 05C25 (05C10)
- Ševčenko, Ju. I.** Framings of varieties of planes in projective space. (Russian) *Kaliningrad. Gos. Univ. Differentsial'naja Geom. Mnogoobraz. Figur* No. 9 (1978), 124-133, 140. (M. A. Akivis) **80i:53006** 53A20
- Ševčenko, V. I.** Analogue of the Atiyah-Singer formula in the problem of the homotopy classification of elliptic systems. (Russian) *Complex analysis and its applications (Russian)*, pp. 595-600, 672, "Nauka", Moscow, 1978. (V. S. Rabinović) **80e:58023** 58G10 (35J45)
- (with Le Hyu Zien) Homotopy classification of systems of equations on the plane that are elliptic in the sense of Petrovskii. (Russian) *Dokl. Akad. Nauk SSSR* **238** (1978), no. 1, 26-28. (Ja. A. Roitberg) **80a:35038** 35J40 (58G99)
- (with Černomaz, V. N.) The problem of linear conjugation for a holomorphic vector in four-dimensional space. (Russian) *Dokl. Akad. Nauk SSSR* **242** (1978), no. 3, 549-551. (N. K. Karapetjanc) **80a:32004** 32A30 (30E25, 35J99)
- (with Černomaz, V. N.) Elliptic systems with eight independent variables. (Russian) *Mat. Fiz. No. 24* (1978), 116-119, 124. (M. S. Agranović) **80f:35052** 35J45 (58G99)
- Ševčenko, V. N.** (with Veselov, S. I.) The exponential growth of coefficients of the aggregating equation. (Russian. English summary) *Kibernetika (Kiev)* **1978**, no. 4, 78-79. (E. Ja. Gabovici) **80a:90101** 90C10 (65F99)
- Solution of a linear programming problem with variable coefficients. *Avtomat. i Telemekh.* **1979**, no. 5, 114-120. (Russian. English summary); translated as *Avtomat. Remote Control* **40** (1979), no. 5, part 2, 721-727. (Author's summary) **80a:90096** 90C05
- Sevcik, Ken** (with Gelenbe, Erol) Analysis of update synchronization for multiple copy data bases. *IEEE Trans. Comput.* **28** (1979), no. 10, 737-747. (Authors' summary) **80a:68080** 68H05 (68A05)
- Ševčik, V. V.** Interpolation of certain properties of linear operators. (Russian) *Mathematical analysis and probability theory (Russian)*, pp. 187-190, 224, "Naukova Dumka", Kiev, 1978. (Angelo Favini) **80a:46004** 46M35 (47A05)
- Equations of convolution type in a scale of spaces of generalized functions. (Russian) *Mathematical analysis and probability theory (Russian)*, pp. 190-194, 224, "Naukova Dumka", Kiev, 1978. (Angelo Favini) **80a:46045** 46F10 (45E10, 46M05)
- Integral equations of convolution type in a family of spaces of generalized functions that is continuously dependent on a parameter. (Russian) *Differentsial'nye Uravnenija* **14** (1978), no. 11, 2060-2064, 2109. (F. Smithies) **80a:45007** 45E10 (46F10)
- Ševcov, P. V.** (with Vabiševič, P. N.; Gabov, S. A.) Angular potential for the operator  $\Delta + c(x)$ . (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **19** (1979), no. 5, 1162-1177, 1356. (M. A. Atabodžiev) **80a:35024** 35J05
- Ševčuk, I. A.** The function classes  $H_{\alpha, \beta}^{(p)}$  on sets  $\mathbb{R}^n$  of the complex plane. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kahuga, 1975)* (Russian), pp. 409-412, "Nauka", Moscow, 1977. (D. Mitrović) **80f:30030** 30E10 (46E99)
- Ševčuk, I. S.** On the question of complete positivity of powers of matrices. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* **1978**, no. 5(192), 124-126. (I. Enescu) **80a:15022** 15A48
- Ševčuk, V. S.** (with Suvorov, G. D.; Aptekar, A. S.; Gusarova, N. I.; Popov, V. I.; Prohoda, G. M.) The method of simplex-splines (as applied to the optimal layout of gas pipelines). (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 9* (1979), 708-709, 777. (Authors' summary) **80a:90022** 90B99
- Sevel'ov, A. G.** (with Tkalič, A. P.) Analysis of the possibility of solving the problem of analytic construction of regulators for nonlinear systems. (Russian) *Adapt. Sistemy Avtomat. Upravlenija* No. 7 (1979), 116-119, 131. (I. Munteanu) **80g:93055** 93C10
- Severinov, L. I.** A method for the solution of nonlinear difference boundary value problems of continuum mechanics. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **18** (1978), no. 4, 974-986, 1069. (Author's summary) **80e:76043** 76N15 (65P05)
- Servia, L. N.** See *Studies in functional analysis*, **80a:47001**
- Sewell, Geoffrey L.** Stability, equilibrium and metastability in statistical mechanics. *Phys. Rep.* **57** (1980), no. 5, 307-342. (H. Araki) **80m:82015** 82A15 (46L60)
- Sewell, J. I.** (with Dunning-Davies, J.; Faulkner, Faith D.) On sensitivity theorems in active equivalent network theory. 1978 *IEEE International Symposium on Circuits and Systems* (New York, 1978), pp. 1060-1063, *IEEE*, New York, 1978. (Authors' summary) **80d:94041** 94C99
- Sewell, M. J.** A pure catastrophe machine. *Bull. Inst. Math. Appl.* **14** (1978), no. 8-3, 212-214. (Martin Golubitsky) **80b:58017** 58C28
- (with Noble, B.) General estimates for linear functionals in nonlinear problems. *Proc. Roy. Soc. London Ser. A* **361** (1978), no. 1706, 293-324. (Michael F. Baras) **80e:49040** 49H05 (49C15)
- Seydel, Kenneth** (with Alexanderson, Gerald L.) Kürschak's tile. *Math. Gaz.* **62** (1978), no. 421, 192-196. (A. Florian) **80b:51012** 51M20 (52A45)
- Seydel, Rüdiger** Numerical computation of branch points of ordinary differential equations. *Numer. Math.* **32** (1979), no. 1, 51-68. (J. Hurt) **80g:65097** 65L10
- Numerical computation of branch points in nonlinear equations. *Numer. Math.* **33** (1979), no. 3, 339-352. (Author's summary) **80m:65044** 65H10 (55M20, 58C15)
- Seyedin, Massoud** Completion of members of the Pervin quasi-proximity class. *Proceedings of the Seventh National Mathematics Conference (Dept. Math., Azarabadegan Univ., Tabriz, 1976)*, pp. 297-305, *Azarabadegan Univ., Tabriz*, 1977. (P. Fletcher) **80a:54024** 54E15
- Seymour, B. R.** (with Parker, D. F.) Finite amplitude one-dimensional pulses in an inhomogeneous granular material. *Arch. Rational Mech. Anal.* **72** (1979/80), no. 3, 265-284. (Peter J. Chen) **80j:73021** 73D99 (35Q99)
- (with Mortell, M. P.) Nonlinear forced oscillations in a closed tube: continuous solutions of a functional equation. *Proc. Roy. Soc. London Ser. A* **367** (1979), no. 1729, 253-270. (C. Rogers) **80j:76035** 76N15 (39B99)
- Seymour, P. D.** A two-commodity cut theorem. *Discrete Math.* **23** (1978), no. 2, 177-181. (Edward Minieka) **80a:90068** 90B10 (05C38)
- Counterexample to a conjecture of Jeurlissen. *Discrete Math.* **24** (1978), no. 3, 315. (D. L. Greenwell) **80a:05091** 05C38 (05C99)
- (with Schrijver, Alexander) Solution of two fractional packing problems of Lovász. *Discrete Math.* **26** (1979), no. 2, 177-184. (László Lovász) **80j:05095** 05C65 (90C10)
- Matroid representation over GF(3). *J. Combin. Theory Ser. B* **26** (1979), no. 2, 159-173. (Robert E. Bixby) **80k:05031** 05B35
- A short proof of the two-commodity flow theorem. *J. Combin. Theory Ser. B* **26** (1979), no. 3, 370-371. **80d:90037** 90B10
- Sezer, E.** (with Hüseyin, Ö.) On the controllability of composite systems. *IEEE Trans. Automat. Control* **24** (1979), no. 2, 327-329. (Jerzy Klamka) **80e:93042** 93B05
- Sezenc, R.** (with Zinn-Justin, J.) Summation of divergent series by order dependent mappings: application to the anharmonic oscillator and critical exponents in field theory. *J. Math. Phys.* **20** (1979), no. 7, 1398-1408. (Gh. Adam) **80j:81036** 81C9 (41A58, 65B10)
- Sfikas, Ioannis G.** (with Grammatikopoulos, M. K.; Staikos, V. A.) Oscillatory properties of strongly superlinear differential equations with deviating arguments. *J. Math. Anal. Appl.* **67** (1979), no. 1, 171-187. (Bhagat Singh) **80a:34072** 34K15
- On the behavior of nonoscillatory solutions of differential equations with deviating argument. *Nonlinear Anal.* **3** (1979), no. 3, 379-394. (Hal Leslie Smith) **80b:34098** 34K15
- Sgarro, Andrea** Probability exponents of the classes of certain partitions relative to discrete-parameter stochastic processes. (Italian summary) *Rend. Istit. Mat. Univ. Trieste* **10** (1978), no. 1-2, 57-65 (1979). (S. Guaiu) **80m:94049** 94A99
- Noiseless block-coding of useful information. (German and Russian summaries) *Elektron. Informatsionserarb. Kibernet.* **15** (1979), no. 5-6, 309-314. (Author's summary) **80m:94037** 94A29
- Sghibner, M. S.** (with Rogozin, B. A.) Maximal ideals in Banach algebras of measures on the line. (Russian) *Mat. Zametki* **24** (1978), no. 3, 315-318, 445. (K. A. Ross) **80a:43005** 43A10
- (with Rogozin, B. A.) Banach algebras of absolutely continuous measures on the line. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 1, 119-127, 205. (Nicholas Young) **80f:43007** 43A10 (26A12, 60K05)
- Asymptotic analysis of the density of the renewal function. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 1, 141-151, 205. (M. V. Kartasov) **80e:60099** 60K05
- Sgro, Joseph** The interior operator logic and product topologies. *Trans. Amer. Math. Soc.* **258** (1980), no. 1, 99-111. (Andreas Blass) **80m:03074** 03C80
- Shahad, A. E.** See *Shahad, A. E.*
- Shackell, John R.** Semigroups associated with polynomial-hull structure. *Proc. London Math. Soc.* (3) **39** (1979), no. 1, 30-50. (B. M. Weinstock) **80a:32019** 32E20
- Shadwick, W. F.** The Backlund problem for the equation  $\partial^2 z / \partial x^1 \partial x^2 = f(z)$ . *J. Math. Phys.* **19** (1978), no. 11, 2312-2317. (A. Degasperis) **80a:58002** 58A15 (35Q20)
- Shaffer, Juliet Popper** (with Lehmann, E. L.) Optimum significance levels for multistage comparison procedures. *Ann. Statist.* **7** (1979), no. 1, 27-45. (S. Blumenthal) **80j:62070** 62J15 (62F03, 62G10)
- Shafiq, M.** (with Federer, W. T.) Generalized N-ary balanced block designs. *Biometrika* **66** (1979), no. 1, 115-123. (Damaraju Raghavarao) **80j:62074** 62K10
- Shah, Jayant** Stability of local rings of dimension 2. *Proc. Nat. Acad. Sci. U.S.A.* **75** (1978), no. 9, 4085-4086. (T. Oda) **80k:14024** 14D20 (13H10, 13H15)
- Shah, K. Tahir** A general theory of conservation laws, their violation, and spontaneous phenomena. *Found. Phys.* **9** (1979), no. 3-4, 271-282. (Author's summary) **80b:81004** 81E15 (58F07)
- (with Recami, Erasmo) A multiply-connected space-time, black holes, and tachyons. *Lett. Nuovo Cimento* (2) **24** (1979), no. 4, 115-119. **80a:83064** 83D05 (53B50)
- Shah, Manilal** A new expansion theorem on Fox's H-function of two variables. *Math.*



- Balkanica** 6 (1976), 179-185 (1978). (R. G. Buschman) **80j:33006** 33A35
- Shah, N. C.** (with Sheth, I. H.) Remark on a paper of T. Saitô: "On a theorem by S. M. Patel" (Rev. Roumaine Math. Pures Appl. 21 (1976), no. 10, 1407-1409). *Math. Student* 45 (1977), no. 1, 97-99 (1978). (J. P. Williams) **80a:47037** 47B20
- Shah, S. H.** Approximation of meromorphic functions by rational functions. *J. Approx. Theory* 24 (1978), no. 2, 146-160. (Wolfgang Luh) **80c:30016** 30E10 (30D15)
- Shah, S. L.** (with Seborg, D. E.; Fisher, D. Grant) Design and application of controllers and observers for disturbance minimization and pole assignment. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* 102 (1980), no. 1, 21-27. (Authors' summary) **80m:93017** 93B05 (93B07)
- Shah, S. M.** See **Shah, Shantilal M.**
- Shah, S. M.** See **Shah, Swarupchand M.**
- Shah, Shantilal M.** Corrigendum: "On some block structure properties of a BIBD" (Calcutta Statist. Assoc. Bull. 24 (1975), no. 93-96, 127-130 (1976)). *Calcutta Statist. Assoc. Bull.* 26 (1977), no. 101-104, 123 (1978). (Editors) **80a:05028** 05B05 (62K10)
- (with Rathod, V. R.) Prediction intervals for future order statistics in two-parameter exponential distributions. *J. Indian Statist. Assoc.* 16 (1978), 113-121. (J. F. Lawless) **80i:62027** 62F25
- (with Patel, S. R.) Minimum variance unbiased estimation of left truncated multivariate power series distributions. *Mitrika* 25 (1978), no. 4, 209-218. (Stanley L. Sclove) **80c:62035** 62F10 (62H12)
- Shah, Swarupchand M.** (with Fricke, G. H.) On bounded value distribution and bounded index. *Nonlinear Anal.* 2 (1978), no. 4, 423-435. (Heinrich Begehr) **80c:30025** 30D20 (30D35)
- Chebyshev approximation constants related to entire functions of perfectly regular growth. *J. Approx. Theory* 25 (1979), no. 1, 12-20. (Anthony G. O'Farrell) **80i:30031** 30E10 (30D15)
- Shah, Y. K.** (with Dave, Upendra) Alternative derivation of deterministic inventory models with nonconstant demand. *Acta Cienc. Indica* 5 (1979), no. 2, 84-86. (From the text) **80g:90037** 90B05
- Shahidi, Freydoon** Modular forms and L-functions for  $GL_2$ . *Proceedings of the Eighth National Mathematics Conference (Arya-Mehr Univ. Tech., Tehran, 1977)*, pp. 316-324. *Arya-Mehr Univ. Tech., Tehran, 1977*. (Audrey A. Terras) **80g:12008** 12A67 (10D40, 22E55)
- Shahinpoor, M.** (with Ahmadi, Goodarz) Universal stability of thermo-Cosserat fluid motions. (Italian summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 111 (1977), no. 2, 241-249 (1978). (Hilmi Demiryaz) **80g:76003** 76A05 (76E05)
- Shahshahani, S.** A new mathematical framework for the study of linkage and selection. *Mem. Amer. Math. Soc.* 17 (1979), no. 211, ix+34 pp. (John Cantwell) **80c:92021** 92A10
- Shahik, A.** Amendments and corrections: "Statistical inference for Markov chains with lumped states" (Biometrika 63 (1976), no. 1, 211-213). *Biometrika* 65 (1978), no. 2, 455. (Editors) **80a:62133** 62M05
- Shall, R.** Some potential problems for slender rotor. *J. Inst. Math. Appl.* 24 (1979), no. 3, 303-325. (Author's summary) **80i:65145** 65P05 (65R20)
- Shaked, Moshe** (with Greenwood, Priscilla) Dual pairs of stopping times for random walk. *Ann. Probab.* 6 (1978), no. 4, 644-650. (E. Arjas) **80a:60009** 60J15 (60G17, 60G40)
- Accelerated life testing for a class of linear hazard rate type distributions. *Technometrics* 20 (1978), no. 4, part 1, 457-466. (A. P. Basu) **80c:62112** 62N05
- Estimation of starshaped sequences of Poisson and normal means. *Ann. Statist.* 7 (1979), no. 4, 729-741. (G. K. Bhattacharyya) **80f:62034** 62F10 (62N05)
- An estimator for the generalized hazard rate function. *Comm. Statist. A—Theory Methods* 8 (1979), no. 1, 17-33. (G. K. Bhattacharyya) **80c:62033** 62G05 (62N05)
- Shaked, U.** The asymptotic behavior of the root-loci of multivariable optimal regulators. *IEEE Trans. Automat. Control* 23 (1978), no. 3, 425-430. (Author's summary) **80a:93067** 93B99
- The design of multivariable systems having zero sensitive poles. *IEEE Trans. Automat. Control* 24 (1979), no. 1, 117-119. (Author's summary) **80c:93058** 93B99
- A transfer function approach to the linear discrete stationary filtering and the steady-state discrete optimal control problems. *Internat. J. Control* 29 (1979), no. 2, 279-291. (V. Kolmanovskii) **80c:93117** 93E10
- A general transfer-function approach to the discrete-time steady-state linear quadratic Gaussian stochastic control problem. *Internat. J. Control* 29 (1979), no. 3, 361-386. (H. Taylor) **80f:93101** 93E20
- Shakhtarin, B. I.** See **Sahtarin, B. I.**
- Shaki, Ableser S.** Algebraic solutions of partisan games with cycles. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 2, 227-246. (R. E. Stearns) **80a:90172** 90D12
- Shakiban, Chehrzad** (with Oliver, Peter J.) A resolution of the Euler operator. *Proceedings of the Eighth National Mathematics Conference (Arya-Mehr Univ. Tech., Tehran, 1977)*, pp. 325-337. *Arya-Mehr Univ. Tech., Tehran, 1977*. (Alexander A. Pankov) **80c:59058** 58F07 (35Q20, 49A50)
- Shale, David** On geometric ideas which lie at the foundation of quantum theory. *Adv. in Math.* 32 (1979), no. 3, 175-203. (S. Gudder) **80c:81002** 81B05 (00A69)
- Shalen, Peter B.** (with Jaco, William) A new decomposition theorem for irreducible sufficiently-large 3-manifolds. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976)*, Part 2, pp. 71-84. *Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I., 1978*. (J. S. Birman) **80i:57008** 57N10
- (with Jaco, William) Seifert fibered spaces in 3-manifolds. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 91-99. *Academic Press, New York, 1979*. (Hugh M. Hilden) **80k:57016** 57N10
- Separating, incompressible surfaces in 3-manifolds. *Invent. Math.* 52 (1979), no. 2, 105-126. (Hugh M. Hilden) **80k:57019** 57N10
- Linear representations of certain amalgamated products. *J. Pure Appl. Algebra* 15 (1979), no. 2, 187-197. (Ju. I. Merzjakov) **80c:20011** 20C15 (57M05)
- Shalka, Joseph** (with Jacquet, Hervé; Piatetski-Shapiro, I. I.) Automorphic forms on  $GL(3)$ . *I. Ann. of Math. (2)* 109 (1979), no. 1, 169-212. (Stephen Gelbart) **80i:10034** 10D40 (22E50, 22E55)
- (with Jacquet, Hervé; Piatetski-Shapiro, I. I.) Automorphic forms on  $GL(3)$ . *II. Ann. of Math. (2)* 109 (1979), no. 2, 213-258. (Stephen Gelbart) **80i:10034b** 10D40 (22E50, 22E55)
- Shalit, Haim** (with Turnovsky, Stephen J.; Schmitz, Andrew) Consumer's surplus, price instability, and consumer welfare. *Econometrica* 48 (1980), no. 1, 135-152. (Authors' summary) **80m:90025** 90A12 (90A16)
- Shalit, Dan** (with Tikochinsky, Yoel) Transformation between the normal and antinormal expansions of boson operators. *J. Math. Phys.* 20 (1979), no. 8, 1676-1678. (Martin Kummer) **80j:81093** 81H05
- Shallit, Jeffrey** Simple continued fractions for some irrational numbers. *J. Number Theory* 11 (1979), no. 2, 209-217. (L. C. Eggen) **80k:10006** 10A32 (10F20)
- Shamaly, A.** (with Christensen, G. S.; El-Hawary, M. E.) A transformation for necessary optimality conditions for systems with polynomial nonlinearities. *IEEE Trans. Automat. Control* 24 (1979), no. 6, 983-985. (Authors' summary) **80m:49016** 49B10
- Shamash, Y.** Comments on the Routh-Hurwitz criterion. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 132-133. (Author's summary) **80m:93073** 93D99
- Shamim, A. A.** (with Sen, S. K.) Integral solution of linear equations using integer arithmetic. *J. Indian Inst. Sci.* 60 (1978), no. 3, 111-118. (Frank J. Hall) **80a:15006** 15A09
- (with Sen, S. K.) An integer arithmetic method to compute generalized matrix inverse and solve linear equations exactly. *Proc. Indian Acad. Sci. Sect. A* 87 (1978), no. 9, 161-168. (Authors' summary) **80g:65030** 65F05 (65F20)
- Shamir, Adi** How to share a secret. *Comm. ACM* 22 (1979), no. 11, 612-613. (Author's summary) **80g:94070** 94B99 (68E99)
- Shamir, Eliahu** (with Dolev, Danny) Commutation relations of slices characterize some synchronization primitives. *Inform. Process. Lett.* 7 (1978), no. 1, 7-9. (From the introduction) **80k:68013** 68B20
- Shampine, Lawrence F.** Solving ODE's with discrete data in SPEAKEASY. *Recent advances in numerical analysis (Proc. Sympos., Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1978)*, pp. 177-192. *Publ. Math. Res. Center Univ. Wisconsin, 41, Academic Press, New York, 1978*. (From the introduction) **80c:65006** 65-04 (65L99)
- (with Bailey, Paul B.; Gordon, M. K.) Automatic solution of the Sturm-Liouville problem. *ACM Trans. Math. Software* 4 (1978), no. 3, 193-208. (Authors' summary) **80a:65181** 65L15
- Stability properties of Adams codes. *ACM Trans. Math. Software* 4 (1978), no. 4, 323-329. (Author's summary) **80c:65157** 65L05
- Efficiency of phase function methods for Sturm-Liouville eigenvalues. *J. Inst. Math. Appl.* 23 (1979), no. 4, 413-420. (Author's summary) **80c:65099** 65L15
- (with Gear, C. W.) A user's view of solving stiff ordinary differential equations. *SIAM Rev.* 21 (1979), no. 1, 1-17. (Authors' summary) **80c:65158** 65L05
- Shamsundar, N.** Comparison of numerical methods for diffusion problems with moving boundaries. *Moving boundary problems (Proc. Sympos. and Workshop, Gatlinburg, Tenn., 1977)*, pp. 165-185. *Academic Press, New York, 1978*. (A. D. Ljalko) **80a:80006** 80A20 (65N99)
- Shanbhag, D. N.** On some problems in distribution theory. *Sankhyā Ser. A* 40 (1978), no. 2, 208-213. (Lennart Bondesson) **80i:62011** 62E10 (60E05)
- (with Sreehari, M.) An extension of Goldie's result and further results in infinite divisibility. *Z. Wahrsch. Verw. Gebiete* 47 (1979), no. 1, 19-25. (Charles M. Goldie) **80c:60023** 60E07
- Shaneson, Julius L.** (with Cappell, Sylvain E.) An introduction to embeddings, immersions and singularities in codimension two. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976)*, Part 2, pp. 129-149. *Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I., 1978*. (Oscar Burlet) **80c:57013** 57N35 (57Q35, 57Q45)
- (with Cappell, Sylvain E.) Embeddings and immersions of four-dimensional manifolds in  $R^n$ . *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 301-303. *Academic Press, New York, 1979*. (L. Guillou) **80i:57014** 57Q35
- (with Cappell, Sylvain E.) Linear algebra and topology. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 4, 685-687. (R. Schultz) **80f:57016** 57S05 (15A57, 57R67, 57R80, 57S15)
- (with Cappell, Sylvain E.) Nonlinear similarity of matrices. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 6, 899-902. (J. P. Levine) **80a:57010** 57N99 (15A21)
- Shank, H. S.** The rational case of a matrix problem of Harrison. *Discrete Math.* 28 (1979), no. 2, 207-212. (M. Stojaković) **80i:15022** 15A33 (03B25, 15A99)
- Shankar, H.** The maximum term and maximum modulus of an analytic function. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 13(33) (1978), no. 2, 271-275. (Fred Gross) **80c:30021** 30D15
- Shankar, Priti** On BCH codes over arbitrary integer rings. *IEEE Trans. Inform. Theory* 25 (1979), no. 4, 480-483. (Ian Blake) **80c:94033** 94B15 (94B60)
- Shankar, Rama** (with Jain, S. K.) Formation of shock waves in dissociating gases. *Acta Phys. Acad. Sci. Hungar.* 45 (1978), no. 2, 113-121 (1979). (G. A. Nariboli) **80d:76055** 76L05
- Shankara, T. S.** (with Majhi, S. N.) Transformations of some non-commuting operator monomials. *J. Math. Phys. Sci.* 12 (1978), no. 5, 519-527. (David Promislow) **80c:05024** 05A19 (81C99)
- (with Nandi, Kamal Kanti) Revisiting Ramakrishnan's approach to relativity. *J. Math. Anal. Appl.* 67 (1979), no. 2, 421-425. (Authors' summary) **80d:83063** 83C99
- Shanks, Daniel** ★Solved and unsolved problems in number theory. Second edition. *Chelsea Publishing Co., New York, 1978*. xiii+258 pp. *ISBN 0-8284-0297-3* (H. C. Williams) **80c:10003** 10-01 (10-02)
- (with Diaz y Diaz, Francisco; Williams, H. C.) Quadratic fields with 3-rank equal to 4. *Math. Comp.* 33 (1979), no. 146, 836-840. (T. Metsänkylä) **80i:12004** 12A25 (12A50)
- (with Williams, H. C.) A note on class-number one in pure cubic fields. *Math. Comp.* 33 (1979), no. 148, 1317-1320. (T. Metsänkylä) **80g:12002** 12A30 (12-04, 12A50)
- Shanmugam, G.** Parabolic cylinder functions and their application in symmetric two-centre shell model. *Proceedings of the Conference on Mathematical Analysis and its Applications (Inst. Engrs., Mysore, 1977)*, pp. P81-P89. *Matscience Rep.*, 91, *Inst. Math. Sci., Madras, 1978*. (Author's summary) **80d:81046** 81C99
- (with Subramanian, P. R.; Rajasekaran, M.; Devanathan, V.) Nilsson states in cylindrical representation. *Proceedings of the Sixteenth Anniversary Symposium on New Particles—Do They Imply New Physics? (Inst. Math. Sci., Madras, 1978)*, Paper No. 12,

- 21 pp., *Matscience Rep.*, 92, *Inst. Math. Sci., Madras*, 1978. (Authors' summary) 80d:81131 81G35
- Shanno, David F. Conjugate gradient methods with inexact searches. *Math. Oper. Res.* 3 (1978), no. 3, 244–256. (Author's summary) 80d:65082 65K10 (90C30)
- On the convergence of a new conjugate gradient algorithm. *SIAM J. Numer. Anal.* 15 (1978), no. 6, 1247–1257. (Gerhard Telschow) 80b:65067 65K10 (49D07)
- Shannon, A. G. (with Clarke, J. H.) Some observations on Fermat's last theorem. *New Zealand Math. Mag.* 16 (1979/80), no. 3, 80–83. (From the text) 80m:10012 10B15
- Shannon, R. W. Simplicial cells in arrangements of hyperplanes. *Geom. Dedicata* 8 (1979), no. 2, 179–187. (P. McMullen) 80g:52006 52A25
- Shantaram, R. A characterization of the arc-sine law. *Sankhyā Ser. A* 40 (1978), no. 2, 199–207. (E. Lukacs) 80h:62011 62E10
- Shanthikumar, J. G. On a single-server queue with state-dependent service. *Naval Res. Logist. Quart.* 26 (1979), no. 2, 305–309. (Nasser Hadidi) 80k:60108 60K25
- Shamukov, M. H. (with Kančukoev, V. Z.) Boundary value problems for a modified equation of moisture transfer and discrete methods for their solution. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 1, 68–73, 187. (H. Marcinkowska) 80i:35044 35G15 (65P05)
- Shapiro, C. P. (with Wardrop, Robert L.) The Bayes sequential procedure for estimating the arrival rate of a Poisson process. *J. Amer. Statist. Assoc.* 73 (1978), no. 363, 597–601. (Shelemyahu Zacks) 80g:62062 62L15 (62F15, 62N05)
- (with Hubert, Lawrence J.) Asymptotic normality of permutation statistics derived from weighted sums of bivariate functions. *Ann. Statist.* 7 (1979), no. 4, 788–794. (A. N. Philippou) 80e:62012 62E25 (62J05, 65C99)
- Shapiro, Daniel B. Similarities and isoclinic planes. *Geom. Dedicata* 7 (1978), no. 4, 479–497. (Thomas C. Craven) 80a:15029 15A63 (10C05)
- Hasse principle for the Hurwitz problem. *J. Reine Angew. Math.* 301 (1978), 179–190. (Donald Maurer) 80b:10028 10C02 (10C03)
- (with Gentile, Enzo R.) Conservative quadratic forms. *Math. Z.* 163 (1978), no. 1, 15–23. (Ron Brown) 80a:15027 15A63 (10C05)
- Intersections of the space of skew-symmetric maps with its translates. *Pacific J. Math.* 75 (1978), no. 2, 553–562. (Maurice Flamant) 80b:15035 15A63
- Shapiro, H. Simultaneous block triangularization and block diagonalization of sets of matrices. *Linear Algebra Appl.* 25 (1979), 129–137. (Donald W. Robinson) 80e:15009 15A21 (65F30)
- Shapiro, Harold N. (with Hausman, Miriam) Adding totitives. *Math. Mag.* 51 (1978), no. 5, 284–288. (Paul Hartung) 80i:10008 10A20
- (with Sparer, Gerson H.) Correction to: "Power quadratic Diophantine equations and descent" (Comm. Pure Appl. Math. 31(1978), no. 2, 185–203). *Comm. Pure Appl. Math.* 32 (1979), no. 2, 277–279. (Re. Steiner) 80b:10025 10B15
- Shapiro, Harold S. Integral representation of remainder functionals in one and several variables. *Multivariate approximation (Sympos., Univ. Durham, Durham, 1977)*, pp. 69–82. Academic Press, London, 1978. (Christopher T. H. Baker) 80c:41015 41A55
- Comparative approximation in two topologies. *Approximation theory (Papers, Vth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 225–232. Banach Center Publ., 4, PWN, Warsaw, 1979. (G. D. Taylor) 80j:41064 41A65 (41A45)
- Stefan Bergman's theory of doubly-orthogonal functions. An operator-theoretic approach. *Proc. Roy. Irish Acad. Sect. A* 79 (1979), no. 6, 49–58. (I. P. Ramadanov) 80m:30010 30C40 (30B40, 47B05)
- Shapiro, Henry D. Generalized Latin squares on the torus. *Discrete Math.* 24 (1978), no. 1, 63–77. (Giuseppe Pellegrino) 80h:05011 05B15
- Platetski-Shapiro, I. I. See Platetski-Shapiro, I. I.
- Shapiro, Jack M. A Riemann-Roch type theorem for the Witt and Milnor rings of a field. *J. Pure Appl. Algebra* 15 (1979), no. 3, 293–304. (W.-D. Geyer) 80i:10022 10C01
- Shapiro, Jeffrey H. (with Yuen, Horace P.) Optical communication with two-photon coherent states. I. Quantum-state propagation and quantum-noise reduction. *IEEE Trans. Inform. Theory* 24 (1978), no. 6, 657–668. (Carl W. Helstrom) 80f:94005a 94A05 (81K05)
- (with Yuen, Horace P.; Machado Mats, Jesus A.) Optical communication with two-photon coherent states. II. Photoemissive detection and structured receiver performance. *IEEE Trans. Inform. Theory* 25 (1979), no. 2, 179–192. (Carl W. Helstrom) 80f:94005b 94A05 (81K05)
- Shapiro, Jesse M. On the rate of convergence of distribution functions of sums of reciprocals of random variables to the Cauchy distribution. *Houston J. Math.* 4 (1978), no. 3, 439–445. (L. Hahn) 80a:60029 60F05
- Shapiro, Joel A. (with Gates, S. James, Jr.) Local supersymmetry in superspace. *Phys. Rev. D* (3) 18 (1978), no. 8, 2768–2775. (N. D. Sengupta) 80a:81068 81E10 (53C10)
- Shapiro, Leonard. Regularities of distribution. *Studies in probability and ergodic theory*, pp. 135–154. *Advances in Math., Suppl. Studies*, 2, Academic Press, New York, 1978. (R. G. Stoneham) 80m:10039 10K05 (10K30)
- (with Richter, Marcel K.) Revelations of a gambler. *J. Math. Econom.* 5 (1978), no. 3, 229–244. (R. E. Stearns) 80e:90011 90A06 (90D05)
- Conditions for expected utility maximization: the finite case. *Ann. Statist.* 7 (1979), no. 6, 1288–1302. (Charles F. Manski) 80k:62009 62A99 (90A10)
- Shapiro, Louis W. (with Rogers, D. G.) Some correspondences involving the Schröder numbers and relations. *Combinatorial Mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 267–274. *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (M. S. Cheema) 80c:05009 05A15
- The cycle of six. *Fibonacci Quart.* 17 (1979), no. 3, 253–259. (D. A. Klarner) 80j:05058 05C05 (05A15)
- Shapiro, M. (with Balint-Kurti, G. G.) A new method for the exact calculation of vibrational-rotational energy levels of triatomic molecules. *J. Chem. Phys.* 71 (1979), no. 3, 1461–1469. (Ernest R. Davidson) 80e:81104 81G55 (35G15, 65N25)
- Shapiro, Stuart L. (with Marchant, Alan B.) Star clusters containing massive, central black holes: Monte Carlo simulations in two-dimensional phase space. *Astrophys. J.* 225 (1978), 603–624. (R. H. Wilson, Jr.) 80d:85008 85A35 (65D15)
- Shapley, L. S. (with Milnor, J. W.) Values of large games. II. Oceanic games. *Math. Oper. Res.* 3 (1978), no. 4, 290–307. (G. Duro) 80b:90155 90D12
- Shaposhnikova, T. O. See Mihlin, S. G. 80j:65002
- Shar, Albert O. Localization, algebraic loops and  $H$ -spaces. I. *Canad. J. Math.* 31 (1979), no. 2, 427–435. (S. Zdravkovska) 80k:55039a 55P60 (55P45)
- Localization, algebraic loops and  $H$ -spaces. II. *Canad. J. Math.* 31 (1979), no. 4, 812–817. (S. Zdravkovska) 80k:55039b 55P45
- Sharaf, Mohamed Adel See Adel Sharaf, Mohamed
- Sharan, Pankaj Star-product representation of path integrals. *Phys. Rev. D* (3) 20 (1979), no. 2, 414–418. (Aubrey Truman) 80k:81046 81C35 (17B65, 22E70, 28C20)
- Sharatchandra, H. S. The equivalence theorem is subtle. *Ann. Physics* 116 (1978), no. 2, 408–418. (Author's summary) 80d:81025 81C12
- Sharfuddin, A. (with Husain, S. I.) Curvature tensor of pseudometric semisymmetric connexions in an almost contact metric manifold. *Publ. Inst. Math. (Beograd) (N.S.)* 23(37) (1978), 163–167. (D. J. Shetty) 80g:53029 53C15
- Shartir, M. (with Milman, V. D.) Shrinking minimal systems and complementation of  $l_p^2$ -spaces in reflexive Banach spaces. *Proc. London Math. Soc.* (3) 39 (1979), no. 1, 1–28. (G. J. O. Jameson) 80j:46031 46B20
- Sharkey, William W. (with Telsler, Lester G.) Supportable cost functions for the multiproduct firm. *J. Econom. Theory* 18 (1978), no. 1, 23–37. (M. Schader and O. Opitz) 80k:90007 90A12
- Existence of a core when there are increasing returns. *Econometrica* 47 (1979), no. 4, 869–876. (Author's summary) 80i:90156 90D12
- Sharma, A. (with Tzimbarario, J.) Landau-type inequalities for some linear differential operators. *The theory of the approximation of functions (Proc. Internat. Conf., Kulu, 1975) (Russian)*, pp. 404–408. "Nauka", Moscow, 1977. (C. A. Hall) 80f:41008 41A15
- (with Tzimbarario, J.) Classes of functions defined by differential inequalities. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 735–745. *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (S. M. Shah) 80j:30036 30D20
- Sharma, Ashok K. An extension of Sehgal's result on fixed points. *Indian J. Pure Appl. Math.* 7 (1976), no. 11, 1241–1246. (Rainald Schöneberg) 80i:54059 54H25 (47H10)
- On fixed points in 2-metric spaces. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 3, 467–473. (L. Janos) 80a:54092 54H25
- Some results on periodic and fixed points. *Indian J. Pure Appl. Math.* 10 (1979), no. 6, 752–760. (Rainald Schöneberg) 80e:54062 54H25
- Sharma, B. B. Application of finite discrete transform on  $M/M/s$  queueing system. *Proc. Nat. Acad. Sci. India Sect. A* 48 (1978), no. 1, 50–52. (Takehisa Fujisawa) 80m:60099 60K25
- Sharma, B. K. (with Sharma, P. L.) Noncontraction type mapping in 2-Banach space. *Nanta Math.* 12 (1979), no. 1, 91–93. (From the text) 80i:47081 47H10
- Sharma, Bhagrat Lal On the generalised function of two variables. III. *An. Univ. Bucureşti Mat.* 27 (1978), 79–90. (Editors) 80a:33009 33A35
- (with Abiodun, R. F. A.) Some generating functions for Laguerre and related polynomials. *Proc. Nat. Acad. Sci. India Sect. A* 49 (1979), no. 1, 1–6. (H. L. Manocha) 80k:33014 33A65
- Sharma, Bhu Dev (with Mittal, D. P.) New nonadditive measures of entropy for discrete probability distributions. *J. Math. Sci.* 10 (1975), 28–40 (1976). (Authors' summary) 80f:94010 94A17
- (with Mittal, D. P.) On nonadditive measures of entropy for a continuous probability distribution. *Math. Balkanica* 6 (1976), 194–203 (1978). (From the summary) 80i:94009 94A17
- (with Mehta, F. C.) Generalized band-pass sampling theorem. *Math. Balkanica* 6 (1976), 204–217 (1978). (From the summary) 80i:94004 94A12
- (with Raina, Neelam) Coding theorem for a generalized maximum likelihood decoding scheme. *Indian J. Pure Appl. Math.* 9 (1978), no. 10, 1091–1102. (O. Gulyás) 80a:94035 94B35
- (with Mitter, Jagdish; Mohan, Man) On measures of "useful" information. *Inform. and Control* 39 (1978), no. 3, 323–336. (L. L. Campbell) 80e:94009 94A17
- (with Khanna, Ravinder Kumar) On  $m$ -ary Gray codes. *Inform. Sci.* 15 (1978), no. 1, 31–43. (Vera Pless) 80k:05003 05A05 (68C05, 94A29)
- (with Raina, Neelam) A coding theorem for multiple access channels using a maximum likelihood list decoding scheme. *Inform. Sci.* 16 (1978), no. 2, 81–87. (G. Dueck) 80j:94016 94A29 (94B35)
- (with Aggarwal, R. S.) Blockwise Lee error-correcting codes. *Inform. Sci.* 16 (1978), no. 3, 157–167. (J.-M. Goethals) 80i:94014 94B05
- (with Mohan, Man; Mitter, Jagdish) On generalized "useful" information. *J. Combin. Inform. System Sci.* 3 (1978), no. 2, 82–93. (Authors' summary) 80g:94034 94A17
- (with Garg, Asha) Nonadditive measures of average charge for heterogeneous questionnaires. *Inform. and Control* 41 (1979), no. 2, 232–242. (Authors' summary) 80g:94051 94A50 (92A05, 94A17)
- (with Singh, Ishwar) On the entropy function of degree  $\beta$ . *Inform. Sci.* 18 (1979), no. 3, 213–221. (P. Kannappan) 80k:39010 39B40 (94A17)
- (with Priya, Ved) Variational equations for a general and Gaussian channel with side information. *J. Combin. Inform. System Sci.* 4 (1979), no. 1, 23–31. (Authors' summary) 80j:94018 94A34
- (with Singh, Ishwar) A new generalization of entropy and its characterization. *Kybernetika (Prague)* 15 (1979), no. 5, 366–375. (Authors' summary) 80j:94011 94A17
- (with Priya, Ved) Multiple channels under fidelity criteria. *Kybernetika (Prague)* 15 (1979), no. 6, 446–463. (Authors' summary) 80m:94044 94A40
- (with Garg, Asha) Characterization and lower bounds for additive charges for heterogeneous questionnaires. (French summary) *RAIRO Inform. Théor.* 13 (1979), no. 4, 383–393. (Authors' summary) 80m:94047 94A50
- (with Raina, Neelam) Coding theorem for partial received information. *Inform. Sci.* 20 (1980), no. 3, 181–189. (Authors' summary) 80m:94033 94A24
- Sharma, C. S. (with Ogunslure, E. O.) Axiomatic quantum theory and resonances. *J. Phys. A* 11 (1978), no. 11, 2159–2177. (M. J. Maczyński) 80d:81004 81B05
- Sharma, Dhiraj K. Design of absolutely optimal quantizers for a wide class of distortion measures. *IEEE Trans. Inform. Theory* 24 (1978), no. 6, 693–702. (Author's summary) 80a:94024 94A34



- Sharma, Divakar** Unbiased estimation of the natural parameter in an exponential family. *J. Indian Statist. Assoc.* 15 (1977), 171-178. (Author's summary) **80f:62035** 62F10 (62C15)
- Sharma, H. S.** (with Gupta, Mukesh; Kant, Ravi) Unsteady Hele-Shaw flow of non-Newtonian fluid. *J. Math. Phys. Sci.* 13 (1979), no. 2, 189-197. (J. Dunwoody) **80b:76002** 76A05
- Sharma, J. K.** Programming with fractional non-linear objective function and transportation technique. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 8, 1227-1234. (Hiroshi Konno) **80d:90077** 90C32
- (with Swarup, Kanti) Time-cost tradeoff in a multidimensional transportation problem. I. *Opsearch* 16 (1979), no. 1, 23-33. (Authors' summary) **80h:90099** 90C08
- Sharma, J. P.** (with Dwivedi, A. P.) Formal solution of simultaneous dual integral equations involving  $H$ -function of  $n$  variables. *Proc. Nat. Acad. Sci. India Sect. A* 47 (1977), no. 1, 49-57. (R. U. Verma) **80i:45012** 45F10
- (with Viswanathan, K.) On the matched asymptotic solution of the diffraction of a plane elastic wave by a semi-infinite rigid boundary of finite width. *Modern problems in elastic wave propagation (Proc. IUTAM Symp., Northwestern Univ., Evanston, Ill., 1977)*, pp. 171-195, Wiley, New York, 1978. (F. V. Pohle) **80h:73028** 73D25 (86A15)
- On plane-symmetric polytropes. *Acta Cienc. Indica* 4 (1978), no. 4, 402-409. (Author's summary) **80c:86006** 86A35 (80A10)
- (with Dwivedi, A. P.) Simultaneous triple integral equations involving  $H$ -functions. *Acta Cienc. Indica* 5 (1979), no. 2, 54-57. (Rekha Srivastava) **80i:45012** 45F10 (33A35)
- Sharma, K. G.** (with Shrivastava, K. K.)  $[C, I]$  summability of ultraspherical series. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 21 (1978), no. 3, 285-291. (Shri Nivas Bhatt) **80m:42036** 42C10 (33A45)
- Sharma, K. L.** (with Agrawal, H. L.) On construction of four-dimensional incomplete block designs. *J. Amer. Statist. Assoc.* 73 (1978), no. 364, 844-849. (K. Vijayan) **80c:05021** 05B05 (62K10)
- Sharma, O. P.** (with Pironneau, O.) Sur le découplage de problèmes elliptiques dans des ouvert cylindriques de  $\mathbb{R}^2$  avec des éléments finis prismatiques. (English summary) *RAIRO Anal. Numér.* 13 (1979), no. 1, 55-66, ii. (J. P. Hennart) **80c:65103** 65N30
- Sharma, P. L.** Some characterizations of  $W$ -spaces and  $w$ -spaces. *General Topology Appl.* 9 (1978), no. 3, 289-293. (Daniel Tanré) **80a:54046** 54D55
- (with Sharma, B. K.) Noncontraction type mapping in 2-Banach space. *Nanta Math.* 12 (1979), no. 1, 91-93. (From the text) **80i:47081** 47H10
- Sharma, R. K.** Summation formulae for  ${}_2F_1(\frac{1}{2})$ . *Kyungpook Math. J.* 18 (1978), no. 2, 217-221. (L. J. Slater) **80a:33003** 33A30
- Another Watson's theorem for double series. (Spanish summary) *Rev. Téc. Fac. Ingr. Univ. Zulia* 1 (1978/79), no. 1, 59-61. (Author's summary) **80h:33005** 33A30
- Relations between double series and single series. *Nederl. Akad. Wetensch. Indag. Math.* 41 (1979), no. 1, 55-61. (Harold Exton) **80i:33002** 33A30
- Transformation formulae for hypergeometric series of two variables. I. *Simon Stevin* 53 (1979), no. 3, 193-199. (U. C. Jain) **80i:33006** 33A30
- Sharma, Ramesh** (with Sinha, B. B.) Hypersurfaces in an almost paracompact manifold. *Indian J. Pure Appl. Math.* 9 (1978), no. 10, 1083-1090. (Y. Katsurada) **80i:53029** 53C40
- Sharma, S. C.** Cumulative processes associated with Markov renewal processes in space. *J. Math. Sci.* 10 (1975), 63-68 (1976). (Author's summary) **80h:60109** 60K15
- Sharma, S. D.** (with Lishk, S. S.) Length of the day in Jaina astronomy. *Centaurus* 22 (1978/79), no. 3, 165-176. (R. C. Gupta) **80f:01008** 01A32
- On multiple finite Mathieu transforms. *Indian J. Pure Appl. Math.* 9 (1978), no. 7, 633-639. (R. K. Gupta) **80m:44013** 44A30
- (with Gupta, R. K.) Multiple finite spheroidal transform and its application. *Indian J. Pure Appl. Math.* 10 (1979), no. 10, 1202-1212. (K. M. Saksena) **80j:44009** 44A30
- An integral transform involving two generalised  $H$ -functions. *Kyungpook Math. J.* 19 (1979), no. 1, 119-125. (From the summary) **80i:44006** 44A20 (33A30)
- Sharma, Saroj** (with Arora, R. K.) Correction of multiple errors and detection of additive overflow in residue code. *Inform. and Control* 39 (1978), no. 1, 46-54. (Authors' summary) **80b:94030** 94B40
- Sharma, Shobha** Some more generalized generating functions theorems. *Indian J. Pure Appl. Math.* 8 (1977), no. 12, 1465-1471. (Author's summary) **80i:33011** 33A35
- Certain fractional  $q$ -integral operators. *Indian J. Pure Appl. Math.* 10 (1979), no. 5, 581-589. (W. A. Al-Salam) **80j:33026** 33A70
- Sharma, Sushil** (with Beohar, B. K.) Approximation of a function by its Jacobi expansion. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 21 (1978), no. 3, 247-252. (S. L. Kalla) **80h:33017** 33A65
- (with Beohar, B. K.) On the absolute Cesàro summability of ultraspherical series. *Indian J. Pure Appl. Math.* 10 (1979), no. 9, 1151-1156. (D. P. Gupta) **80k:42027** 42C10 (40F05)
- (with Pandey, S. N.) Plane symmetric space-time of class-I and electromagnetism. *Indian J. Pure Appl. Math.* 10 (1979), no. 11, 1389-1396. (P. C. Vaidya) **80i:83022** 83C50 (58B30)
- Sharma, U.** (with Mishra, R. S.; Pandey, S. B.) On Kählerian submanifold with vanishing Bochner curvature tensor. *Indian J. Pure Appl. Math.* 9 (1978), no. 12, 1291-1297. (S. I. Husain) **80a:53029** 53B35
- Sharma, V. D.** (with Shyam, Radhe) Growth of discontinuities in fluids with internal relaxation. *Appl. Sci. Res.* 35 (1979), no. 2-3, 185-193. (Authors' summary) **80j:76042** 76L05 (58G17)
- (with Singh, Ram Sharan) The growth of discontinuities in a nonequilibrium flow of a relaxing gas. *Quart. J. Mech. Appl. Math.* 32 (1979), no. 4, 331-338. (Authors' summary) **80k:76057** 76L05
- Sharma, V. P.** (with Singh, Punyatma; Misra, U. N.) Fluctuating boundary layer on a heated horizontal plate. (Spanish summary) *Acta Mech.* 30 (1978), no. 1-2, 111-128. (R. Manohar) **80i:76032** 76N05
- (with Singh, Punyatma; Misra, U. N.) Three dimensional free convection flow and heat transfer along a porous vertical plate. *Appl. Sci. Res.* 34 (1978), no. 1, 105-115. (Authors' summary) **80a:76046** 76R99 (35Q99)
- Flow and heat transfer due to small torsional oscillations of a disk about a constant mean. (German summary) *Acta Mech.* 32 (1979), no. 1-3, 19-34. (J. F. Clarke) **80f:76012** 76D10
- (with Singh, Punyatma; Misra, U. N.) Exact solution of transient heat transfer between a fluid and a porous plate. *Pure Appl. Math. Sci.* 10 (1979), no. 1-2, 135-144. (Authors' summary) **80m:80011** 80A20
- Sharov, V. G.** See **Sharov, V. G.**
- Sharp, David H.** (with Bender, Carl M.; Cooper, Fred; Guralnik, G. S.; Roskies, Ralph; Silverstein, Martin L.) Multilegged propagators in strong-coupling expansions. *Phys. Rev. D* (3) 20 (1979), no. 6, 1374-1385. (A. Rouet) **80i:81040** 81E15
- Sharp, Henry, Jr.** (with Bang, Chang M.) Score vectors of tournaments. *J. Combin. Theory Ser. B* 26 (1979), no. 1, 81-84. (Karsten Steffens) **80d:05025** 05C20
- Sharp, Jack C., Jr.** Anti-regular semigroups. *Publ. Inst. Math. (Beograd) (N.S.)* 24(38) (1978), 147-150. (Mohan S. Putcha) **80c:20085** 20M10
- Sharp, N. A.** Geodesics in black hole space-times. *Gen. Relativity Gravitation* 10 (1979), no. 8, 659-670. (Andrew King) **80g:83037** 83D05 (53C50, 53C80)
- Sharp, R. T.** (with Patera, J.; Winternitz, P.) Polynomial irreducible tensors for point groups. *J. Math. Phys.* 19 (1978), no. 11, 2362-2376. (M. K. F. Wong) **80d:22018** 22E70 (81C40)
- (with Desmier, P. E.) Polynomial tensors for double point groups. *J. Math. Phys.* 20 (1979), no. 1, 74-82. (Authors' summary) **80h:81042** 81C40 (20C99)
- Sharp, Rodney Y.** (with Rees, D.) On a theorem of B. Teissier on multiplicities of ideals in local rings. *J. London Math. Soc.* (2) 18 (1978), no. 3, 449-463. (D. Kirby) **80e:13009** 13H15 (14B05)
- (with Bijan-Zadeh, Mohammad H.) On Grothendieck's local duality theorem. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 3, 431-437. (Markus Brodmann) **80h:13017** 13D25 (14F20)
- (with Hall, Janet E.) Duality for a commutative Noetherian ring which possesses a dualizing complex. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 119, 283-299. (T. Albu) **80j:13009** 13D25 (14B15)
- Sharpe, Ken** Some properties of the crossings process generated by a stationary  $\chi^2$  process. *Adv. in Appl. Probab.* 10 (1978), no. 2, 373-391. (A. M. Hasofer) **80a:60050** 60G17
- Level crossings of a constructed process. *J. Appl. Probab.* 16 (1979), no. 1, 206-212. (Georg Lindgren) **80b:60057** 60G17
- Sharpe, Michael J.** (with Protter, Philip) Martingales with given absolute value. *Ann. Probab.* 7 (1979), no. 6, 1056-1058. (Dominique Lepingle) **80j:60076** 60G44
- (with Getto, Ronald K.) Some random time dilations of a Markov process. *Math. Z.* 167 (1979), no. 2, 187-199. (F. B. Knight) **80k:60094** 60J40 (60J25, 60J55)
- (with Getto, Ronald K.) Excursions of Brownian motion and Bessel processes. *Z. Wahrsch. Verw. Gebiete* 47 (1979), no. 1, 83-106. (S. J. Taylor) **80b:60104** 60J65
- (with Getto, Ronald K.) The Markov property at co-optimal times. *Z. Wahrsch. Verw. Gebiete* 48 (1979), no. 2, 201-211. (F. B. Knight) **80b:60083** 60J40
- Sharpley, Robert C.** (with Bennett, Colin) Weak-type inequalities in analysis. *Linear spaces and approximation (Proc. Conf., Math. Res. Inst., Oberwolfach, 1977)*, pp. 151-162. *Internat. Schriftenreihe Numer. Math.*, 40, Birkhäuser, Basel, 1978. (J. V. Ryff) **80d:47049** 47B38 (46E35, 46M35)
- (with Bennett, Colin) Weak-type inequalities for  $H^p$  and BMO. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 1, pp. 201-229. *Proc. Sympos. Pure Math.*, XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (S. D. Riemenschneider) **80j:46044** 46E30 (30D55, 46M35)
- Shastri, R. P.** (with Kasture, D. Y.) Wendroff type inequalities. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 248-250. (Jagdish Chandra) **80c:35008a** 35B45 (34A40, 45K05)
- (with Kasture, D. Y.) Erratum to: "Wendroff type inequalities" (Proc. Amer. Math. Soc. 72 (1978), no. 2, 248-250). *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 374. (Jagdish Chandra) **80c:35008b** 35B45 (34A40, 45K05)
- Shatilov, A. I.** See **Šatilov, A. I.**
- Shaughnessy, Edward P.** Codes with simple automorphism groups. II. *Arch. Math. (Basel)* 31 (1978/79), no. 1, 15-20. (E. F. Assmus, Jr.) **80c:94014** 94B25
- Shaw, J. K.** (with Winfrey, W. R.) Positivity properties of linear differential operators. *J. Math. Anal. Appl.* 65 (1978), no. 1, 184-200. (B. Finkel) **80b:34008** 34A25 (26E05, 34B99)
- Shaw, Leonard** Nonlinear control of linear multivariable systems via state-dependent feedback gains. *IEEE Trans. Automat. Control* 24 (1979), no. 1, 108-112. (Authors' summary) **80b:93059** 93B99
- Shaw, R. P.** (with Falby, W.) FEBIE—a combined finite element-boundary integral equation method. *Comput. & Fluids* 6 (1978), no. 3, 153-160. (Michael J. O'Carroll) **80i:65128** 65N30 (65R20, 76B99)
- Shawyer, Bruce L. R.** On the strong-Riesz mean-value theorem. *J. Reine Angew. Math.* 306 (1979), 208-211. (D. C. Russell) **80d:40007** 40G99 (40D15)
- Shay, Brian** (with Aissen, Michael) Nonassociative multiplication. *Papers in mathematics*, pp. 3-8, Ann. New York Acad. Sci., 321, New York Acad. Sci., New York, 1979. (Irvin Roy Hentzel) **80h:06002** 08A05 (17A99)
- Shay, Margaret** (with Young, Paul) Characterizing the orders changed by program translators. *Pacific J. Math.* 76 (1978), no. 2, 485-490. (Cristian Calude) **80a:68053** 03D20 (68B05)
- Scherbina, Y. V.** See **Šerbina, U. V.**
- Shea, Daniel F.** (with Wainger, Stephen) Growth problems for a class of entire functions via singular integral estimates. *Complex analysis Joensuu 1978 (Proc. Colloq., Univ. Joensuu, Joensuu, 1978)*, pp. 366-368, *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (Fred Gross) **80j:30034** 30D15
- Shea, Gerald** Monotone regression and covariance structure. *Ann. Statist.* 7 (1979), no. 5, 1121-1126. (C. R. Rao) **80g:62031** 62H05 (62J05)
- Shearer, J. B.** A property of the colored complete graph. *Discrete Math.* 25 (1979), no. 2, 175-178. (David E. Daykin) **80c:05059** 05C15
- A note on: "The circular dimension of a graph" [Discrete Math. 25 (1979), no. 1, 27-31; MR 80c:05053] by R. B. Feinberg. *Discrete Math.* 29 (1980), no. 1, 103. (Alan Tucker) **80k:05049** 05C10
- Shebalin, John V.** A double angle sum formula for Gegenbauer polynomials. *J. Math. Phys.* 20 (1979), no. 9, 1837. (Author's summary) **80g:33015** 33A50

- Shedd, Dennis A. (with Sarwate, Dilip V.) Construction of sequences with good correlation properties. *IEEE Trans. Inform. Theory* 25 (1979), no. 1, 94-97. (Authors' summary) **80h:94003** 94A05 (94B05)
- Shedler, Gerald S. (with Iglehart, Donald L.) Regenerative simulation of response times in networks of queues with multiple job types. *Acta Inform.* 12 (1979), no. 2, 159-175. (Authors' summary) **80d:68045** 68C15 (68J05)
- (with Lewis, Peter A. W.) Simulation of nonhomogeneous Poisson processes by thinning. *Naval Res. Logist. Quart.* 26 (1979), no. 3, 403-413. (Sidney J. Yakowitz) **80k:60009** 68J05 (60C99)
- (with Lewis, Peter A. W.) Simulation of nonhomogeneous Poisson processes with degree-two exponential polynomial rate function. *Oper. Res.* 27 (1979), no. 5, 1026-1040. (Authors' summary) **80g:90051** 90B22 (90C39, 90C40)
- Shedletsky, John J. See David, René; et al., **80e:94024**
- Sheehan, J. (with Rousseau, C. C.) Ramsey numbers for books. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 367-369, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Authors' summary) **80j:05092** 05C55
- (with Faudree, R. J.; Rousseau, C. C.) More from the good book. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 289-299, *Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978*. (Torrence D. Parsons) **80h:05038** 05C55 (05B25)
- (with Rousseau, C. C.) On Ramsey numbers for books. *J. Graph Theory* 2 (1978), no. 1, 77-87. (Jean-Claude Bermond) **80a:05151** 05C55
- (with Chvátal, V.; Fleischner, H.; Thomassen, Carsten) Three-regular subgraphs of four-regular graphs. *J. Graph Theory* 3 (1979), no. 4, 371-386. (Ralph Faudree) **80i:05073** 05C99
- Sheehy, Jerome J. Optimum estimation of signal parameters in non-Gaussian noise. *J. Acoust. Soc. Amer.* 64 (1978), no. 6, 1602-1612. (Seiichi Higuchi) **80a:94009** 94A12 (62F10)
- Sheffer, I. M. On polynomial sets of class  $S^k$ , and sets of rank  $k$ . *Ann. Mat. Pura Appl.* (4) 118 (1978), 295-324. (W. A. Al-Salam) **80j:33027** 33A70
- Shefrin, H. M. Bayesian convergence in market games with incomplete information. *Control theory in mathematical economics (Proc. Third Kingston Conf., Part B, Univ. Rhode Island, Kingston, R.I., 1978)*, pp. 221-241, *Lecture Notes in Pure and Appl. Math.*, 47, Dekker, New York, 1979. (From the text) **80g:90140** 90D40
- (with Heineke, J. M.) On duality theory in intertemporal choice with uncertainty. *Econom. Lett.* 3 (1979), no. 1, 19-23. (Authors' summary) **80a:90018** 90A07
- Shelf, Judith (with Bohrer, Robert) Misclassification probabilities in  $2^3$  factorial experiments. *J. Statist. Plann. Inference* 3 (1979), no. 1, 79-84. (D. V. Chopra) **80j:62075** 62K15
- Shell, B. A. Median split trees: a fast lookup technique for frequently occurring keys. *Comm. ACM* 21 (1978), no. 11, 947-958. (Author's summary) **80a:68116** 68H05
- Sheinman, R. I. See Scheinman, R. I.
- Shelah, Saharon Existentially-closed groups in  $\aleph_1$  with special properties. *Bull. Soc. Math. Grèce (N.S.)* 18 (1977), no. 1, 17-27. (Piero Mani) **80j:03047** 03C60 (20A15)
- Appendix to: "Models with second-order properties. II. Trees with no undefined branches" (Ann. Math. Logic 14 (1978), no. 1, 73-87). *Ann. Math. Logic* 14 (1978), 223-226. (Martin Weese) **80b:03047c** 03C85
- Models with second-order properties. I. Boolean algebras with no definable automorphisms. *Ann. Math. Logic* 14 (1978), no. 1, 57-72. (Martin Weese) **80b:03047a** 03C85
- Models with second-order properties. II. Trees with no undefined branches. *Ann. Math. Logic* 14 (1978), no. 1, 73-87. (Martin Weese) **80b:03047b** 03C85
- A Banach space with few operators. *Israel J. Math.* 30 (1978), no. 1-2, 181-191. (M. M. Day) **80b:46033** 46B99 (03E45)
- End extensions and numbers of countable models. *J. Symbolic Logic* 43 (1978), no. 3, 550-562. (V. Harnik) **80b:03037** 03C15
- (with Rudin, Mary Ellen) Unordered types of ultrafilters. *Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978)*, I. *Topology Proc.* 3 (1978), no. 1, 199-204 (1979). (James Baumgartner) **80a:04002** 04A20 (54A25)
- (with Stern, Jacques) The Hanf number of the first order theory of Banach spaces. *Trans. Amer. Math. Soc.* 244 (1978), 147-171. (B. I. Zil'ber) **80a:03047** 03C65 (46B99)
- On uniqueness of prime models. *J. Symbolic Logic* 44 (1979), no. 2, 215-220. (Bruno Poizat) **80m:03066** 03C45
- Hanf number of omitting type for simple first-order theories. *J. Symbolic Logic* 44 (1979), no. 3, 319-324. (W. Hodges) **80k:03031** 03C50 (03C45)
- (with Ziegler, Martin) Algebraically closed groups of large cardinality. *J. Symbolic Logic* 44 (1979), no. 4, 522-532. (Paul C. Eklof) **80j:03048** 03C60 (20A15)
- (with Devlin, Keith J.) Souslin properties and tree topologies. *Proc. London Math. Soc.* (3) 39 (1979), no. 2, 237-252. (József Krasinkiewicz) **80m:54031** 54D15 (54A25, 54F05)
- Shell, Niel (with Narici, Lawrence; Beckenstein, Edward) Locally compact non-Archimedean spaces. *Rev. Mat. Hisp.-Amer.* (4) 38 (1978), no. 1, 46-49. (N. De Grande-De Kimpe) **80j:46119** 46F05 (12B99)
- Shelstad, D. Characters and inner forms of a quasipplit group over  $\mathbb{R}$ . *Compositio Math.* 39 (1979), no. 1, 11-45. (A. U. Klimyk) **80m:22023** 22E45
- Shelton, Robert Orrin Noncollision singularities in the four-body problem. *Trans. Amer. Math. Soc.* 249 (1979), no. 2, 225-259. (F. Nahon) **80c:70011** 70F10 (58E05, 58F05)
- Shen, C. N. (with Wu, Julian J.) Vibrations of a helicopter rotor blade using finite element-unconstrained variational formulations. *Transactions of the Twenty-Third Conference of Army Mathematicians (Langley Res. Center, Hampton, Va., 1977)*, pp. 375-400, *ARO Rep.* 78, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1978. (Editors) **80d:73052** 73D35 (49B99)
- Shen, Chun Li (with Gu, Chao Hao; Hu, He Sheng; Li, Da Qian; Xin, Yuan Long; Yang, Chen Ning) Riemannian spaces with local duality and gravitational instantons. *Sci. Sinica* 21 (1978), no. 4, 475-482. (M. A. H. MacCallum) **80a:81085** 81E15 (53C05, 58E30)
- (with Gu, Chao Hao; Hu, He Sheng; Yang, Chen Ning) A geometrical interpretation of instanton solutions in Euclidean space. *Sci. Sinica* 21 (1978), no. 6, 767-772. (B. Z. Moroz) **80c:81065** 81E10 (53C05)
- Shen, M. C. Asymptotic method for flow in unconfined aquifers. *Phys. Fluids* 23 (1980), no. 1, 5-9. (Author's summary) **80j:76049** 76S05
- Shen, Xie Chang (with Lou, Yuan Ren) Best approximation by rational functions on the unit circle. (Chinese) *Acta Math. Sinica* 20 (1977), no. 3, 232-235. (P. S. Chiang) **80a:30043** 30E10
- (with Cheng, M. T.; Zhou, Min Qiang; Zhang, Xu Ding) Finite Walsh transform in  $\mathbb{R}^n$  and applications to picture bandwidth compression. (Chinese. English summary) *Beijing Daxue Xuebao* No. 1 (1978), 26-50. (From the summary) **80g:94002** 94A05 (44A15, 94A11)
- Sheng, C. L. (with Das, Sunil R.) Strong connectivity in symmetric graphs and generation of maximal minimally strongly connected subgraphs. *Inform. Sci.* 14 (1978), no. 3, 181-187. (P. Ungar) **80c:68165** 68E10 (05C40)
- (with Das, Sunil R.; Chen, Zen; Hsu, W. J.) Transition matrices in the measurement and control of synchronous sequential machines. *Inform. Sci.* 18 (1979), no. 1, 47-65. (Authors' summary) **80f:68061** 68D05 (68D15)
- Shenitzer, Abie See Jaglom, I. M., **80c:51007**
- Shen-Orr, Chaim D. (with Ur, Hanoch) Function evaluation by incremental computation, with applications. *Math. Comput. Simulation* 21 (1979), no. 2, 163-169. (F. M. Larkin) **80j:65010** 65D15 (41-04)
- Shenoy, Prakash P. On coalition formation in simple games: a mathematical analysis of Caplow's and Gansson's theories. *J. Math. Psych.* 18 (1978), no. 2, 177-194. (J. Moulin) **80a:90170** 90D12 (92A20)
- A solution for noncooperative games. *Transactions of the Twenty-Fourth Conference of Army Mathematicians (Univ. Virginia, Charlottesville, Va., 1978)*, pp. 53-66, *ARO Rep.* 79, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (J. Moulin) **80c:90161** 90D10
- Shenoy, R. G. (with Sathe, Y. S.) On inequalities for statistics similar to Student's  $t$ . *Comm. Statist. A—Theory Methods* 8 (1979), no. 6, 575-579. (M. L. Tiku) **80j:62019** 62E15
- Shenoy, Varadaraj P. (with Taylor, Fred J.) On the Fourier transform of sequence limited signals with applications to delta modulation and medicine. *Internat. J. Systems Sci.* 10 (1979), no. 9, 945-960. (From the introduction) **80f:94004** 94A05 (92A09)
- Shenton, L. R. (with Bowman, K. O.) Approximate percentage points for Pearson distributions. *Biometrika* 66 (1979), no. 1, 147-151. (Editors) **80c:62017** 62E15
- (with Bowman, K. O.) Further approximate Pearson percentage points and Cornish-Fisher. *Comm. Statist. B—Simulation Comput.* 8 (1979), no. 3, 231-244. (Authors' summary) **80c:62007** 62E15
- Shepard, Donald S. (with Pliskin, Joseph S.; Weinstein, Milton C.) Utility functions for life years and health status. *Oper. Res.* 28 (1980), no. 1, 206-224. (Authors' summary) **80c:92004** 92A07 (90A10)
- Shepard, G. C. (with Grünbaum, Branko) The homeomeric classification of patterns. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 1, 57-60. (J. C. Fisher) **80c:51014** 51F15 (05B45, 20H15)
- (with Grünbaum, Branko) Isohedral tilings of the plane by polygons. *Comment. Math. Helv.* 53 (1978), no. 4, 542-571. (Heiko Harborth) **80d:52016** 52A45 (05B45)
- (with Grünbaum, Branko) Isotaxal tilings. *Pacific J. Math.* 76 (1978), no. 2, 407-430. (Ethan D. Bolker) **80a:05065** 05B45
- (with Grünbaum, Branko) The ninety-one types of isogonal tilings in the plane. *Trans. Amer. Math. Soc.* 242 (1978), 335-353. (Heiko Harborth) **80a:05066a** 05B45 (52A45)
- (with Grünbaum, Branko) Incidence symbols and their applications. *Relation between combinatorics and other parts of mathematics (Proc. Sympos. Pure Math., Ohio State Univ., Columbus, Ohio, 1978)*, pp. 199-244, *Proc. Sympos. Pure Math., XXXIV, Amer. Math. Soc., Providence, R.I., 1979*. (Joseph A. Thas) **80c:05059** 05B45
- (with Grünbaum, Branko) Erratum to: "The ninety-one types of isogonal tilings in the plane" (Trans. Amer. Math. Soc. 242 (1978), 335-353). *Trans. Amer. Math. Soc.* 240 (1979), no. 2, 446. (Heiko Harborth) **80a:05066b** 05B45 (52A45)
- Shepard, Ronald W. Dynamic production functions. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 4, pp. 275-287, *Operations Research Verfahren*, 34, Hain, Meisenheim, 1979. (Author's summary) **80c:90051** 90B30
- Shepherd, I. M. (with Lillington, J. N.) Central difference approximations to the heat transport equation. *Internat. J. Numer. Methods Engrg.* 12 (1978), no. 11, 1697-1704. (Authors' summary) **80a:80005** 80A20 (65L10)
- Shepherd, J. G. (with May, Robert M.; Beddington, J. R.; Horwood, J. W.) Exploiting natural populations in an uncertain world. *Math. Biosci.* 42 (1978), no. 3-4, 219-252. (Authors' summary) **80a:92059** 92A17 (92A15)
- Shepherd, P. J. See Stochastic processes in nonequilibrium systems, **80c:82001** and Patashinski, A. Z.; et al., **80c:82022**
- Shepherd-Baron, N. I. Local homomorphisms and Hilbert-Samuel functions. *Bull. London Math. Soc.* 11 (1979), no. 2, 138-141. (Hamet Seydi) **80j:13016** 13H10 (14C17)
- Shepherdson, John C. (with Elgot, Calvin C.) A semantically meaningful characterization of reducible flowchart schemes. *Theoret. Comput. Sci.* 8 (1979), no. 3, 325-357. (From the summary) **80m:68013** 68B05
- Shepley, L. C. (with Rosenbaum, Marcos; Ryan, Michael P., Jr.) Space-time homogeneous models with torsion. *J. Math. Phys.* 20 (1979), no. 4, 744-751. (Andrzej Trautman) **80d:83095** 83F05 (53C80)
- Shepp, L. A. (with Hoffmann-Jørgensen, J.; Dudley, R. M.) On the lower tail of Gaussian seminorms. *Ann. Probab.* 7 (1979), no. 2, 319-342. (N. C. Jain) **80j:60051** 60G15
- The joint density of the maximum and its location for a Wiener process with drift. *J. Appl. Probab.* 16 (1979), no. 2, 423-427. (S. J. Taylor) **80g:60084** 60J65 (60G17)
- Sher, R. B. (with Hollingsworth, J. G.) On the cancellation of shapes from products. *Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977)*, II. *Topology Proc.* 2 (1977), no. 2, 479-482 (1978). (Jerzy Dydak) **80k:55036** 55P55 (55P15)
- Products and sums of absolute proper retracts. II. *Colloq. Math.* 40 (1978/79), no. 2, 223-225. (W. Kuperberg) **80k:54028** 54C55
- Liftings of shape morphisms to finite covers. *Proceedings of the 1978 Topology*



- Conference (Univ. Oklahoma, Norman, Okla., 1978), 1. *Topology Proc.* 3 (1978), no. 1, 205-220 (1979). (Ross Gheoghegan) **80m:55016** 55P55 (55R99)
- Sherali, Hanif D. (with Shetty, C. M.) A primal simplex based solution procedure for the rectilinear distance multifacility location problem. *J. Oper. Res. Soc.* 29 (1978), no. 4, 373-381. (Kailash C. Kapur) **80c:90101** 90C08
- (with Bazaraa, Mokhtar S.) New approaches for solving the quadratic assignment problem. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 2, pp. 29-46, *Operations Research Verfahren*, 32, Hain, Meisenheim, 1979. (Authors' summary) **80c:90074** 90C20
- el-Sherief, H. See El-Sherief, H.
- Sheriff, A. (with Tan, P.) On structural predictive distribution with type II progressively censored Weibull data. (German, French and Russian summaries) *Statist. Hefte (N.F.)* 19 (1978), no. 4, 247-255. (J. F. Lawless) **80d:62092** 62N05 (62F15)
- Sherk, F. A. Indicator sets in an affine space of any dimension. *Canad. J. Math.* 31 (1979), no. 1, 211-224. (R. Artzy) **80d:51006** 51A40
- Sherman, Clayton C. Some splitting results in the  $K$ -theory of rings. *Amer. J. Math.* 101 (1979), no. 3, 609-632. (Daniel R. Grayson) **80f:13009** 13D15
- $K$ -cohomology of regular schemes. *Comm. Algebra* 7 (1979), no. 10, 999-1027. (Daniel R. Grayson) **80a:14004** 14C35 (18F25)
- Some theorems on the  $K$ -theory of coherent sheaves. *Comm. Algebra* 7 (1979), no. 14, 1489-1508. (Daniel R. Grayson) **80a:14029** 14F15
- Gersten's conjecture for arithmetic surfaces. *J. Pure Appl. Algebra* 14 (1979), no. 2, 167-174. (Daniel R. Grayson) **80d:14009** 14C35
- A note on the localization theorem for projective modules. *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 207-208. (Lindsay N. Childs) **80b:18010** 18F25
- Sherman, Gary A lower bound for the number of conjugacy classes in a finite nilpotent group. *Pacific J. Math.* 80 (1979), no. 1, 253-254. (E. M. Pal'čík) **80b:20038** 20D15
- Sherman, Jon A new characterization of amenable groups. *Trans. Amer. Math. Soc.* 254 (1979), 365-389. (M. M. Day) **80a:43001** 43A07 (28A12, 47D05)
- Sherrington, David Some aspects of functional integrals and many-body theory. *Path integrals and their applications in quantum, statistical and solid state physics (Proc. NATO Advanced Study Inst., State Univ. Antwerp, Antwerp, 1977)*, pp. 61-83, NATO Adv. Study Inst. Ser., Ser. B: Physics, 34, Plenum, New York, 1978. (L. E. H. Trainor) **80c:81106** 81H05 (81C35, 82A99)
- Sherry, T. N. (with Sudarshan, E. C. G.) Interaction between classical and quantum systems: a new approach to quantum measurement. I. *Phys. Rev. D* (3) 18 (1978), no. 12, 4580-4589. (R. M. Dreizler) **80b:81054** 81C99 (58F06)
- (with Hsu, J. P.) Common time in a four-dimensional symmetry framework. *Found. Phys.* 10 (1980), no. 1-2, 57-76. (Authors' summary) **80m:83002** 83A05
- Sherwood, H. (with Anthony, J. M.) Fuzzy groups redefined. *J. Math. Anal. Appl.* 69 (1979), no. 1, 124-130. (Anne C. Baker) **80f:20040** 20F99 (03E72)
- Sherwood, J. D. (with Jeffrey, D. J.) Streamline patterns and eddies in low-Reynolds-number flow. *J. Fluid Mech.* 96 (1980), no. 2, 315-334. (Authors' summary) **80m:76038** 76D99
- Shehinski, Eytan Note on the relation between quantity and price anomalies under externalities. *Econom. Lett.* 1 (1978), no. 2, 111-115. (Hildegard Dierker) **80i:90036** 90A14 (90A16)
- Shestakov, Aleksei I. A hybrid vortex-ADI solution for flows of low viscosity. *J. Comput. Phys.* 31 (1979), no. 3, 313-334. (J. P. Hennart) **80b:76015** 76D05 (65P05)
- Sheth, I. H. (with Shah, N. C.) Remark on a paper of T. Saitō: "On a theorem by S. M. Patel" (Rev. Roumaine Math. Pures Appl. 21 (1976), no. 10, 1407-1409). *Math. Student* 45 (1977), no. 1, 97-99 (1978). (J. P. Williams) **80a:47037** 47B20
- Shetty, C. M. (with Sherali, Hanif D.) A primal simplex based solution procedure for the rectilinear distance multifacility location problem. *J. Oper. Res. Soc.* 29 (1978), no. 4, 373-381. (Kailash C. Kapur) **80c:90101** 90C08
- (with Bazaraa, Mokhtar S.)  $\star$ Nonlinear programming. Theory and algorithms. John Wiley & Sons, New York-Chichester-Brisbane, 1979. xiv + 560 pp. ISBN 0-471-78610-1 (Paul Jambor) **80f:90110** 90C30
- Shen, Ming Goei On theories and applications of mixed finite element methods for linear boundary-value problems. *Comput. Math. Appl.* 4 (1978), no. 4, 333-347. (P. G. Ciarlet) **80c:65211** 65N30
- Shevchenko, V. N. See Ševčenko, V. N.
- Shevell, Steven K. Similar threshold functions from contrasting neural signal models. *J. Math. Psych.* 19 (1979), no. 1, 1-17. (Giovanni Melzi) **80a:92004** 92A05
- Shenya, O. B. See Šeĭnina, O. B.
- Shi, Shu Zhong Optimal uniform distributions generated by  $M$ -sequences. (Chinese) *Acta Math. Sinica* 22 (1979), no. 1, 123-128. (Jau-Shyong Shiue) **80i:10068** 10K05
- Shibata, Chikō On the curvature tensor  $R_{\mu\nu}$  of Finsler spaces of scalar curvature. *Tensor (N.S.)* 32 (1978), no. 3, 311-317. (Hideo Izumi) **80d:53020** 53B40
- (with Matsumoto, Makoto) On semi- $C$ -reducibility,  $T$ -tensor = 0 and  $S$ -likeness of Finsler spaces. *J. Math. Kyoto Univ.* 19 (1979), no. 2, 301-314. (J. K. Beem) **80a:53045** 53B40
- Shibata, F. (with Chaturvedi, S.) Time-convolutionless projection operator formalism for elimination of fast variables. Applications to Brownian motion. *Z. Phys. B* 35 (1979), no. 3, 297-308. (G. Della Riccia) **80a:82006** 82A05 (60J65)
- Shibata, Ritsel A note on asymptotic unbiasedness of estimates. *Kodai Math. J.* 2 (1979), no. 1, 38-42. (R. Ponnappallai) **80j:62035** 62F12
- Shibata, Yoshihiro (with Murata, Minoru) Lower bounds at infinity of solutions of partial differential equations in the exterior of a proper cone. *Israel J. Math.* 31 (1978), no. 2, 193-203. (J. Christina) **80b:35037** 35E20
- Shibuya, Yuzji On the existence of a complex almost contact structure. *Kodai Math. J.* 1 (1978), no. 2, 197-204. (David Blair) **80a:53047** 53C15
- Real submanifolds in a quaternionic projective space. *Kodai Math. J.* 1 (1978), no. 3, 421-439. (A. Aeppli) **80c:53019** 53B25 (53B05)
- Shida, Selya (with Tsuchiya, Tōru) On the design of broad-band 90° phase-splitting networks. *IEEE Trans. Circuits and Systems* 27 (1980), no. 1, 30-36. (Authors' summary) **80m:94000** 94C05
- Šidlovskii, A. B. See Šidlovskii, A. B.
- Šidlovskii, V. P. See Šidlovskii, V. P.
- Šil'fman, J. (with Kumar, P.) Interaction between soliton pairs in a double sine-Gordon equation. Special issue on solitons in physics. *Phys. Scripta* 20 (1979), no. 3-4, 435-439. (Authors' summary) **80i:81008** 81C05 (35Q20)
- Shieh, A. S. L. Fast Poisson solvers on general two-dimensional regions for the Dirichlet problem. *Numer. Math.* 31 (1978/79), no. 4, 405-429. (B. Kellogg) **80d:65110** 65N20
- Shieh, Leang S. (with Shih, Chao D.; Yates, R. E.) Some sufficient and some necessary conditions for the stability of multivariable systems. 1978 IEEE International Symposium on Circuits and Systems (New York, 1978), pp. 647-651, IEEE, New York, 1978. (Authors' summary) **80b:93117** 93D05
- (with Wei, Y. J.; Navarro, J. M.) An algebraic method to determine the common divisor, poles and transmission zeros of matrix transfer functions. *Internat. J. Systems Sci.* 9 (1978), no. 9, 949-964. (Joel Winthrop) **80a:93053** 93B25
- (with Shih, Chao D.; Yates, R. E.) Some sufficient and some necessary conditions for the stability of multivariable systems. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* 100 (1978), no. 3, 214-218. (M. F. Kirichenko) **80c:93100** 93D05 (34D99)
- (with Wei, Y. J.) Synthesis of optimal block controllers for multivariable control systems and its inverse optimal-control problem. *Proc. Inst. Electr. Engrs.* 126 (1979), no. 5, 449-456. (A. Barraud) **80f:93054** 93C99
- Shields, Allen L. Some problems in operator theory. Notes by Michael J. Hoffman. *Hilbert space operators (Proc. Conf., Calif. State Univ., Long Beach, Calif., 1977)*, pp. 157-167, *Lecture Notes in Math.*, 693, Springer, Berlin, 1978. (Editors) **80c:47007** 47A15
- On Möbius bounded operators. *Acta Sci. Math. (Szeged)* 40 (1978), no. 3-4, 371-374. (Glenn R. Luecke) **80a:47029** 47A65
- Shields, M. W. (with Lauer, P. E.; Best, E.) On the problem of achieving adequacy of concurrent programs. *Formal description of programming concepts (Proc. IFIP Working Conf., St. Andrews, N.B., 1977)*, pp. 301-336, North-Holland, Amsterdam, 1978. (Authors' summary) **80c:68060** 68B20 (68D90)
- Shields, Patrick Representation of integers as a sum of two  $h$ -th powers of primes. *Proc. London Math. Soc.* (3) 38 (1979), no. 2, 369-384. (G. Greaves) **80g:10047** 10J15 (10H32)
- Shields, Paul C. (with Burton, Robert M., Jr.) A skew-product which is Bernoulli. *Monatsh. Math.* 86 (1978/79), no. 2, 155-165. (Nathaniel Friedman) **80c:28017** 28D05
- Stationary coding of processes. *IEEE Trans. Inform. Theory* 25 (1979), no. 3, 283-291. (N. C. Mohanty) **80g:94042** 94A24
- (with Neuhoff, David L.) Channels with almost finite memory. *IEEE Trans. Inform. Theory* 25 (1979), no. 4, 440-447. (Authors' summary) **80g:94049** 94A40
- Shields, Robert W. See Morari, Manfred; et al. **80a:93040**
- Shier, D. R. (with Witzgall, C. J.) Norm approximation problems and norm statistics. *J. Res. Nat. Bur. Standards* 83 (1978), no. 1, 71-74. (Valery Fedorov) **80f:65036** 65D99 (62J05)
- On algorithms for finding the  $k$  shortest paths in a network. *Networks* 9 (1979), no. 3, 195-214. (Authors' summary) **80g:90047** 90B10
- See also McNamee, J. M. **80b:65037**
- Shiffman, Bernard On holomorphic curves and meromorphic maps in projective space. *Indiana Univ. Math. J.* 28 (1979), no. 4, 627-641. (Hirotaka Fujimoto) **80a:32044** 32H30
- Shifflett, Ray C. Extreme stochastic measures and Feldman's conjecture. *J. Math. Anal. Appl.* 68 (1979), no. 1, 111-117. (Pierre Crépel) **80b:28001** 28A12 (60J05)
- Continuous stochastic measures and Markov operators. *J. Math. Anal. Appl.* 70 (1979), no. 1, 258-266. (M. M. Rao) **80m:60007** 60A10 (28A99, 60J99)
- Shifman, M. A. See Šifman, M. A.
- Shiga, Hiroo Rational homotopy type and self-maps. *J. Math. Soc. Japan* 31 (1979), no. 3, 427-434. (Willi Meier) **80a:55042** 55P62 (55Q05)
- Shiga, Kiyoshi (with Sasaki, Takeshi) Remarks on the curvature of hypersurfaces in  $C^n$ . *Nagoya Math. J.* 71 (1978), 91-95. (B. Smyth) **80j:53063** 53C55 (32C10)
- A geometric characterization of  $C^n$  and open balls. *Nagoya Math. J.* 75 (1979), 145-150. (Paul F. Klembeck) **80m:53051** 53C55 (32C10)
- Shiga, Tokuzo A remark on infinite-dimensional Wiener processes with interactions. *Z. Wahrsch. Verw. Gebiete* 47 (1979), no. 3, 299-304. (J. Fritz) **80d:60139** 60K35 (60G60)
- Shigemoto, K. On the gauge-fixing problem. (Italian and Russian summaries) *Nuovo Cimento A* (11) 52 (1979), no. 4, 465-478. (A. Rouet) **80i:81042** 81E15
- Shigesada, Nanako (with Kawasaki, Kohkichi; Teramoto, Ei) Spatial segregation of interacting species. *J. Theoret. Biol.* 79 (1979), no. 1, 83-99. (Authors' summary) **80c:92038** 92A15
- (with Teramoto, Ei; Kawasaki, Kohkichi) Switching effect of predation on competitive prey species. *J. Theoret. Biol.* 79 (1979), no. 3, 303-315. (Authors' summary) **80c:92039** 92A15
- Shih, Chao D. (with Shieh, Leang S.; Yates, R. E.) Some sufficient and some necessary conditions for the stability of multivariable systems. 1978 IEEE International Symposium on Circuits and Systems (New York, 1978), pp. 647-651, IEEE, New York, 1978. (Authors' summary) **80b:93117** 93D05
- (with Shieh, Leang S.; Yates, R. E.) Some sufficient and some necessary conditions for the stability of multivariable systems. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* 100 (1978), no. 3, 214-218. (M. F. Kirichenko) **80c:93100** 93D05 (34D99)
- Shih, Hui Jan  $\star$ Free monoids and languages. Tamsui Oxford College Lecture Notes Series, 5, Tamsui Oxford College, Department of Computer Science, Taipei, 1978. iii + 138 pp. (Editors) **80d:68099** 68F05
- (with Laszlez, J.-L.) Factorization in the monoid of languages. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 199-205, *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (André Lentini) **80d:20063** 20M35 (68F05)
- (with Reis, C. M.) Some properties of disjunctive languages on a free monoid. *Inform. and Control* 37 (1978), no. 3, 334-344. (H. Jürgensen) **80d:20064** 20M35 (68F05)
- (with Hsieh, Wen Yau) Left cancellative elements in the monoid of languages.

- Soochow, J. *Math.* 4 (1978), 7–15. (D. Simovici) **80j:20073** 20M35 (20M05, 68F05)  
(with Lin, Kuang Nan) Disjunctive pairs and related languages on a free monoid.
- Soochow, J. *Math.* 4 (1978), 73–82. (D. Simovici) **80j:20056** 20M35 (20M05, 68F05)  
(with Lassez, J.-L.) Prefix properties and equations in the monoid of languages.
- Tamkang, J. *Math.* 9 (1978), no. 1, 5–14. (Dominique Perrin) **80j:68060** 68F05  
(94B45)
- Shih, Kuang-yen  $p$ -division points on certain elliptic curves. *Compositio Math.* 36 (1978), no. 2, 113–129. (Roy Fuller) **80d:10042** 10D35 (10D05, 14K07)
- Shih, Lionel C. C. (with Gray, F. Gail; Thompson, Richard A.) Diagnosis of faults in modular trees. *IEEE Trans. Comput.* 28 (1979), no. 5, 342–353. (Authors' summary) **80g:94101** 94C15 (68E10)
- Shih, Pen Yuan (with Schreyer, Howard L.) Lower bounds to fundamental frequencies and buckling loads of columns and plates. *Internat. J. Solids and Structures* 14 (1978), no. 12, 1013–1026. (Vadim Komkov) **80e:73025** 73D99 (49G05)
- Shih, Wei-shu Une remarque sur les équations aux dérivées partielles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 19, A823–A825. (Author's summary) **80i:58058** 58G15 (55M25)
- Shih, Yen Min Block pulse function analysis of time-varying and non-linear networks. (Chinese summary) *J. Chinese Inst. Engrs.* 1 (1978), no. 2, 43–52. (Author's summary) **80a:94047** 94C05
- Shih, Yen Ping (with Chen, Wen Liang) Shift Walsh matrix and delay-differential equations. *IEEE Trans. Automat. Control* 23 (1978), no. 6, 1023–1028. (K. Schmitt) **80d:34096** 34K05 (42C10)  
(with Han, Joung Yi) Double Walsh series solution of first-order partial differential equations. *Internat. J. Systems Sci.* 9 (1978), no. 5, 569–578. (Richard B. Crittenden) **80j:42045** 42C10
- Shilinka, Hsiao A new structure with reduced number of elements for synthesis of RC-grounded two-port networks. 1978 *IEEE International Symposium on Circuits and Systems* (New York, 1978), pp. 414–415, *IEEE, New York, 1978*. (Author's summary) **80b:94057** 94C99
- Shikata, Kiyoshi A renewal theorem in higher dimensions. *Tsukuba J. Math.* 3 (1979), no. 1, 79–89. (Aart J. Stam) **80i:60103** 60K05
- Shilkret, N. See Shell, Niel
- Shilnikov, L. P. See Šil'nikov, L. P.
- Shiloch, Yossi Strong linear orderings of a directed network. *Inform. Process. Lett.* 8 (1979), no. 3, 146–148. (Edward Minieka) **80b:90061** 90B10  
A fast equivalence-checking algorithm for circular lists. *Inform. Process. Lett.* 8 (1979), no. 5, 236–238. (Author's introduction) **80b:68032** 68C05 (68C25)  
A minimum linear arrangement algorithm for undirected trees. *SIAM J. Comput.* 8 (1979), no. 1, 15–32. (Henry S. Warren, Jr.) **80c:68034** 68C25 (68E10)  
(with Itai, Alon) Maximum flow in planar networks. *SIAM J. Comput.* 8 (1979), no. 2, 135–150. (Takao Ozawa) **80i:90052** 90B10 (68C25)
- Shilov, Yurii A note on the presentation and solution of infinite games. *J. Math. Econom.* 6 (1979), no. 1, 63–65. (Author's summary) **80i:90041** 90D10
- Shima, Hirohiko Compact locally Hessian manifolds. *Osaka J. Math.* 15 (1978), no. 3, 509–513. (J. L. Koszul) **80c:53054** 53C40
- Shima, Masasuke A study of optimal impulse control problems. I. Analytical construction of free boundary. (Japanese. English summary) *Systems and Control* 22 (1978), no. 10, 624–632. (Nobuo Sannomiya) **80a:49042** 49B36  
Study of optimal impulse control problems. II. Iterative procedure. (Japanese. English summary) *Systems and Control* 23 (1979), no. 8, 471–479. (Nobuo Sannomiya) **80m:49030** 49D99 (49B36)
- Shimada, Hideo (with Matsumoto, Makoto) On Finsler spaces with 1-form metric. *Tensor (N.S.)* 32 (1978), no. 2, 161–169. (Hassan Akbar-Zadeh) **80e:53030** 53B40
- Shimada, Ipppei (with Nagashima, Tomomasa) A numerical approach to ergodic problem of dissipative dynamical systems. *Progr. Theoret. Phys.* 61 (1979), no. 6, 1605–1616. (Richard C. Churchill) **80i:58077** 58F13 (58F15, 65L99)
- Shimano, Takashi An invariant of systems in the ergodic theory. *Tôhoku Math. J. (2)* 30 (1978), no. 3, 337–350. (B. S. Pickett) **80c:28013** 28D05 (28D20)
- Shimazaki, Hiroyuki On an approximation of Bessel function by the tau method. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 33 (1979), no. 1, 173–178. (Y. L. Luke) **80k:33015** 33A40 (34A50, 41A10)
- Shimboraki, Ehud Variational methods applied to the study of symmetric flows in Laval nozzles. *Comm. Partial Differential Equations* 4 (1979), no. 1, 41–77. (Vadim Komkov) **80d:76062** 76N10 (35Q20)
- Shimomura, Etsujiro (with Yamanaka, Kazuo; Uchida, Keno) Optimal control of systems with random delay. *Internat. J. Control* 29 (1979), no. 3, 489–495. (B. Wittenmark) **80g:93095** 93E20
- Shimul, T. N. Approximation of fixed points of certain nonlinear mappings. *J. Math. Anal. Appl.* 65 (1978), no. 3, 565–571. (Mo Tak Kiang) **80a:47090** 47H10
- Shimizu, Akinobu Construction of a solution of a certain evolution equation. II. *Nagoya Math. J.* 71 (1978), 181–198. (Ju. M. Ryžov) **80i:66052** 60H15
- Shimizu, Makoto (with Miyadera, Isao) Perturbation theory for cosine families on Banach spaces. *Tokyo J. Math.* 1 (1978), no. 2, 333–343. (S. Kurepa) **80c:47035** 47D05
- Shimizu, Ryotchi Entropy maximization principle and selection of the order of an autoregressive Gaussian process. *Ann. Inst. Statist. Math.* 30 (1978), no. 2, 263–270. (S. Csibi) **80c:62108** 62M09
- Shimizu, T. Analytic form of the simplest limit cycle in the Lorenz model. *Phys. A* 97 (1979), no. 2, 383–398. (P. J. Holmes) **80j:58054** 58F13 (34C05, 34E10, 58F21, 58F22)
- Shimoda, Setsuro Sur une classe des fonctions qui s'attachent à la théorie des équations du type elliptique et du second ordre. I. (Japanese summary) *Mem. Osaka Kyoiku Univ. III Natur. Sci. Appl. Sci.* 27 (1978/79), no. 2, 69–74. (R. C. MacCamy) **80i:35068** 35J25
- Shimoda, Yumihiko A note on Rees algebras of two-dimensional local domains. *J. Math. Kyoto Univ.* 19 (1979), no. 2, 327–333. (W. Vogel) **80k:13011** 13H10  
The class group of the Rees algebras over polynomial rings. *Tokyo J. Math.* 2 (1979), no. 1, 129–132. (J. T. Arnold) **80k:13001** 13A05 (13H10)
- Shimodaira, Kazuo Land surveying problems described in "Sanyo-ki". (Japanese) *Sûgakushi Kenkyû No. 77* (1978), 1–3. (S. Hitotumatu) **80i:01009** 01A27 (86–03)  
On the formulas for arc, arrow and chord in the early period of the Tokugawa shōgunate. (Japanese) *Sûgakushi Kenkyû No. 77* (1978), 20–35. (S. Hitotumatu) **80i:01005** 01A27 (51–03)  
(with Ōya, Shinichi; Suzuki, Hisao; Hagino, Kōgō; Takagi, Shigeo) Memories of the days when the Society was founded. (Japanese) Special issue on the 20th anniversary of Sûgakushi Kenkyû. *Sûgakushi Kenkyû No. 80* (1979), 76–88. (K. Inoue) **80i:01008** 01A27 (01A60)
- Shimokawa, Yakiichi On the nomographic chart of three complex variables in the line coordinates. (Czech and Russian summaries) *Apl. Mat.* 24 (1979), no. 4, 241–249. (Author's summary) **80e:65130** 65S05
- Shimomura, Hiroaki Quasi-invariant measures on  $\mathbb{R}^n$  and their ergodic decomposition. *Vector space measures and applications (Proc. Conf., Univ. Dublin, Dublin, 1977)*, I, pp. 378–395, *Lecture Notes in Math.*, 644, Springer, Berlin, 1978. (Author's introduction) **80c:28022** 28C20  
Ergodic decomposition of quasi-invariant measures. *Publ. Res. Inst. Math. Sci.* 14 (1978), no. 2, 359–381. (K. Jacobs) **80i:28023** 28D05
- Shimomura, N. (with Hotta, R.) The fixed-point subvarieties of unipotent transformations on generalized flag varieties and the Green functions. Combinatorial and cohomological treatments centering  $GL_n$ . *Math. Ann.* 241 (1979), no. 3, 193–208. (V. L. Popov) **80h:20068** 20G40 (14L30, 14M15)
- Shimshak, Daniel G. A comparison of waiting time approximations in series queueing systems. *Naval Res. Logist. Quart.* 26 (1979), no. 3, 499–509. (Author's summary) **80g:90054** 90B22
- Shimura, Goro The special values of the zeta functions associated with Hilbert modular forms. *Duke Math. J.* 45 (1978), no. 3, 637–679. (Hiroshi Saito) **80a:10043** 10D20 (10H10)
- Shimura, Masamichi Heuristic problem solving by tree search. *Systems-Comput.-Control* 8 (1977), no. 4, 18–26 (1979). (Author's summary) **80d:68126** 68G20
- Shiu, Jung G. (with Kassam, Saleem A.) Multilevel coincidence correlators for random signal detection. *IEEE Trans. Inform. Theory* 25 (1979), no. 1, 47–53. (K. S. Miller) **80d:94004** 94A12
- Shin, Moon Chirl (with Puterman, Martin L.) Modified policy iteration algorithms for discounted Markov decision problems. *Management Sci.* 24 (1977/78), no. 11, 1127–1137. (Uriel G. Rothblum) **80a:90146** 90C40
- Shin, Y. S. (with Saigal, R.) Perturbations in fixed point algorithms. *Functional differential equations and approximation of fixed points (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978)*, pp. 434–441, *Lecture Notes in Math.*, 730, Springer, Berlin, 1979. (Norihiko Adachi) **80j:65020** 65H05 (55M20, 58C15)
- Shingawa, Y. Invalidity of the Henderson diffusion equation shown by the exact solution of the Nernst-Planck equations. *J. Theoret. Biol.* 83 (1980), no. 2, 359–364. (From the text) **80m:80010** 80A20 (92A09)
- Shinbrot, Marvin (with Reeder, John) The initial value problem for surface waves under gravity. III. Uniformly analytic initial domains. *J. Math. Anal. Appl.* 67 (1979), no. 2, 340–391. (A. S. Alekseev) **80i:76004** 76B15 (35Q20)
- Shindo, Kōji Polynomial identities of certain algebras. *Sci. Rep. Hiroshima Univ.* 25 (1978), no. 2, 1–3. (Louis Rowen) **80d:16016** 16A38 (10Axx)
- Shindo, Yasuhide (with Tomita, Sadahiro) Thermoelastic Rayleigh waves with thermal relaxation in the magnetic field normal to the surface. (Russian summary) *Bull. Acad. Polon. Sci. Ser. Sci. Tech.* 27 (1979), no. 1, 9–15. (Authors' summary) **80m:73074** 73U05
- Shingal, Rymuzo Maximum period of 2-dimensional uniform neural networks. *Inform. and Control* 41 (1979), no. 3, 324–341. (Author's summary) **80e:94031** 94C99 (68D99, 92A09)
- Shinji, Hiroshi (with Kaneda, Masahiro; Aoyama, Mikio) An adaptive observer via optimal control law. *Mem. School Engrs. Okayama Univ.* 13 (1979), 225–238. (Bojan Popović) **80b:93081** 93C40
- Shinoda, Ken-ichi Sur le caractère de la représentation de Weil pour un corps fini. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 9, A485–A488. (Author's summary) **80d:20041** 20G05
- Shinohara, Masahiko A remark on the Hilbert paradox of Boltzmann equation. *Sci. Rep. Tokyo Woman's Christian Univ. No. 42-44* (1977), 469–475 (1978). (Mizan Rahman) **80g:82019** 82A05 (45K05)
- Shinohara, Yoshitane (with Yamamoto, Norio) Galerkin approximations of periodic solution and its period to van der Pol equation. *J. Math. Tokushima Univ.* 12 (1978), 19–42. (Ian Gladwell) **80a:65178** 65L10 (34C25)
- Shinoraki, Nobuo (with Rao, C. Radhakrishna) Precision of individual estimators in simultaneous estimation of parameters. *Biometrika* 65 (1978), no. 1, 23–30. (Arthur Cohen) **80f:62010** 62C15 (62C20, 62F10)  
A note on estimating the common mean of  $k$  normal distributions and the Stein problem. *Comm. Statist. A—Theory Methods* 7 (1978), no. 15, 1421–1432. (B. Raja Rao) **80c:62069** 62H12 (62C99, 62F10)  
(with Sibuya, Masaaki) Further results on the reverse-order law. *Linear Algebra Appl.* 27 (1979), 9–16. (Colette Lebaud) **80j:15004** 15A09 (65F05)
- Shioda, Tetsuji The Hodge conjecture for Fermat varieties. *Math. Ann.* 245 (1979), no. 2, 175–184. (Loren D. Olson) **80k:14035** 14G13  
The Hodge conjecture and the Tate conjecture for Fermat varieties. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 3, 111–114. (Loren D. Olson) **80e:14006** 14G13  
(with Katsura, Toshiyuki) On Fermat varieties. *Tôhoku Math. J. (2)* 31 (1979), no. 1, 97–115. (V. V. Šokurov) **80k:14033** 14J25 (14G05)
- Shiode, Syogo (with Ishii, Hiroaki; Nishida, Toshio; Iguchi, Katsuro) An algorithm for a partially chance-constrained E-model. (Japanese summary) *J. Oper. Res. Soc. Japan* 22 (1979), no. 3, 233–256. (Authors' summary) **80h:90108** 90C15
- Shiohama, Katsuhiko Busemann functions and total curvature. *Invent. Math.* 53 (1979), no. 3, 281–297. (Ju. Burago) **80m:53039** 53C20  
(with Greene, R. E.) Diffeomorphisms and volume-preserving embeddings of noncompact manifolds. *Trans. Amer. Math. Soc.* 255 (1979), 403–414. (M. L. Gromov) **80k:58031** 58D10 (53C42)
- Shioyama, Tadayoshi (with Mine, Hisashi; Ohno, Katsuhisa) A new priority queue with two servers. *Opssearch* 16 (1979), no. 1, 1–22. (Authors' summary) **80g:90052** 90B22
- Shipman, David W. (with Bernstein, Philip A.; Wong, Wing S.) Formal aspects of



- serializability in database concurrency control. *IEEE Trans. Software Engrg.* 5 (1979), no. 3, 203-216. (Authors' summary) **80f:60021** 68B15 (68H05)
- Shipman, J. S. (with Roberts, S. M.) Fundamental matrix and two-point boundary-value problems. *J. Optim. Theory Appl.* 28 (1979), no. 1, 77-88. (Authors' summary) **80d:65098** 65L10
- (with Roberts, S. M.) On the formulation of invariant imbedding problems. *J. Optim. Theory Appl.* 28 (1979), no. 4, 525-547. (Authors' summary) **80e:65082** 65L10
- Shippy, David J. (with Fairweather, Graeme; Rizzo, Frank J.; Wu, Yensen S.) On the numerical solution of two-dimensional potential problems by an improved boundary integral equation method. *J. Comput. Phys.* 31 (1979), no. 1, 96-112. (Authors' summary) **80e:65221** 65N99 (65R10)
- Shipsey, Edward J. Approximation method for molecular collisions in the turning point region. *J. Chem. Phys.* 70 (1979), no. 11, 5281-5291. (Author's summary) **80f:82014** 82A05 (34E20, 65L99)
- Shirafuji, Takeshi (with Hayashi, Kenji) New general relativity. *Phys. Rev. D* (3) 19 (1979), no. 12, 3524-3553. (Kenneth Dunn) **80f:83045** 83D05
- Lorentz invariant theory of gravitation. Gravitational interaction of spin-1/2 particles. *Progr. Theoret. Phys.* 62 (1979), no. 3, 802-822. (Pierre Hillion) **80i:83035** 83D05
- Shiral, Susumu On the central class field mod  $m$  of Galois extensions of an algebraic number field. *Nagoya Math. J.* 71 (1978), 61-85. (J. Browkin) **80c:12015** 12A65
- A remark concerning the 2-adic number field. *Nagoya Math. J.* 71 (1978), 87-90. (J. Browkin) **80c:12020** 12B15
- Shirakawa, Isao (with Tsukiyama, Shuji; Asahara, Shigeo) An algorithm for the via assignment problem in multilayer backboard wiring. *IEEE Trans. Circuits and Systems* 26 (1979), no. 6, 369-377. (Authors' summary) **80e:68126** 68C25 (94C99)
- Shirakura, Teruhiko On aliasing in fractional  $2^n$  factorial designs of even resolution. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 3, 483-494. (A. Hedayat) **80a:62121** 62K15
- Shirali, Satish On Jordan  $\ast$  representations of Banach algebras. *J. Indian Math. Soc. (N.S.)* 41 (1977), no. 1-2, 117-120. (Author's introduction) **80d:46106** 46K10
- Uniform convergence of an approximate method for elliptic quasilinear boundary value problems—a report. *Proceedings of the Conference on Mathematical Analysis and its Applications (Inst. Engrs., Mysore, 1977)*, pp. M37-M42, *Mathematics Rep.*, 91, *Inst. Math. Sci., Madras*, 1978. (Todd Dupont) **80e:65104** 65N30 (35A35)
- Shiratori, Norio (with Noguchi, Shiochi) Information transmission characteristics of ladder type computer networks. *Systems-Comput.-Controls* 9 (1978), no. 1, 54-61 (1979). (From the summary) **80j:68008** 68A05
- Shirokov, V. A. See **Širokov, V. A.**
- Shironosov, V. A. See **Šironosov, V. A.**
- Shiota, Taira (with Imai, Masato) On a parametrix for the hyperbolic mixed problem with diffractive lateral boundary. *Hokkaido Math. J.* 7 (1978), no. 2, 339-352. (V. Petkov) **80f:35081** 35L99 (58G17)
- Shiryaev, A. N. See **Širjaev, A. N.**
- Shiiba, O. Integration rules of the second kind. *J. Approx. Theory* 24 (1978), no. 3, 224-226. (C. Dagnino) **80f:65022** 65D30
- Šitkova, K. V. See **Šitkova, K. V.**
- Šitovitz, Benyamin (with Greenberg, Joseph; Wiecek, Andrzej) Existence of equilibria in atomless production economies with price dependent preferences. *J. Math. Econom.* 6 (1979), no. 1, 31-41. (Karl Schell) **80j:90031** 90A14
- Shiu, Elias S. W. Numerical ranges of products and tensor products. *Tōhoku Math. J.* (2) 30 (1978), no. 2, 257-262. (P. Rosenthal) **80e:47005** 47A12
- Shiu, Jau Shyong (with Niederreiter, Harald) Uniform distribution of sequences in rings of integral matrices. *Glasgow Math. J.* 20 (1979), no. 2, 169-178. (Charles Pisot) **80h:10058** 10K05 (15A36)
- Shiva, S. G. S. (with El-Guebaly, S.) On quartics in relation to BCH decoding. (French and German summaries) *Digital Process.* 5 (1979), no. 1-2, 129-131. (Authors' summary) **80m:94066** 94B35
- (with Abdel-Nabi, T. H.) On the cosets of shortened double-error-correcting binary BCH codes. (French and German summaries) *Digital Process.* 5 (1979), no. 1-2, 151-157. (Authors' summary) **80m:94056** 94B15
- Shivakumar, P. N. (with Wong, R.) Asymptotic expansion of multiple Fourier transforms. *SIAM J. Math. Anal.* 10 (1979), no. 6, 1095-1104. (R. L. Cooke) **80h:42009** 42B10
- Shivarova, A. See **Šivarova, A.**
- Shivpuri, Saroj (with Chhadha, S. S.) Enumerative technique for an extreme point fractional program. *European J. Oper. Res.* 4 (1980), no. 1, 54-59. (R. N. Kaul) **80j:90103** 90C32
- Šlichta, Paul J. Higher dimensional Hadamard matrices. *IEEE Trans. Inform. Theory* 25 (1979), no. 5, 566-572. (E. F. Assmus, Jr.) **80k:05025** 05B20
- Šillier, E. (with Gavish, B.) An approach for solving a class of transportation scheduling problems. *European J. Oper. Res.* 3 (1979), no. 2, 122-134. (Authors' summary) **80b:90079** 90B35
- Šlosman, S. B. Correlation inequalities for antiferromagnets. *J. Statist. Phys.* 22 (1980), no. 1, 59-64. (Author's summary) **80k:82072** 82A67
- Šmelev, V. V. See **Šmelev, V. V.**
- Šmely, Zahava The lattice of idempotent binary relations. *Algebra Universalis* 9 (1979), no. 3, 297-303. (Št. Schwarz) **80k:06009** 06F05 (20M10)
- Idempotents in complete poset groups. *Semigroup Forum* 17 (1979), no. 4, 317-324. (Ferenc Fenyes) **80h:20099** 20M10
- Šnider, S. (with Burns, D., Jr.) Geometry of hypersurfaces and mapping theorems in  $\mathbb{C}^n$ . *Comment. Math. Helv.* 54 (1979), no. 2, 199-217. (Hugo Rossi) **80h:32020** 32C05 (32F25, 53B35)
- (with Harnad, J.; Vinet, Luc) The Yang-Mills system in compactified Minkowski space: invariance conditions and SU(2) invariant solutions. *J. Math. Phys.* 20 (1979), no. 5, 931-942. (Daniel A. Akyepong) **80d:81073** 81E10 (57S15)
- Šnuf, Jim (with Hartwig, Robert E.) On the derivative of the Drazin inverse of a complex matrix. *SIAM J. Math. Anal.* 10 (1979), no. 1, 207-216. (Ralph A. Willoughby) **80b:65050** 65F20 (15A09)
- Šnosaker, E. M. On nonexistence of collapse solutions in rigid-perfect plasticity. *Utilitas Math.* 16 (1979), 3-13. (Z. Mróz) **80m:73039** 73E99 (73E05)
- Šnosmith, D. J. (with Smiley, T. J.)  $\star$ Multiple-conclusion logic. *Cambridge University Press, Cambridge-New York*, 1978. xiii + 356 pp. ISBN 0-521-21765-2 (J. A. Kalman) **80k:03001** 03-02 (03B50, 05C20)
- Šokurov, Vladimir See **Šokurov, Vladimir**
- Šolander, M. C. (with Leach, E. B.) Corrections to: "Extended mean values" [Amer. Math. Monthly 85 (1978), no. 2, 84-90; MR 58 #22428]. *Amer. Math. Monthly* 85 (1978), no. 8, 656. (Editors) **80e:26006** 26A24
- Šolpo, I. A. See **Šolpo, I. A.**
- Šoman, Toshio (with Baba, Norio; Sawaragi, Yoshikazu) A modified convergence theorem for a random optimization method. *Inform. Sci.* 13 (1977), no. 2, 159-166. (Authors' summary) **80h:93068** 93E20 (49B60)
- Šoop, Richard A. Some applications of  $(f, d_*)$  summability. *Indian J. Pure Appl. Math.* 7 (1976), no. 11, 1221-1240. (Amnon Jakimovski) **80m:42012** 42A24 (30B40)
- The Lebesgue constants for  $(f, d_*)$ -summability. *Pacific J. Math.* 80 (1979), no. 1, 255-263. (L. Lorch) **80f:42006** 42A24
- Šorack, Galen R. Extension of the Darling and Erdős theorem on the maximum of normalized sums. *Ann. Probab.* 7 (1979), no. 6, 1092-1096. (P. Révész) **80i:60028** 60F05 (60F17)
- Weak convergence of empirical and quantile processes in sup-norm metrics via KMT-constructions. *Stochastic Process. Appl.* 9 (1979), no. 1, 95-98. (P. Révész) **80i:60044** 60F17 (62G10)
- Šore, G. M. Dimensional regularisation and instantons. *Ann. Physics* 122 (1979), no. 2, 321-372. (Hsin-Yang Yeh) **80k:81110** 81E10
- (with Drummond, I. T.) Conformal anomalies for interacting scalar fields in curved spacetime. *Phys. Rev. D* (3) 19 (1979), no. 4, 1134-1143. (Authors' summary) **80d:83043** 83C45 (47Axx, 81E10)
- Šore, John E. (with Johnson, Rodney W.) Axiomatic derivation of the principle of maximum entropy and the principle of minimum cross-entropy. *IEEE Trans. Inform. Theory* 26 (1980), no. 1, 26-37. (Authors' summary) **80m:94029** 94A17 (62A15)
- Šore, Richard A. On the  $\vee$ -sentences of a  $\alpha$ -recursion theory. *Generalized recursion theory, II (Proc. Second Sympos., Univ. Oslo, Oslo, 1977)*, pp. 331-353, *Studies in Logic and Foundations of Math.*, 94, North-Holland, Amsterdam, 1978. (Stanley H. Stahl) **80e:03055** 03D60
- Some more minimal pairs of  $\alpha$ -recursively enumerable degrees. *Z. Math. Logik Grundlag. Math.* 24 (1978), no. 5, 409-418. (Stanley H. Stahl) **80e:03061** 03D60
- Šore, S. D. (with Kenton, S. A.) The Pidey-Roy space is continuously semimetrizable. *Amer. Math. Monthly* 86 (1979), no. 2, 117-119. (H. R. Bennett) **80h:54034** 54E25
- Šore, Terence R. (with Book, Stephen A.) On large intervals in the Csörgő-Révész theorem on increments of a Wiener process. *Z. Wahrsch. Verw. Gebiete* 46 (1978/79), no. 1, 1-11. (M. Csörgő) **80h:60052** 60G15 (60F15, 60G17)
- Šorrock, R. W. (with Rizvi, M. Haseeb) On operator inequalities and projections. *Studies in probability and ergodic theory*, pp. 113-118, *Advances in Math., Suppl. Studies*, 2, Academic Press, New York, 1978. (D. J. H. Garling) **80d:60083** 60H25
- Šorrock, Anthony Income inequality and income mobility. *J. Econom. Theory* 19 (1978), no. 2, 376-393. (From the introduction) **80f:90045** 90A16
- Šort, Robert D. (with Fukunaga, Keinosuke) A class of feature extraction criteria and its relation to the Bayes risk estimate. *IEEE Trans. Inform. Theory* 26 (1980), no. 1, 59-65. (Authors' summary) **80m:68079** 68G10
- Šortt, Joseph An iterative program to calculate Fibonacci numbers in  $O(\log n)$  arithmetic operations. *Inform. Process. Lett.* 7 (1978), no. 6, 299-303. (From the introduction) **80b:10003** 10-04 (68C05)
- Šostak, Robert E. A practical decision procedure for arithmetic with function symbols. *J. Assoc. Comput. Mach.* 26 (1979), no. 2, 351-360. (Author's summary) **80f:68020** 68B10 (03B25, 03B35, 03F30)
- Šowalter, R. E. Sobolev equations for nonlinear dispersive systems. *Applicable Anal.* 7 (1977/78), no. 4, 297-308. (W. Güttinger) **80g:34067** 34G20 (35Q20)
- A Green's formula for weak solutions of variational problems. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 381-387, Academic Press, New York, 1979. (Alfonso Castro) **80g:49007** 49A22 (35A15, 49A29)
- Initial and final value problems for degenerate parabolic evolution systems. *Indiana Univ. Math. J.* 28 (1979), no. 6, 883-893. (J. E. Lagnese) **80k:34081** 34G10 (35K22)
- Degenerate parabolic initial-boundary value problems. *J. Differential Equations* 31 (1979), no. 3, 296-312. (Curtis C. Travis) **80h:35033** 35G30 (34G10, 35K65)
- Špilevski, Edward See **Špilevski, E.**
- Šreve, Steven E. (with Bertsekas, Dimitri P.)  $\star$ Stochastic optimal control. The discrete time case. *Mathematical Systems in Economics*, 139, Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1978. xiii + 323 pp. ISBN 0-12-093260-1 (Vladimir Katkovnik) **80d:93081** 93E20
- (with Bertsekas, Dimitri P.) Dynamic programming in Borel spaces. *Dynamic programming and its applications (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 115-130, Academic Press, New York, 1978. (Authors' summary) **80m:90085** 90C39
- Probability measures and the C-sets of Selivanovskij. *Pacific J. Math.* 79 (1978), no. 1, 189-196. (Richard D. Mauldin) **80d:28008** 28A05 (28A20)
- (with Bertsekas, Dimitri P.) Alternative theoretical frameworks for finite horizon discrete-time stochastic optimal control. *SIAM J. Control Optim.* 16 (1978), no. 6, 953-978. (Authors' summary) **80a:93024** 93E20 (49A60)
- (with Bertsekas, Dimitri P.) Existence of optimal stationary policies in deterministic optimal control. *J. Math. Anal. Appl.* 69 (1979), no. 2, 607-620. (Authors' summary) **80f:93045** 93C99
- (with Bertsekas, Dimitri P.) Universally measurable policies in dynamic programming. *Math. Oper. Res.* 4 (1979), no. 1, 15-30. (Richard F. Serfozo) **80g:90113** 90C40
- Šrīkhande, M. S. (with Bose, R. C.; Bridges, W. G.) Partially geometric designs and two-class partially balanced designs. *Discrete Math.* 21 (1978), no. 2, 97-101. (Bhagwandas) **80e:05028** 05B05
- Šrīkhande, S. S. (with Singhi, N. M.) A note on embedding of orthogonal arrays of strength two. *J. Statist. Plann. Inference* 3 (1979), no. 3, 267-271. (E. Seiden) **80j:05025** 05B15 (62K10)
- Šrivastava, K. K. (with Sharma, K. G.)  $[C, 1]$  summability of ultraspherical series. (Hindi.

- English summary) *Vijnana Parishad Anusandhan Patrika* 21 (1978), no. 3, 285-291. (Shri Nivas Bhatti) 80m:42036 42C10 (33A45)
- Shrivastava, P. N. Classical polynomials—a unified presentation. *Publ. Inst. Math. (Beograd) (N.S.)* 23(37) (1978), 169-177. (S. K. Chatterjea) 80j:33028 33A70
- Shrivastava, S. C. Inelastic buckling of plates including shear effects. *Internat. J. Solids and Structures* 15 (1979), no. 7, 567-575. (J. W. Craggs) 80e:73036 73H05
- Shteingrad, D. M. (with Fradkin, E. S.) A continuous-integral method for spin lattice models. (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 1, 115-138. (Daniel B. Litvin) 80a:82003 82A05 (00A89)
- Štilfman, M. S. See Štilfman, M. S.
- Shu, Michael (with Nemeth, Evi; Seberry, Jennifer) On the distribution of the permanent of cyclic (0, 1) matrices. *Utilitas Math.* 16 (1979), 171-182. (R. A. Brualdi) 80m:15004 15A15 (05A15)
- Shuh, Michael ★Stabilité globale des systèmes dynamiques. With an English preface and summary. *Astérisque*, 56. Société Mathématique de France, Paris, 1978. iv+211 pp. (John Franke) 80e:58015 58F10 (34C35, 58F20)
- (with Sacksteder, Richard) Entropy on sphere bundles. *Adv. in Math.* 28 (1978), no. 2, 174-177. (D. Newton) 80e:58032 58F11 (28D20, 58F25)
- (with Sacksteder, Richard) Entropy of a differentiable map. *Adv. in Math.* 28 (1978), no. 3, 181-185. (Zbigniew Nitecki) 80e:58021 58F20 (28D20)
- Shukla, Martin (with Dubey, Pradeep) Bankruptcy and optimality in a closed trading mass economy modelled as a noncooperative game. *J. Math. Econom.* 6 (1979), no. 2, 115-134. (Andrew Schotter) 80g:90017 90A14 (90D40)
- Shubin, Gregory (with Cheng, Sin I) Computational accuracy and mesh Reynolds number. *J. Comput. Phys.* 28 (1978), no. 3, 315-326. (Authors' summary) 80a:65249 65P05 (35Q20, 76D99)
- (with Cheng, Sin I) Gasdynamic modeling and computational accuracy. *J. Comput. Phys.* 32 (1979), no. 1, 39-55. (Carlo Cercignani) 80e:76039 76N15 (65N20)
- Shubin, M. A. See Shubin, M. A.
- Shuchat, Alan Spectral measures and homomorphisms. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 6, 939-945. (Igor Kluvánek) 80a:47053 47B40 (28B05, 46G10)
- Shudo, Takefumi (with Miyamoto, Haruo) On the decomposition of coalgebras. *Hiroshima Math. J.* 8 (1978), no. 3, 499-504. (Surender K. Gupta) 80a:16018 16A24
- abū Kāmil Shujā', Ibn Aslam ibn Muhammad ibn Shujā' See abū Kāmil Shujā', Ibn Aslam ibn Muhammad ibn Shujā'
- Shukla, D. P. On the estimate of a solution of nonhomogeneous differential equation. *J. Indian Math. Soc. (N.S.)* 41 (1977), no. 3-4, 271-279 (1978). (From the introduction) 80c:34009 34A20
- A note on generating relations for Lauricella's function of several variables. *Proc. Amer. Math. Soc.* 73 (1979), no. 2, 199-206. (H. L. Manocha) 80f:33003 33A30
- Shukla, N. D. Estimation of a regression coefficient after two preliminary tests of significance. *Metrika* 26 (1979), no. 4, 183-193. (T. A. Bancroft) 80m:62070 62J05
- Shukla, U. S. (with Ravisankar, T. S.) Structure of T-rings. *Pacific J. Math.* 80 (1979), no. 2, 537-559. (J. Luh) 80i:16046 16A78
- Shu-Kong Chang See Chang, Shu Kong
- Shukuryan, S. K. See Šukurjan, S. K.
- Shuler, K. E. (with West, B. J.; Bulsara, A. R.; Lakatos-Lindenberg, Katja; Seshadri, Venkita) Stochastic processes with nonadditive fluctuations. I. Itô and Stratonovich calculus and the effects of correlations. *Phys. A* 97 (1979), no. 2, 211-233. (Authors' summary) 80e:82015a 82A05
- (with Bulsara, A. R.; Lakatos-Lindenberg, Katja; Seshadri, Venkita; West, B. J.) Stochastic processes with nonadditive fluctuations. II. Some applications of Itô and Stratonovich calculus. *Phys. A* 97 (1979), no. 2, 234-243. (Authors' summary) 80e:82015b 82A05
- Shulman, Herbert Covering dimension and characteristic classes for foliations. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 2, pp. 189-190, Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I., 1978. (J. Stasheff) 80e:57025 57R20*
- (with Stasheff, James) de Rham theory for BT. *Differential topology, foliations and Gelfand-Fuks cohomology (Proc. Sympos., Pontificia Univ. Católica, Rio de Janeiro, 1976), pp. 62-74, Lecture Notes in Math., 652, Springer, Berlin, 1978. (D. B. Fuks) 80d:57016 57R32*
- (with Lazarov, Connor) Obstructions to foliation preserving Lie group actions. *Topology* 18 (1979), no. 3, 255-256. (Toru Tsujishita) 80m:57020 57R30 (57S99)
- Shultz, Frederic W. On normed Jordan algebras which are Banach dual spaces. *J. Funct. Anal.* 31 (1979), no. 3, 360-376. (C. Martin Edwards) 80b:46096 46L05 (46H99)
- (with Alfsen, Erik M.) On noncommutative spectral theory and Jordan algebras. *Proc. London Math. Soc. (3)* 38 (1979), no. 3, 497-516. (C. Martin Edwards) 80b:46085 46L05 (46A55)
- Shultz, Harris S. A new algebra of distributions on  $\mathbb{R}^n$ . *Publ. Math. Debrecen* 25 (1978), no. 1-2, 85-88. (J.-P. Antoine) 80d:46071 46F10
- Shumakov, V. M. See Šumakov, V. M.
- Shumway, R. H. (with Katzoff, M. J.) Distributed lag regression with an almost periodic design matrix. *J. Appl. Probab.* 15 (1978), no. 4, 759-773. (E. J. Hannan) 80a:62145 62M10 (62M15)
- Shure, B. N. (with Newman, Morris; Ryavec, C.) The use of integral operators in number theory. *J. Funct. Anal.* 32 (1979), no. 2, 123-130. (Henri Joris) 80b:10046 10H05
- (with Marcus, Marvin) The numerical range of certain 0, 1-matrices. *Linear and Multilinear Algebra* 7 (1979), no. 2, 111-120. (Werner Bani) 80c:15015 15A60 (65F99)
- Švrachka, A. B. See Švrachka, A. B.
- Švralko, N. Ia. See Švralko, N. Ju.
- Švartsmann, Sh. M. See Švartsmann, Š. M.
- Švetsov, V. I. See Švecov, V. I.
- Shyam, Radhe (with Sharma, V. D.) Growth of discontinuities in fluids with internal relaxation. *Appl. Sci. Res.* 35 (1979), no. 2-3, 185-193. (Authors' summary) 80j:76042 76L05 (58G17)
- Shyannamdar, Rudrapatna Kaillkote LR-deterministic grammars. (German and Russian summaries) *Elektron. Informatsionverarb. Kybernet.* 14 (1978), no. 7-8, 361-376. (A. V. Anisimov) 80a:68092 68F05 (68F25)
- (with Rajasethupathy, K. S.) Programmed OL-systems. *Inform. Sci.* 20 (1980), no. 2, 137-150. (Authors' summary) 80b:68063 68F10
- Shymanski, W. T. (with Arscott, F. M.; Lacroix, R.) A three-term recursion and the computation of Mathieu functions. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1978), pp. 107-115, Congress. Numer., XXII, Utilitas Math., Winnipeg, Man., 1979. (From the text) 80j:65013 65D20 (33A70)*
- Shyr, H. J. See Shih, Hui Jan
- Shyr, Jih Min Class numbers of binary quadratic forms over algebraic number fields. *J. Reine Angew. Math.* 307/308 (1979), 353-364. (A. I. Vinogradov) 80g:12013 12A85 (10C03)
- do tan Si See Do Tan Si
- Si, Siu Chong Dynamic testing of redundant logic networks. *IEEE Trans. Comput.* 27 (1978), no. 9, 828-832. (G. Saucier) 80a:94062 94C10
- Šitnanov, A. V. (with Birjukov, S. I.) A search algorithm for balanced plans in a dynamic model of economics. (Russian) *Modelling and control in cooling systems (Russian), pp. 76-81, 258, "Nauka", Moscow, 1978. (Authors' summary) 80e:90028 90A16*
- Sibgatullina, Nail Les effets acoustiques non linéaires dans l'univers en expansion. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 5, A233-A236. (Authors' summary) 80m:85007 85A40 (35Q99, 76Q05, 83F05)
- Sibirskii, K. S. (with Kirnitskaja, E. F.) Conditions for two centers for a quadratic differential system. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 9, 1589-1593, 1722. (E. S. Čičkin) 80c:34033 34C05
- Sibirskii, V. K. The set of  $\varphi$ -vertices of a graph. (Russian) *Bul. Akad. Štiinse RSS Moldoven.* 1978, no. 2, 25-29, 93. (Author's summary) 80f:05022 05C05
- Sibbey, David S. (with Klein, Roger W.; Rafsky, Lawrence C.; Willig, Robert D.) Decisions with estimation uncertainty. *Econometrica* 46 (1978), no. 6, 1363-1387. (Authors' summary) 80b:90010 90A10 (62C99, 90A05)
- Sibner, L. M. (with Sibner, R. J.) Nonlinear Hodge theory: applications. *Adv. in Math.* 31 (1979), no. 1, 1-15. (Jill P. Mesirov) 80b:58058 58G99 (35L65, 49F10, 76J99)
- (with Sibner, R. J.) Transonic flow on an axially symmetric torus. *J. Math. Anal. Appl.* 72 (1979), no. 1, 362-382. (A. P. Stone) 80b:58004 58A10 (35Q20, 76H05)
- Sibner, R. J. (with Sibner, L. M.) Nonlinear Hodge theory: applications. *Adv. in Math.* 31 (1979), no. 1, 1-15. (Jill P. Mesirov) 80b:58058 58G99 (35L65, 49F10, 76J99)
- (with Sibner, L. M.) Transonic flow on an axially symmetric torus. *J. Math. Anal. Appl.* 72 (1979), no. 1, 362-382. (A. P. Stone) 80b:58004 58A10 (35Q20, 76H05)
- Sibony, Nessim (with Hakim, Monique) Ensembles lipschit dans des domaines strictement pseudo-convexes. *Duke Math. J.* 45 (1978), no. 3, 601-617. (E. L. Stout) 80c:32087 32A40 (32E30)
- (with Wong, Pit Mann) Remarks on the Casorati-Weierstrass theorem. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 2, pp. 91-95, Proc. Sympos. Pure Math., XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979. (I. P. Ramadanov) 80c:32054 32H99 (32H30)*
- Silson, Robin Locally equiangular triangulations. *Comput. J.* 21 (1978), no. 3, 243-245. (Heiko Harborth) 80d:52018 52A45 (05B45)
- Sibal, Leon H. Stochastic Green's functions and scattering functions. *Information linkage between applied mathematics and industry (Proc. First Annual Workshop, Naval Postgraduate School, Monterey, Calif., 1978), pp. 617-631, Academic Press, New York, 1979. (V. P. Milant'ev) 80b:78005 78A25 (76Q05)*
- Sibuya, Masaaki The distribution of finite order statistics. *TRU Math.* 14 (1978), no. 1, 53-56. (J. S. Huang) 80b:62027 62E15 (62G30)
- (with Shinozaki, Nobuo) Further results on the reverse-order law. *Linear Algebra Appl.* 27 (1979), 9-16. (Colette Lebaud) 80j:15004 15A09 (65F05)
- Sibuya, Yasutaka Convergence of power series solutions of a linear Pfaffian system at an irregular singularity. *Keio Engrg. Rep.* 31 (1978), no. 7, 79-86. (Antoinette Sec) 80j:34009 34A25 (58A17)
- Siechter, J. (with Fried, Ervin) On automorphism groups of subalgebras of a universal algebra. *Acta Sci. Math. (Szeged)* 40 (1978), no. 3-4, 265-270. (James B. Nation) 80f:08002 08A35
- (with Adams, M. E.) Endomorphism monoids of distributive double  $p$ -algebras. *Glasgow Math. J.* 20 (1979), no. 1, 81-86. (Heinrich Werner) 80g:08006 08A35 (06D15)
- Siciak, J. On some inequalities for polynomials. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* No. 21 (1979), 7-10. (J. P. Ferrier) 80m:32020 32E20
- Siddappa, B. (with Balagondar, P. M.) Flow due to a sudden stoppage of moving bodies in a Rivlin-Ericksen viscoelastic fluid. *J. Karnatak Univ. Sci.* 22 (1977), 74-80. (Authors' summary) 80j:76004 76A10 (73B25)
- Siddiqui, A. H. (with Gupta, S. C.) On the approximation by Walsh functions. *Aligarh Bull. Math.* 3/4 (1973/74), 37-42. (Editors) 80m:42003 42A10
- Siddiqui, Jamil A. The determination of the jump of a function by Nörlund means. *Publ. Math. Debrecen* 25 (1978), no. 1-2, 5-19. (H. P. Dikshit) 80a:42008 42A24
- (with Bailleite, Aïme) Non-totalité d'exponentielles sur un arc rectifiable. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 3, A177-A179. (Authors' summary) 80b:30010 30B60
- Siddiqui, A. Use of the  $H$ -function of several variables in the solution of a boundary value problem in heat conduction. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 21 (1978), no. 4, 341-345. (Authors' summary) 80b:33012 33A35 (80A10)
- Integral involving the  $H$ -function of several variables and an integral function of two complex variables. *Bull. Inst. Math. Acad. Sinica* 7 (1979), no. 3, 329-332. (Authors' summary) 80j:33007 33A35
- Sideridis, A. (with Levin, D.; Papamichael, N.) The Bergman kernel method for the numerical conformal mapping of simply connected domains. *J. Inst. Math. Appl.* 22 (1978), no. 2, 171-187. (Ju. E. Hohlov) 80b:30008 30C30 (65E05)
- Sidhu, Gursharan S. (with Weinert, Howard L.) Dynamical recursive algorithms for  $L_g$ -spline interpolation of EHB data. *Appl. Math. Comput.* 5 (1979), no. 2, 157-185. (Christian Coatméc) 80b:65016 65D07
- (with Weinert, Howard L.; Desai, U. B.) ARMA splines, system inverses, and least-squares estimates. *SIAM J. Control Optim.* 17 (1979), no. 4, 525-536. (Authors' summary) 80f:65012 65D07 (65D10)
- Sidi, Marcel (with Horowitz, Isaac) Synthesis of linear time-varying non-minimum-phase



- systems with plant uncertainty. *Internat. J. Control* **27** (1978), no. 3, 351-359. (Authors' summary) **80a:93061** 93B99
- (with Horowitz, Isaac) Optimum synthesis of non-minimum phase feedback systems with plant uncertainty. *Internat. J. Control* **27** (1978), no. 3, 361-386. (Authors' summary) **80a:93134** 93D15
- Sidi, Said. Generators and relations of finite groups. *Proceedings of the Ninth Brazilian Mathematical Colloquium (Poços de Caldas, 1973)*, Vol. 1 (Portuguese), pp. 13-20. *Inst. Mat. Pura Apl., São Paulo*, 1977. (Author's summary) **80j:20036** 20F05
- Šidlichovský, M. Note on the shift of the center of libration of geosynchronous satellites. (Russian summary) *Bull. Astronom. Inst. Czechoslovakia* **30** (1979), no. 1, 41-45. (Author's summary) **80k:70033** 70M05
- Šidlovský, A. B. On the estimates of the algebraic independence measures of the values of E-functions. *J. Austral. Math. Soc. Ser. A* **27** (1979), no. 4, 385-407. (Michel Waldschmidt) **80m:10027** 10F37 (33A25)
- Šidlovský, V. I. (with Fedorov, S. M.) Method of synthesis of a discrete control law for a multidimensional object from an analogous prototype. (Russian) *Kibernet. i Vychisl. Tehn.* **44** (1979), 3-9, 114. (Authors' summary) **80k:93035** 93C55
- Šidlovský, V. P. The structure of a viscous fluid flow near a rotating disk edge. *Prikl. Mat. Meh.* **41** (1977), no. 3, 464-472. (Russian); translated as *J. Appl. Math. Mech.* **41** (1977), no. 3, 467-476 (1978). (Howard Swann) **80a:76030** 76D30 (35Q10)
- Sidney, Jeffrey B. (with Monma, Clyde L.) Sequencing with series-parallel precedence constraints. *Math. Oper. Res.* **4** (1979), no. 3, 215-224. (Authors' summary) **80m:90058** 90B35
- Sidonik, O. B. (with Korobitsyn, V. A.) The difference operator on a group over a matrix ring. (Russian) *Dokl. Akad. Nauk SSSR* **243** (1978), no. 4, 847-850. (S. G. Gindikin) **80d:47057** 47B39 (22D99, 39A70)
- (with Belousov, P. V.) Dual operators in lattices. (Russian) *Sibirsk. Mat. Ž.* **19** (1978), no. 3, 504-508, 715. (S. Teleman) **80j:33025** 33A75 (20C99, 22D12)
- (with Dubovik, O. A.) A group of matrices and Legendre functions. (Russian) *Mat. Zametki* **26** (1979), no. 1, 71-75, 157. (R. G. Langebartel) **80k:33011** 33A45
- Siderina, T. M. Time-optimal synthesis for a system of the form  $\dot{x} = A(t)x + Bu + g(t)$  with certain constraints on the input data. (Russian) *Differentsial'nye Uravneniya (Ryazan)* **10** (1978), 148-154. (Author's summary) **80k:93103** 93C99
- Sidorov, A. F. (with Hailullina, O. B.) Exact solutions of some boundary value problems of gas dynamics in classes of double and triple waves. (Russian) *Trudy Inst. Mat. i Meh. Ural. Nauch. Centr Akad. Nauk SSSR No. 25 Metody Resheniya Kraevykh Zadach Meh. Splodn. Sredy* (1978), 52-66, 80. (Authors' summary) **80d:76071** 76N15
- Sidorov, A. S. (with Oleinikov, V. A.) Observability of a class of nonlinear dynamic plants. (Russian) *Voprosy Teor. Sistem Avtomat. Upravleniya* **1978**, no. 4, 3-7, 131. (Authors' summary) **80k:93035** 93B07
- Sidorov, I. M. (with Timofeev, V. V.) Analysis of two-frequency regimes of operations in a stabilization system. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 1, 174-182, 223 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 1, 127-135. (Authors' summary) **80a:93129** 93D05
- Sidorov, N. A. The calculation of eigenvalues and -vectors of linear operators on the basis of the theory of perturbations. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 8, 1522-1525, 1535. (B. V. Loginov) **80k:47023** 47A70
- Sidorova, V. K. (with Rozdestvenskii, B. L.; Levitan, Ju. L.; Moiseenko, B. D.; Priimak, V. G.) Methods of numerical modeling of turbulent flows of an incompressible viscous fluid. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 14* (1979), 20 pp. (Authors' summary) **80k:76020** 76F99 (65P05)
- Siebenmann, L. (with Matumoto, Takao) The topological s-cobordism theorem fails in dimension 4 or 5. *Math. Proc. Cambridge Philos. Soc.* **84** (1978), no. 1, 85-87. (J. W. Vick) **80b:57012** 57N75
- (with Sullivan, Dennis) On complexes that are Lipschitz manifolds. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 503-525. *Academic Press, New York*, 1979. (Oscar Burlet) **80k:57027** 57Q05 (32G15)
- Siebert, Eberhard. Pairwise sufficiency. *Z. Wahrsch. Verw. Gebiete* **46** (1979), no. 3, 237-246. (T. Pitcher) **80k:62006** 62B05
- Statistical experiments and their conical measures. *Z. Wahrsch. Verw. Gebiete* **46** (1979), no. 3, 247-258. (T. Pitcher) **80k:62007** 62B10
- Siefkes, Dirk. An axiom system for the weak monadic second order theory of two successors. *Israel J. Math.* **30** (1978), no. 3, 264-284. (Wolfgang Thomas) **80a:03015** 03B25 (03D05)
- Siegburg, Hans Willi (with Prüfer, Michael) On computational aspects of topological degree in  $\mathbb{R}^n$ . *Functional differential equations and approximation of fixed points (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978)*, pp. 410-433. *Lecture Notes in Math.*, **730**. Springer, Berlin, 1979. (Gilles Fournier) **80k:55011** 55M25 (65H10)
- Siegel, Andrew F. Random arcs on the circle. *J. Appl. Probab.* **15** (1978), no. 4, 774-789. (Gedalia Ailam) **80a:60014** 60D05
- Asymptotic coverage distributions on the circle. *Ann. Probab.* **7** (1979), no. 4, 651-661. (Gedalia Ailam) **80k:60020** 60D05 (60E05)
- Siegel, Carl Ludwig. *Gesammelte Abhandlungen*. Band IV. Edited by K. Chandrasekharan and H. Maass. With corrections to the first three volumes. Springer-Verlag, Berlin-New York, 1979. iii+343 pp. (1 plate). ISBN 3-540-09374-5 (W. J. LeVeque) **80k:01066** 01A75
- Siegel, G. Zero-one laws and weak convergences for sums of independent random variables. *Math. Nachr.* **86** (1978), 333-346. (H. Bergström) **80j:60043** 60F20
- (with Jesiak, B.; Rossberg, Hans-Joachim)  $\star$ On the central limit theorem for the triangular array and the Lindeberg-Feller theorem. With German and Russian summaries. *Wissenschaftliche Sitzungen zur Stochastik 79*. Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin, 1979. 29 pp. (H. Bergström) **80m:60034** 60F05
- (with Wünsche, S.) Abschätzungen der Erneuerungsfunktion. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* **10** (1979), no. 2, 265-275. (Authors' summary) **80k:90076** 90B25 (90B22)
- Siegel, Jerrold. On the structure of  $B_\infty(F)$ ,  $F$  a stable space. *Pacific J. Math.* **76** (1978), no. 2, 491-507. (Tetsuya Aikawa) **80k:55017** 55S35
- Siegel, Warren. Unextended superfields in extended supersymmetry. *Nuclear Phys. B* **156** (1979), no. 1, 135-143. (R. L. Ingraham) **80f:83056** 83E15
- (with Grisar, M. T.; Roček, Martin) Improved methods for supergraphs. *Nuclear Phys. B* **159** (1979), no. 3, 429-450. (J. G. Taylor) **80k:81027** 81C12 (83C45)
- Supersymmetric dimensional regularization via dimensional reduction. *Phys. Lett. B* **84** (1979), no. 2, 193-196. (Author's summary) **80e:81074** 81E10
- Supergravity supergraphs. *Phys. Lett. B* **84** (1979), no. 2, 197-200. (Author's summary) **80d:81100** 81E99
- Siegl, G. The Peierls phase transition. *Acta Phys. Austriaca* **50** (1978/79), no. 4, 263-271. (Author's summary) **80k:82024** 82A25
- Siegmund, A. E. Simplified derivation of the Fokker-Planck equation. *Amer. J. Phys.* **47** (1979), no. 6, 545-547. (Author's summary) **80b:82009** 82A05 (94A05)
- Siegmund, D. Estimation following sequential tests. *Biometrika* **65** (1978), no. 2, 341-349. (M. B. Woodroffe) **80f:62079** 62L10 (62F25)
- Corrected diffusion approximations in certain random walk problems. *Adv. in Appl. Probab.* **11** (1979), no. 4, 701-719. (Frederick Stern) **80f:60096** 60J15
- (with Lai, Tze Leung) A nonlinear renewal theory with applications to sequential analysis. II. *Ann. Statist.* **7** (1979), no. 1, 60-76. (J. R. Blum) **80c:62100** 62L10 (60K05)
- Confidence intervals related to sequential test for the exponential distribution. *Naval Res. Logist. Quart.* **26** (1979), no. 1, 57-67. (M. B. Woodroffe) **80j:62077** 62L10
- Siegmund-Schultze, Rainer (with Fleischmann, Klaus) An invariance principle for reduced family trees of critical spatially homogeneous branching processes. With discussion. *Serdica* **4** (1978), no. 2-3, 111-134. (A. R. Moncayo) **80j:60109** 60J80
- Siekma, J. Über die Profilkurve einer zylindrischen Kapillarfäche. *Z. Angew. Math. Mech.* **59** (1979), no. 5, T269-T271. (From the text) **80k:76038** 76N99 (49F25)
- de Siena, S. (with de Martino, S.; Marra, R.) A note on some confinement criteria. (Italian and Russian summaries) *Nuovo Cimento A* (11) **48** (1978), no. 3, 279-289. (W.-H. Steeb) **80a:82010** 82A05 (00A89)
- Stenkiewicz, W. (with Lukierski, Jerzy) Generalized free fields, conformal group and five-dimensional quantum field theory. (Russian) *Bull. Acad. Polon. Sci. Sér. Sci. Phys. Astronom.* **27** (1979), no. 1, 33-40. (R. F. Biljalov) **80k:81103** 81E10 (22E70)
- di Sieno, Simonetta. See Di Sieno, Simonetta
- Sieradski, Allan J. (with Dyer, Michael N.) Distinguishing arithmetic for certain stably isomorphic modules. *J. Pure Appl. Algebra* **15** (1979), no. 2, 199-217. (Jean-Louis Loday) **80k:20007** 20C05 (55U15)
- Sierkma, Gerard. Nonnegative matrices: the open Leontief model. *Linear Algebra Appl.* **26** (1979), 175-201. (Z. Waksman) **80k:90052** 90A17 (49C15)
- Sierpińska, Anna (with Krempa, Jan) The Jacobson radical of certain group and semigroup rings. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys. C* **26** (1978), no. 12, 963-967 (1979). (Ralph W. Wilkerson) **80e:16009** 16A26
- Siewert, C. E. Explicit results for the quantum-mechanical energy states basic to a finite square-well potential. *J. Math. Phys.* **19** (1978), no. 2, 434-435. (S. Aramaki) **80k:81009** 81C05
- A new approach to the inverse problem. *J. Math. Phys.* **19** (1978), no. 12, 2619-2621. (Author's summary) **80k:82064** 82A75
- (with Phelps, J. S., III) On the solution of a  $\tanh(-kw) + \tanh \xi = 0$ . *J. Comput. Appl. Math.* **5** (1979), no. 2, 99-101. (Authors' summary) **80k:65112** 65H05 (65D20)
- (with Phelps, J. S., III) On solutions of a transcendental equation basic to the theory of vibrating plates. *SIAM J. Math. Anal.* **10** (1979), no. 1, 105-111. (Authors' summary) **80b:73020** 73D30 (30E99)
- On establishing a two-term scattering law in the theory of radiative transfer. (German summary) *Z. Angew. Math. Phys.* **30** (1979), no. 3, 522-525. (Edward W. Larsen) **80k:85011** 85A25 (82A70)
- Siewert, Erdmute (with Dümmel, Siegfried) Richtungsableitungen von k-dimensionalen Potentialen. *Math. Nachr.* **83** (1978), 177-190. (S. A. Tersenov) **80k:31004** 31B15
- Sifakis, Joseph. Use of Petri nets for performance evaluation. With errata. *Measuring, modelling and evaluating computer systems (Proc. Third Internat. Symp., Bad Godesberg, 1977)*, pp. 75-93, 467. North-Holland, Amsterdam, 1977. (Editors) **80k:68074a** 68D90 (94A15)
- (with Moalla, M.; Pulou, J.) Synchronized Petri nets: a model for the description of non-autonomous systems. *Mathematical foundations of computer science, 1978 (Proc. Seventh Symp., Zakopane, 1978)*, pp. 374-384. *Lecture Notes in Comput. Sci.*, **64**. Springer, Berlin, 1978. (Guy Vidal-Naquet) **80d:68075** 68D90
- Structural properties of Petri nets. *Mathematical foundations of computer science, 1978 (Proc. Seventh Symp., Zakopane, 1978)*, pp. 474-483. *Lecture Notes in Comput. Sci.*, **64**. Springer, Berlin, 1978. (J. Paredaens) **80d:68032** 68B20 (68D90)
- Use of Petri nets for performance evaluation. *Acta Cybernet.* **4** (1978/79), no. 2, 185-202. (Editors) **80f:68074b** 68D90 (94A15)
- (with Moalla, M.; Pulou, J.) Réseaux de Petri synchronisés. *RAIRO Automat.* **12** (1978), no. 2, 103-130. (Rüdiger Valk) **80f:68066** 68A05 (68B20, 68D90)
- Realization of fault-tolerant systems by coding Petri nets. *J. Design Automat. Fault-Tolerant Comput.* **3** (1979), no. 2, 93-107. (K. L. Kodandapani) **80k:94062** 94C15 (68D90)
- Sifman, M. A. (with Vainstein, A. I.; Zaharov, V. I.) Instantons in nonperturbative QCD vacuum. *Nuclear Phys. B* **165** (1980), no. 1, 45-54. (Authors' summary) **80m:81094** 81G05
- Sil'nov, V. I. (with Zinov'ev, V. A.; Sukhov, Yu. M.) On some problems in the information theory and related areas. (Russian summary) *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* **7** (1978), no. 6, 407-427. (Michele Elia) **80i:94005** 94A15
- Sifrin, E. G. (with Kolosov, V. V.) Flow around a body with a formation of a fully developed stationary discontinuous region as  $Re \rightarrow \infty$ . (Russian) *Izv. Akad. Nauk SSSR Meh. Zhidk. Gaza* **1978**, no. 2, 28-37. (From the summary) **80k:76028** 76D15 (35K99)
- (with Šubnikov, G. V.) A numerical experiment for the solution of the Neumann problem and a problem with a directional derivative without fulfillment of solvability conditions. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **19** (1979), no. 2, 533-540, 560. (Authors' summary) **80k:65026** 65D30 (65R10)
- Sigal, I. M. (with Horwitz, L. P.) On a mathematical model for nonstationary physical systems. *Helv. Phys. Acta* **51** (1978), no. 5-6, 685-715 (1979). (Lawrence E. Thomas) **80j:81043** 81D99 (47A55)

- Sigala, Maria** (with Halatsis, Constantine; Philokyprou, George) Polylinear decomposition of synchronous sequential machines. *IEEE Trans. Comput.* **27** (1978), no. 12, 1144-1152. (A. T. Amin) **80f:68072** 68D37
- Siganov, I. S.** Some estimates of the accuracy of approximation in the multidimensional central limit theorem. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 3, 621-624. (V. J. Paulauskas) **80f:60029** 60F05 (60B12)
- Siggin, Eric D.** (with Kerr, Robert M.) Cascade model of fully developed turbulence. *J. Statist. Phys.* **19** (1978), no. 5, 543-552. (Author's summary) **80d:76045** 76F99 (35Q20)
- Sigmon, Kermit** On when a topologically simple semigroup is simple. *J. Austral. Math. Soc. Ser. A* **26** (1978), no. 1, 126-128. (Anne L. Hudson) **80b:22004** 22A15  
(with Misfeld, Jürgen) Completion of topological incidence groups. *J. Geom.* **11** (1978), no. 2, 150-160. (D. Klucký) **80b:51006** 51H10
- Sigmund, K.** (with Schuster, P.; Wolff, R.) Dynamical systems under constant organization. I. Topological analysis of a family of non-linear differential equations—a model for catalytic hypercycles. *Bull. Math. Biol.* **40** (1978), no. 6, 743-769. (C. P. Bruter) **80a:92026** 92A05 (58F99)  
(with Schuster, P.; Wolff, R.) On  $\omega$ -limits for competition between three species. *SIAM J. Appl. Math.* **37** (1979), no. 1, 49-54. (K. E. Swick) **80g:92029** 92A15 (58F13)
- Sigov, Ju. S.** (with Dorolkevič, A. G.; Kotok, È. V.; Novikov, I. D.; Poljudov, A. N.; Šandarin, S. F.) A two-dimensional model for the formation of the large-scale structure of the universe. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 83* (1978), 23 pp. (N. V. Micevič) **80c:83057** 83F05 (65P05)
- Sigrist, François** (with Suter, Ueli) On immersions  $CP^2 \rightarrow R^{4n-2n(n-1)}$ . *Algebraic topology (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 106-115, *Lecture Notes in Math.*, **673**, Springer, Berlin, 1978. (Oscar Burlet) **80g:57042** 57R42  
(with Suter, Ueli) On the exponent and the order of the groups  $\tilde{J}(x)$ . *Algebraic topology (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 116-122, *Lecture Notes in Math.*, **673**, Springer, Berlin, 1978. (Richard R. Patterson) **80d:55019** 55R40  
(with Lemaire, Jean-Michel) Dénombrement de types d'homotopie rationnelle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 3, A109-A112. (Authors' summary) **80a:55009** 55P62 (55P15)
- Siharulidze, T. D.** (with Melkadze, Z. A.) Calculation of multiwave shallow cylindrical covering shells weakened by a very small circular aperture. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* **92** (1978), no. 2, 377-380. (Authors' summary) **80g:73060** 73L99
- Šihor, S. B.** (with Anikin, A. A.; Popykin, A. I.) The stability of the solution of the spectral problem for a multi-group diffusion approximation of the transport equation. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 9, 1692-1695, 1725. (G. Lassner) **80b:82059** 82A70 (35B20)
- Šijački, Djordje** (with Ne'eman, Yuval) Unified affine gauge theory of gravity and strong interactions with finite and infinite  $GL(4, R)$  spinor fields. *Ann. Physics* **120** (1979), no. 2, 292-315. (M. Carmeli) **80b:81060** 81G20 (22E70, 81C40)  
(with Ne'eman, Yuval) Gravitational interaction of hadrons and leptons: linear (multiplicity-free) bandor and nonlinear spinor unitary irreducible representations of  $SL(4, R)$ . *Proc. Nat. Acad. Sci. U.S.A.* **76** (1979), no. 2, 561-564. (Authors' summary) **80d:81149** 81M05 (22E45)
- Sikder, M. K.** (with Rudra, P.) Group theoretical analysis of second-order phase transitions in magnetic structures. *J. Math. Phys.* **20** (1979), no. 7, 1579-1592. (R. L. Ingraham) **80f:81117** 81G50 (20C35)
- Sikvie, P.** (with Weiss, Nathan) Static sources in classical Yang-Mills theory. *Phys. Rev. D* (3) **20** (1979), no. 2, 487-490. (Authors' summary) **80a:81137** 81E99 (53C05)  
Instability of abelian field configurations in Yang-Mills theory. *Phys. Rev. D* (3) **20** (1979), no. 4, 877-880. (P. K. Smer) **80b:81085** 81E10 (53C05)
- Sikkema, P. C.** Approximation formulae of Voronovskaya-type for certain convolution operators. *J. Approx. Theory* **26** (1979), no. 1, 26-45. (Z. Ditzian) **80b:41018** 41A35  
(with van der Meer, P. J. C.) The exact degree of local approximation by linear positive operators involving the modulus of continuity of the  $p$ th derivative. *Nederl. Akad. Wetensch. Indag. Math.* **41** (1979), no. 1, 63-76. (Z. Ditzian) **80b:41010** 41A36  
On the exact degree of local approximation with convolution operators. *Nederl. Akad. Wetensch. Indag. Math.* **41** (1979), no. 3, 337-351. (G. Mühlbach) **80j:41033** 41A35 (41A25)
- Siklos, Stephen T. C.** (with Debney, George; Fairchild, Edward E., Jr.) Equivalence of vacuum Yang-Mills gravitation and vacuum Einstein gravitation. *Gen. Relativity Gravitation* **9** (1978), no. 10, 879-887. (C. V. Vishveshwara) **80g:83012** 83C35 (53B50, 83D05)
- Sikola, Břetislav** See **Pill, Milan**, **80j:01033**
- Sikoparija, V.** Variational description of nonstationary heat transfer phenomena. *Z. Angew. Math. Mech.* **58** (1978), no. 7, T399-T401. (Author's introduction) **80c:80006** 80A20
- Sikorski, Krzysztof** A three-dimensional analogue to the method of bisections for solving nonlinear equations. *Math. Comp.* **33** (1979), no. 146, 722-738. (From the summary) **80i:65058** 65H10
- Silaev, N. V.** (with Madorskii, V. M.) A hyperlinear process for the solution of nonlinear equations. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1978**, no. 5, 46-50, 142. (B. T. Poljak) **80b:65080** 65J15 (47H17)  
(with Madorskii, V. M.) Determination of an initial approximation for a superlinear process. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 3, 16-20, 140. (C. Ilioi) **80b:65043** 65H05
- Silava, E. A.** Representability of complete equations of fourth and fifth nomographic order with four and five variable nomograms from aligned points. (Russian) *Nomography collection*, No. 12 (Russian), pp. 59-65, 113, *Akad. Nauk SSSR, Vyčisl. Cent., Moscow*, 1978. (Author's summary) **80g:65135** 65S05
- Silbergeld, Sam** (with Smith, Paul J.; Rae, Donald S.; Manderscheid, Ronald W.) Exact and approximate distributions of the chi-square statistic for equiprobability. *Comm. Statist. B—Simulation Comput.* **8** (1979), no. 2, 131-149. (Authors' summary) **80c:62023** 62E15 (62G10)
- Silberger, Allan J.** Isogeny restrictions of irreducible admissible representations are finite direct sums of irreducible admissible representations. *Proc. Amer. Math. Soc.* **73** (1979), no. 2, 263-264. (G. I. Ol'sanskii) **80f:22017** 22E50
- Silberger, D. M.** (with Ehrenfeucht, Andrzej) Periodicity and unbordered segments of words. *Discrete Math.* **26** (1979), no. 2, 101-109. (Authors' summary) **80c:68175** 68E99
- Silbermann, Bernd** (with Proßdorf, Siegfried) Gestörte Projektionsverfahren und einige ihrer Anwendungen. (English summary) *Theory of nonlinear operators (Proc. Fifth Internat. Summer School, Central Inst. Math. Mech. Acad. Sci. GDR, Berlin, 1977)*, pp. 229-237, *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1978, 6, Akademie-Verlag, Berlin, 1978. (Authors' summary) **80c:65041** 65D32 (45L10)  
Zur Berechnung von Toeplitz-Determinanten, die durch eine Klasse im wesentlichen beschränkter Funktionen erzeugt werden. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* **20** (1978), no. 6, 683-687. (G. M. Gubreev) **80j:47043** 47B35  
See also **Mihlin, S. G.**, **80b:35001**
- Silberschatz, Abraham** (with Akkoyunlu, Eralp A.; Bernstein, Arthur J.; Schneider, Fred B.) Conditions for the equivalence of synchronous and asynchronous systems. *IEEE Trans. Software Engrg.* **4** (1978), no. 6, 507-516. (Authors' summary) **80a:68006** 68B05  
(with Kedem, Zvi M.) Consistency in hierarchical database systems. *J. Assoc. Comput. Mach.* **27** (1980), no. 1, 72-80. (Authors' summary) **80m:68027** 68B15
- Sil'chenko, Ju. T.** An evolutionary equation with an operator that generates a nonanalytic semigroup. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 2, 363-366, 384. (C. Corduneanu) **80b:34075** 34G10
- Šilvskii, È. K.** Principles of dynamical classification of stochastic processes and systems. (Russian. Lithuanian and English summaries) *Statist. Problemy Upravlennija—Trudy Sem. Processy Optimal. Upravlennija V Sekcija No. 28* (1978), 138 pp. (Z. A. Piranavič) **80c:62068** 62M99 (62H30)
- Šil'vay, Miroslav** A condition equivalent to the existence of non-equilibrium entropy and temperature for materials with internal variables. *Arch. Rational Mech. Anal.* **68** (1978), no. 4, 299-332. (J. A. König) **80b:82037** 82A35 (58F20)  
How many constitutive functions are necessary to determine a thermoelastic material? *Czechoslovak J. Phys. B* **29** (1979), no. 9, 981-996. (R. L. Fosdick) **80f:73002** 73B05 (73U05)
- Silhol, R.** Nullité de certains groupes de cohomologie des variétés sur un corps non algébriquement clos. (English summary) *Boll. Un. Mat. Ital. A* (5) **16** (1979), no. 3, 484-492. (Margherita Galbiati) **80m:14013** 14F25 (14G30)
- Silla, V. P.** (with Andreev, N. E.; Stenčikov, G. L.) A numerical method for the solution of a system of Vlasov equations that is based on a combination of the method of particles in a cell and the water bag method. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **19** (1979), no. 1, 165-173, 270. (Authors' summary) **80d:82048** 82A45 (65P05)
- Sillo, Charles B., Jr.** An efficient simplex coverability algorithm in  $E^2$  with application to stochastic sequential machines. *IEEE Trans. Comput.* **28** (1978), no. 2, 109-120. (Wolfgang Boehm) **80d:68069** 68D25 (05B40, 68C05)
- Šiljak, D. D.** (with Krtolica, R.) Suboptimality of decentralized stochastic control and estimation. *IEEE Trans. Automat. Control* **25** (1980), no. 1, 76-83. (Authors' summary) **80m:93083** 93E10  
(with Ikeda, Masao) Decentralized stabilization of linear time-varying systems. *IEEE Trans. Automat. Control* **25** (1980), no. 1, 106-107. (Authors' summary) **80m:93069** 93D99
- Sillman, Sherwood D.** On complete semicardinal quadrature formulae. *Comput. Math. Appl.* **5** (1979), no. 1, 41-49. (C. de Boor) **80g:65028** 65D32
- Sills, David L.** See *Encyclopedia: Statistics*, **80b:62001a**
- Šil'man, S. V.** ★Метод произвольных функций в теории динамических систем. (Russian) [The generating function method in the theory of dynamical systems] Теоретические Основы Технической Кибернетики. [Series in Theoretical Foundations of Engineering Cybernetics] "Nauka", Moscow, 1978, 335 pp. (Josef Kaška) **80f:93052** 93C99 (34Cxx, 94C05)
- Šil'nikov, L. P.** Bifurcation theory of dynamical systems with homoclinic Poincaré curves. (Russian) VII. Internationale Konferenz über Nichtlineare Schwingungen (Berlin, 1975), Band 1, Teil 2, pp. 279-293, *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977, 4, Akademie-Verlag, Berlin, 1977. (J. S. Joel) **80d:58048** 58F14 (28D20, 34C40)  
(with Afraimovič, V. S.) The ring principle in problems of interaction between two self-oscillating systems. *Prikl. Mat. Meh.* **41** (1977), no. 4, 618-627 (Russian); translated as *J. Appl. Math. Mech.* **41** (1977), no. 4, 632-641 (1978). (L. A. Bunimovich) **80k:70019** 70G99 (34C35, 58F13)  
(with Luk'janov, V. I.) Some bifurcations of dynamical systems with homoclinic structures. (Russian) *Dokl. Akad. Nauk SSSR* **243** (1978), no. 1, 26-29. (S. Ju. Piljugin) **80d:58046** 58F14
- Šilo, V. P.** Application of stochastic programming methods in problems of the control of diffusion processes. (Russian. English summary) *Kibernetika (Kiev)* **1978**, no. 5, 92-95. (Author's summary) **80a:93205** 93E20
- Silva, A. M.** (with Navaza, J.) A geometrical approach to solving crystal structures. *Acta Cryst. Sect. A* **35** (1979), no. 2, 266-275. (Authors' summary) **80b:82054** 82A60 (51F15)
- da Silva, Clóvis P.** See **Pereira da Silva, Clóvis**
- da Silva, Eurípedes Alves** (with Volpe, Celso; Azevedo, Paulo Roberto F.) Contact equivalence. (Portuguese. English summary) *Naturalia* **4** (1978), 45-53. (Felice Ronga) **80k:58026** 58C27 (57R45)
- dias da Silva, J. A.** See **Dias da Silva, J. A.**
- Silva, M.** (with David, René) Synthèse programmée des automatismes logiques décrits par réseaux de Petri: Une méthode de mise en oeuvre sur microcalculateur. (English summary) *RAIRO Automat.* **13** (1979), no. 4, 369-393. (Authors' summary) **80j:68021** 68B20 (68D90)
- da Silva, M. R. J.** (with Ortiz, E. L.) Polynomial approximations of shapes based on condensed representations of Bernstein polynomials in one and several variables. *Multivariate approximation (Sympos., Univ. Durham, Durham, 1977)*, pp. 155-167, Academic Press, London, 1978. (C. Dierieck) **80j:41012** 41A10
- crespo da Silva, M. R. M.** See **Crespo da Silva, M. R. M.**
- da Silva, W. M.** (with Som, M. M.) The singularity in axially symmetric fields. *J. Phys. A*



- 12 (1979), no. 7, 1029-1035. (R. Behari) **80h:33025** 83C50 (53B50)
- da Silva Maia, Ena (with Kerner, Richard) Sur le tenseur d'énergie et le champ gravitationnel du monopole magnétique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 2, A83-A86. (Authors' summary) **80m:33022** 83C50
- Silveira, H. M. (with Landau, Ioan Doré) A stability theorem with applications to adaptive control. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 305-312. (Authors' summary) **80h:93113** 93D05
- Silveira, J. M. (with Landau, Ioan Doré) Une nouvelle méthode pour la synthèse des systèmes adaptatifs avec modèle de référence. (English summary) *RAIRO Automat.* 13 (1979), no. 1, 39-56, ii. (Authors' summary) **80c:93074** 93C40 (93D05)
- Silver, Edward A. (with McGillivray, A. Russell) Some concepts for inventory control under substitutable demand. (French summary) *INFOR—Canad. J. Oper. Res. Inform. Process.* 16 (1978), no. 1, 47-63. (Authors' summary) **80i:90049** 90B05
- Silver, R. S. Coupling and uncoupling in irreversible thermodynamics. *J. Phys. A* 12 (1979), no. 6, L141-L145. (Author's summary) **80c:80007** 80A20
- Silverman, Bernard Choosing the window width when estimating a density. *Biometrika* 65 (1978), no. 1, 1-11. (Paul Deheuvels) **80c:62055** 62G05
- (with Brown, Tim) Short distances, flat triangles and Poisson limits. *J. Appl. Probab.* 15 (1978), no. 4, 815-825. (Norman Kaplan) **80c:60042** 60F05
- Silverman, Herb (with Silvia, Evelyn Marie; Telage, Donald) Convolution conditions for convexity starlikeness and spiral-likeness. *Math. Z.* 162 (1978), no. 2, 125-130. (William T. Sledd) **80i:30025** 30C45
- (with Silvia, Evelyn Marie; Telage, Donald) Locally univalent functions and coefficient distortions. *Pacific J. Math.* 77 (1978), no. 2, 533-539. (D. M. Campbell) **80c:30013** 30C45
- Subclasses of starlike functions. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 7, 1093-1099. (S. K. Bajpai) **80g:30009** 30C45
- (with Silvia, Evelyn Marie) Prestarlike functions with negative coefficients. *Internat. J. Math. Math. Sci.* 2 (1979), no. 3, 427-439. (T. H. MacGregor) **80i:30024** 30C45
- (with Telage, Donald) Extreme points of subclasses of close-to-convex functions. *Proc. Amer. Math. Soc.* 74 (1979), no. 1, 59-65. (Louis Brickman) **80c:30012** 30C45
- Silverman, L. M. Comments on: "Stable proper  $n$ -th order inverses" [IEEE Trans. Automat. Control 23 (1978), no. 6, 1104-1106; MR 58 #26408] by P. J. Antsaklis. With a reply by Antsaklis. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 673-674. (Authors' summary) **80h:93049** 93D99
- Silverman, Mark P. Gravitational deflection of relativistic massive particles. *Amer. J. Phys.* 48 (1980), no. 1, 72-78. (Author's summary) **80i:83003** 83B05
- Silverman, Richard A. See Pogorelov, A. V., **80i:53066**; Sprindžuk, Vladimir G., **80k:10048** and Borisenco, A. I.; et al., **80m:15020**
- Silverman, Ruth (with Bumbly, R.; Fisher, R.; Levinson, H.) Topologies on finite sets. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 163-170. *Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978*. (N. Hadžiivanov) **80h:05008** 05A99 (54A10)
- Silverstein, Martin L. Application of the sector condition to the classification of sub-Markovian semigroups. *Trans. Amer. Math. Soc.* 244 (1978), 103-146. (M. Fukushima) **80c:60090** 60J50
- (with Bender, Carl M.; Cooper, Fred; Guralnik, G. S.; Sharp, David H.; Roskies, Ralph) Multilegged propagators in strong-coupling expansions. *Phys. Rev. D* 3 (1979), no. 6, 1374-1385. (A. Rouet) **80i:81040** 81E15
- (with Monrad, Ditlev) Stable processes: sample function growth at a local minimum. *Z. Wahrsch. Verw. Gebiete* 49 (1979), no. 2, 177-210. (Bert Fristedt) **80i:60102** 60J30
- Silvert, William Anomalous enhancement of mean population levels by harvesting. *Math. Biosci.* 42 (1978), no. 3-4, 253-256. (P. D. M. Macdonald) **80c:92039** 92A15
- Symmetric summation: a class of operations on fuzzy sets. *IEEE Trans. Systems Man Cybernet.* 9 (1979), no. 10, 657-659. (Milan Mareš) **80c:03059** 03E72 (94D05)
- Silverton, J. V. On the generation of "magic integers". *Acta Cryst. Sect. A* 34 (1978), no. 4, 634. (Helman R. P. Ferguson) **80a:10048** 10F10 (65C10, 82A60)
- Silverstri, Richard Simple groups of finite order in the nineteenth century. *Arch. Hist. Exact Sci.* 20 (1979), no. 3-4, 313-356. (Peter M. Neumann) **80k:01039** 01A55 (20-03)
- Silvestrov, D. S. The renewal theorem in the scheme of series. II. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist.* No. 20 (1979), 97-116, 158. (John C. Wierman) **80g:60092** 60K05
- (with Tursunov, G. T.) General limit theorems for sums of controlled random variables. II. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist.* No. 20 (1979), 116-126, 158. (Serban Grigorescu) **80d:60030** 60F05 (60K15)
- Remarks on the weak limit of a superposition of asymptotically independent random functions. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 1, 150-155. (G. K. Eagleson) **80c:60043** 60F05
- (with Kaplan, E. I.) Theorems of invariance principle type for recurrent semi-Markov processes with an arbitrary phase space. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 3, 529-541. (Gh. Oprisan) **80h:60108** 60K15 (60F17)
- Silvestrov, V. V. (with Čibrikova, L. I.) On the question of the effectiveness of the solution of Riemann's boundary value problem for automorphic functions. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* 1978, no. 12, 117-121. (P. Ju. Alekna) **80j:30058** 30E25
- Silvey, S. D. ★Wnioskowanie statystyczne. (Polish) [Statistical inference] Translated from the English by Ryszard Zieliński. Państwowe Wydawnictwo Naukowe (PWN), Warsaw, 1978. 254 pp. (Editors) **80h:62001** 62-01
- Optimal design measures with singular information matrices. *Biometrika* 65 (1978), no. 3, 553-559. (J. Kiefer) **80c:62092** 62K05
- Silvia, Evelyn Marie (with Silverman, Herb; Telage, Donald) Convolution conditions for convexity starlikeness and spiral-likeness. *Math. Z.* 162 (1978), no. 2, 125-130. (William T. Sledd) **80i:30025** 30C45
- (with Silverman, Herb; Telage, Donald) Locally univalent functions and coefficient distortions. *Pacific J. Math.* 77 (1978), no. 2, 533-539. (D. M. Campbell) **80c:30013** 30C45
- (with Silverman, Herb) Prestarlike functions with negative coefficients. *Internat. J. Math. Math. Sci.* 2 (1979), no. 3, 427-439. (T. H. MacGregor) **80i:30024** 30C45
- A note on special classes of  $p$ -valent functions. *Rocky Mountain J. Math.* 9 (1979), no. 2, 365-370. (W. C. Royster) **80c:30013** 30C45
- Simader, Christian G. (with Louhivaara, Ippo Simo) Fredholmische verallgemeinerte Dirichletprobleme für koerzitive lineare partielle Differentialoperatoren. *Proceedings of the Rolf Nevanlinna Symposium on Complex Analysis (Math. Res. Inst., Univ. Istanbul, Silivri, 1976)*, pp. 47-57. *Publ. Math. Res. Inst. Istanbul, 7, Univ. Istanbul, Istanbul, 1978*. (A. Haimovici) **80i:35038** 35E20
- (with Louhivaara, Ippo Simo) Über periodische Lösungen koerzitiver linearer partieller Differentialgleichungen. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 1, 87-108. (Howard A. Levine) **80h:35006** 35B10 (35H05)
- Simarov, V. L. (with Artjuhina, Ju. P.; Kargu, L. I.) ★Системы управления космических аппаратов, стабилизированных вращением. (Russian) [Control systems for satellites stabilized by rotation] "Nauka", Moscow, 1979. 295 pp. (Vadim Komkov) **80g:93044** 93C22 (70E05)
- Šimanič, Čestmír de Bruijn cycles and their application for encoding of discrete positions. *Kybernetika (Prague)* 14 (1978), no. 6, 408-420. (Ian Blake) **80c:05073** 05C38 (94B99)
- Šimanov, S. N. (with Kazeeva, N. I.) A study of the stability of systems of difference equations in the critical case of one as a double root. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* 1977, no. 12(187), 23-28. (K. Lajkó) **80g:39003** 39A11
- Šimeľ, O. V. (with Potapov, S. V.) Factorization of games. (Russian) *Mathematical models of behavior*, No. 3 (Russian), pp. 53-67, 87. *Saratov. Gos. Univ., Saratov, 1978*. (M. Mañas) **80i:90110** 90D10
- See also Mathematical models of behavior, **80i:90152**
- Šimeš, Česlovas Bayesian and minimax solution of a hypothesis testing problem. (Russian. Lithuanian and English summaries) *Mat. Metody v Social. Nauk.—Trudy Sem. Procsessy Optimal. Upravleniya II Sekciya* No. 10 (1978), 87-106, 123. (P. Neumann) **80c:62056** 62L10 (62F15)
- Simeone, B. (with Hammer, Peter L.; Ibaraki, Toshihide) Degree sequences of threshold graphs. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 329-355. *Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978*. (M. C. Golumbic) **80j:05088** 05C50 (05C35, 68E10, 94C15)
- Simeonova, D. M. On the stability of the zero solution of a system of two nonlinearly coupled harmonic oscillators. (Bulgarian. Russian and English summaries) *Godišnik Visl. Učebn. Zaved. Priložna Mat.* 13 (1977), no. 3, 59-70 (1978). (Author's summary) **80j:34063** 34D20 (70K20)
- On the stability of the zero solution of a class of nonlinear autonomous systems. (Bulgarian. Russian and English summaries) *Godišnik Visl. Učebn. Zaved. Priložna Mat.* 13 (1977), no. 3, 71-82 (1978). (Author's summary) **80j:34064** 34D20 (93D05)
- (with Čelankov, B.) On the stability of a class of mechanical systems. (Bulgarian. Russian and English summaries) *Godišnik Visl. Učebn. Zaved. Priložna Mat.* 13 (1977), no. 3, 83-94 (1978). (Authors' summary) **80j:34056** 34D20 (70K20)
- Simeonova, Ju. S. (with Marčenko, V. M.; Moskovska, B. P.) Pointwise controllability of systems with after effect. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 7, 1324-1327, 1343-1344. (A. A. Martiniuk) **80c:93046** 93C05
- Simha, R. R. Algebraic varieties bihomomorphic to  $C^* \times C^*$ . *Tōhoku Math. J. (2)* 30 (1978), no. 3, 455-461. (D. Sundararaman) **80i:14024** 14J25 (32J05)
- Simić, Slobodan K. (with Akiyama, Jin; Kaneko, Kimiko) Graph equations for line graphs and  $n$ -th power graphs. I. *Publ. Inst. Math. (Beograd)* (N.S.) 23(37) (1978), 5-8. (M. Aigner) **80c:05106** 05C99
- (with Cvetković, Dragoš M.) Graphs which are switching equivalent to their line graphs. *Publ. Inst. Math. (Beograd)* (N.S.) 23(37) (1978), 39-51. (M. E. Watkins) **80c:05108** 05C99
- On the decomposition of the line (total) graphs with respect to some binary operations. *Publ. Inst. Math. (Beograd)* (N.S.) 24(38) (1978), 163-172. (Geoffrey Exoo) **80m:05099** 05C99
- (with Cvetković, Dragoš M.) A bibliography of graph equations. *J. Graph Theory* 3 (1979), no. 4, 311-324. (Geoffrey Exoo) **80j:05054** 05Cxx (00A15)
- Šimier, G. V. Pursuit game with infinite linear sequential decisions on the field of  $E$ . (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 6, 49-53. (V. G. Ramm) **80i:90171** 90D26
- Simionescu, C. (with Cocan, A.; Pitiș, Gh.) Groupes discrets complets de certains groupes  $G_4$  résolubles. (Romanian summary) *Bul. Univ. Braşov Ser. C* 19 (1977), 65-70 (1978). (V. Oproiu) **80h:22015** 22E40
- (with Simionescu, Claudia Lidia) Complex analysis methods in control theory. (Romanian summary) *Bul. Univ. Braşov Ser. C* 19 (1977), 71-88 (1978). (L. Mikolajczyk) **80j:93062** 93C20 (49A22)
- Simionescu, Claudia Lidia Formal solutions in optimal control. *Math. Balkanica* 6 (1976), 218-226 (1978). (Klaus Glaschoff) **80h:49012** 49B22
- Note on a differential inequality. (Romanian summary) *Bul. Univ. Braşov Ser. C* 19 (1977), 57-60 (1978). (Author's introduction) **80i:35025** 35B99 (35R45)
- Optimal control problems in distributions. (Romanian summary) *Bul. Univ. Braşov Ser. C* 19 (1977), 61-64 (1978). (John M. Ball) **80d:49005** 49A27
- (with Simionescu, C.) Complex analysis methods in control theory. (Romanian summary) *Bul. Univ. Braşov Ser. C* 19 (1977), 71-88 (1978). (L. Mikolajczyk) **80j:93062** 93C20 (49A22)
- Control for an hereditary system. *Math. Comput. Simulation* 21 (1979), no. 2, 178-181. (G. J. Olsder) **80h:92018** 92A15 (45J05, 49B10)
- See also Systems theory, **80m:93002**
- Simirad, Constantin Sur les solutions périodiques et presque-périodiques des équations différentielles du premier ordre. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 24 (1978), no. 1, 51-56. (Robert Faure) **80d:34053** 34C27
- Sur les solutions périodiques et presque-périodiques des systèmes d'équations différentielles non-linéaires du premier ordre. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 24 (1978), no. 2, 299-305. (N. Chafee) **80j:34046** 34C27
- Simis, Aron ★Introdução à álgebra. (Portuguese) [Introduction to algebra] Second edition. *Monografias de Matemática [Mathematical Monographs]*, 23. Instituto de

- Matemática Pura e Aplicada**, Rio de Janeiro, 1977. iii + 127 pp. (Editors) **80b:00002**  
**80A05**
- Rationality criteria for algebraic varieties of dimension  $\leq 3$ . (Portuguese)  
*Proceedings of the Ninth Brazilian Mathematical Colloquium* (Poços de Caldas, 1973), Vol. I (Portuguese), pp. 21–30, *Inst. Mat. Pura Apl.*, São Paulo, 1977. (J. S. Joel) **80b:14055** 14M20 (14E40, 14J30)
- A note on the Kozul homology of ordinary singularities. *Bol. Soc. Brasil. Mat.* **8** (1977), no. 2, 149–159. (Joel Roberts) **80b:14023** 14H20
- Kozul homology and its syzygy-theoretic part. *J. Algebra* **55** (1978), no. 1, 28–42. (D. Kirby) **80b:13011** 13D25 (14B05, 14H20)
- Šimjalis, Česlovas** See **Šimella, Česlovas**
- Simjatic, I. L.** Gibbs states in the case of classic representation of quantum spin systems. (Russian. English summary) *Teoret. Mat. Fiz.* **39** (1979), no. 3, 429–430. (Author's summary) **80b:82023** 82A15
- Simmons, James G.** Surfaces with metric and curvature tensors that depend on one coordinate only are general helicoids. *Quart. Appl. Math.* **37** (1979/80), no. 1, 82–85. (P. E. Markov) **80b:53000** 53A05
- Simmons, Gustavus J.** Computational complexity and asymmetric encryption. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing* (Univ. Manitoba, Winnipeg, Man., 1978), pp. 65–93, *Congress. Numer., XXII, Utilitas Math.*, Winnipeg, Man., 1979. (From the introduction and summary) **80b:68017** 68B15 (68C25, 94B99)
- (with Ehrenfeucht, Andrzej; Faber, V.) Projective designs. *Ars Combin.* **7** (1979), 205–219. (R. W. Quackenbush) **80b:05015** 05B05
- (with Wetzel, John E.) A two-coloring inequality for Euclidean two-arrangements. *Proc. Amer. Math. Soc.* **77** (1979), no. 1, 124–127. (G. L. Alexanderson) **80b:51009** 51M20 (05C15)
- Simmons, H. E.** A framework for topology. *Logic Colloquium '77* (Proc. Conf., Wrocław, 1977), pp. 239–251, *Studies in Logic and Foundations of Math.*, **96**, North-Holland, Amsterdam, 1978. (H. Herrlich) **80b:06008** 06B30 (18B30)
- Simmons, L. M., Jr.** (with Nieto, Michael Martin) Limiting spectra from confining potentials. *Amer. J. Phys.* **47** (1979), no. 7, 634–635. (Authors' summary) **80b:81012** 81C05 (47A10)
- (with Nieto, Michael Martin) Eigenstates, coherent states, and uncertainty products for the Morse oscillator. *Phys. Rev. A* (3) **19** (1979), no. 2, 438–444. (Authors' summary) **80b:81013** 81C10 (47B99)
- (with Nieto, Michael Martin) Coherent states for general potentials. I. Formalism. *Phys. Rev. D* (3) **20** (1979), no. 6, 1321–1331. (Tuan W. Chen) **80b:81067a** 81G25 (22E70)
- (with Nieto, Michael Martin) Coherent states for general potentials. II. Confining one-dimensional examples. *Phys. Rev. D* (3) **20** (1979), no. 6, 1332–1341. (Tuan W. Chen) **80b:81067b** 81G25 (22E70)
- (with Nieto, Michael Martin) Coherent states for general potentials. III. Nonconfining one-dimensional examples. *Phys. Rev. D* (3) **20** (1979), no. 6, 1342–1350. (Tuan W. Chen) **80b:81067c** 81G25 (22E70)
- Simons, D. J.** Geometric quantization of symplectic manifolds. *Mathematical physics and physical mathematics* (Proc. Internat. Sympos., Warsaw, 1974), pp. 275–285, *Math. Phys. and Appl. Math.*, **2**, Reidel, Dordrecht, 1976. (Nigel B. Backhouse) **80b:50053** 58F06 (81C99)
- On the Schrödinger equation given by geometric quantisation. *Differential geometrical methods in mathematical physics, II* (Proc. Conf., Univ. Bonn, Bonn, 1977), pp. 351–356, *Lecture Notes in Math.*, **676**, Springer, Berlin, 1978. (Nicholas M. J. Woodhouse) **80b:81013** 81C05 (58F06)
- Slom, Carlos** Relative equilibrium solutions in the four-body problem. *Celestial Mech.* **18** (1978), no. 2, 165–184. (Author's summary) **80b:70020** 70F10 (58E05, 58F05)
- Simões-Pereira, J. M. S.** (with Palm, Christine) Edge sets of hypergraphs with a  $B_q$ -like property and partition numbers of graphs. *Combinatorics* (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II, pp. 793–804, *Colloq. Math. Soc. János Bolyai*, **18**, North-Holland, Amsterdam, 1978. (András Frank) **80b:05105** 05C65 (05A17)
- Locally  $k$ -degenerate graphs: a definition and two conjectures. *J. Reine Angew. Math.* **299/300** (1978), 80–83. (D. R. Lick) **80b:05173** 05C99
- Simojoki, Heikki** ★The history of geophysics in Finland 1828–1918. Translated from the Finnish by Peter Jones. The History of Learning and Science in Finland 1828–1918. *Societas Scientiarum Fennica, Helsinki*, 1978. 157 pp. (20 plates). *ISBN 951-653-078-8* (Petter Mäurup) **80b:01015** 01A55 (86–03)
- Chaljub-Simon, Alice** See **Chaljub-Simon, Alice**
- Simon, Barry** New rigorous existence theorems for phase transitions in model systems. *Statistical physics—"STATPHYS 13"* (Proc. Thirteenth IUPAP Conf. Statist. Phys., Technion—Israel Inst. Tech., Haifa, 1977), Part I, pp. 287–301, *Ann. Israel Phys. Soc.*, **2**, Hilger, Bristol, 1978. (Steven M. Moore) **80b:82022** 82A25 (34B25)
- Classical boundary conditions as a technical tool in modern mathematical physics. *Adv. in Math.* **30** (1978), no. 3, 268–281. (Gerhard Hegerfeldt) **80b:81046** 81C99 (35R99)
- (with Avron, J. E.; Herbst, I. W.) Separation of center of mass in homogeneous magnetic fields. *Ann. Physics* **114** (1978), no. 1–2, 431–451. (M. A. Rashid) **80b:81050** 81D05 (00A89)
- (with Fröhlich, Jürg; Israel, Robert B.; Lieb, Elliott H.) Phase transitions and reflection positivity. I. General theory and long range lattice models. *Comm. Math. Phys.* **62** (1978), no. 1, 1–34. (Gerhard Hegerfeldt) **80b:82061** 82A67
- (with Davies, E. Brian) Scattering theory for systems with different spatial asymptotics on the left and right. *Comm. Math. Phys.* **63** (1978), no. 3, 277–301. (J. Weidmann) **80b:81110** 81F99 (34B25, 47A40)
- (with Deift, P.; Hunziker, W.; Vock, E.) Pointwise bounds on eigenfunctions and wave packets in  $N$ -body quantum systems. IV. *Comm. Math. Phys.* **64** (1978/79), no. 1, 1–34. (Teruo Ikebe) **80b:81016** 81C05 (35P15, 81H05)
- (with Avron, J. E.; Herbst, I. W.) Schrödinger operators with magnetic fields. I. General interactions. *Duke Math. J.* **45** (1978), no. 4, 847–883. (Richard B. Lavine) **80b:35054** 35P25 (47F05, 81C05)
- (with Radin, Charles) Invariant domains for the time-dependent Schrödinger equation. *J. Differential Equations* **29** (1978), no. 2, 289–296. (Teruo Ikebe) **80b:35078** 35P25 (81C05)
- (with Lieb, Elliott H.) Monotonicity of the electronic contribution to the Born-Oppenheimer energy. *J. Phys. B* **11** (1978), no. 18, L537–L542. (Sandro Graffi) **80b:81000** 81G35 (82A05)
- ★Trace ideals and their applications. *London Mathematical Society Lecture Note Series*, **35**, Cambridge University Press, Cambridge-New York, 1979. viii + 134 pp. *ISBN 0-521-22286-9* (M. Demuth) **80b:47048** 47D25 (47A40, 81F99)
- (with Reed, Michael C.) ★Methods of modern mathematical physics. III. Scattering theory. *Academic Press [Harcourt Brace Jovanovich, Publishers]*, New York-London, 1979. xv + 463 pp. *ISBN 0-12-585004-2* (P. R. Chernoff) **80b:81005** 81F99
- (with Klaus, M.) Binding of Schrödinger particles through conspiracy of potential wells. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **30** (1979), no. 2, 83–87. (Marcel Cœ) **80b:81012** 81C05 (35P25)
- A remark on Dobrushin's uniqueness theorem. *Comm. Math. Phys.* **68** (1979), no. 2, 183–185. (Hans-Otto Georgii) **80b:82004** 82A05 (60K35)
- Phase space analysis of simple scattering systems: extensions of some work of Enss. *Duke Math. J.* **46** (1979), no. 1, 119–168. (James S. Howland) **80b:35081** 35P25 (78A45, 81F99)
- Kato's inequality and the comparison of semigroups. *J. Funct. Anal.* **32** (1979), no. 1, 97–101. (S. Kantorovitz) **80b:47036** 47D05 (81E05)
- (with Enss, Volker) Bounds on total cross sections in atom-atom and atom-ion collisions by geometric methods. *Phys. Rev. Lett.* **44** (1980), no. 5, 319–322. (Lawrence E. Thomas) **80b:81072** 81F15
- Simon, Carl P.** (with Saari, Donald G.) Effective price mechanisms. *Econometrica* **46** (1978), no. 5, 1097–1125. (J. A. Rickard) **80b:90011** 90A12
- Simon, Friedemann** (with Lippe, Wolfram) A formal notion for equivalence of ALGOL-like programs. *Transformations de programmes* (Proc. Third Internat. Sympos. Programming, Paris, 1978), pp. 141–158, *Dunod*, Paris, 1978. (From the summary) **80b:68014** 68B05
- (with Trademann, Peter) Eine Beziehung zwischen cons-freiem LISP und Stackautomaten. (English and Russian summaries) *Elektron. Informationsverarb. Kybernet.* **14** (1978), no. 12, 619–638. (Authors' summary) **80b:68136** 68C40 (68D35)
- Simon, Herbert A.** Fit, finite, and universal axiomatization of theories. *Philos. Sci.* **46** (1979), no. 2, 295–301. (Lawrence Sklar) **80b:03015** 03A05
- Simon, Iure** Limited subsets of a free monoid. 19th Annual Symposium on Foundations of Computer Science (Ann Arbor, Mich., 1978), pp. 143–150, *IEEE, Long Beach, Calif.*, 1978. (From the introduction) **80b:20072** 20M05
- (with Murty, U. S. R.) A  $\beta$ -function that is not a sum of rank functions of matroids. (French summary) *Problèmes combinatoires et théorie des graphes* (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 305–306, *Colloques Internat. CNRS*, **260**, CNRS, Paris, 1978. (Jeremy Dawson) **80b:05044** 05B35 (05B25)
- Some typical problems in graph theory. (Portuguese) *Proceedings of the Tenth Brazilian Colloquium* (Poços de Caldas, 1975), Vol. II (Portuguese), pp. 355–367, *Con. Nac. Desenvolvimento Ci. Tec., Inst. Mat. Pura Apl.*, Rio de Janeiro, 1978. (Editors) **80b:05047** 05Cxx
- Simon, Jacques** (with Pinzcon, Georges) Non-linear representations of inhomogeneous groups. *Lett. Math. Phys.* **2** (1977/78), no. 6, 499–504. (J. F. Cornwell) **80b:22018** 22E45 (81C40)
- Régularité de la solution d'une équation non linéaire dans  $\mathbb{R}^m$ . *Journées d'Analyse Non Linéaire* (Proc. Conf., Besançon, 1977), pp. 205–227, *Lecture Notes in Math.*, **665**, Springer, Berlin, 1978. (Wolf von Wahl) **80b:35035** 35D10 (35J60)
- Caractérisation d'espaces fonctionnels. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **15** (1978), no. 2, 687–714. (Alberto Torchinsky) **80b:46046** 46E35
- Écoulement d'un fluide non homogène avec une densité initiale s'annulant. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 15, A1009–A1012. (From the summary) **80b:76057** 76V05 (35Q99)
- Régularité de la composée de deux fonctions et applications. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **16** (1979), no. 2, 501–522. (J. Peetre) **80b:46045** 46E35 (35J99)
- (with Flato, Moshé) Yang-Mills equations are formally linearizable. *Lett. Math. Phys.* **3** (1979), no. 4, 279–283. (Authors' summary) **80b:81034** 81E10 (22E65)
- Simon, Jean-Claude** (with Quinection, Joël) Une technique de classification utilisant un balayage multidimensionnel de Peano. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 14, A655–A658. (Authors' summary) **80b:68109** 68G10
- Simon, Judit** (with Nemetz, Tibor O. H.) On estimating the entropy of written Hungarian by gambling technique. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes* (Prague, 1978), Vol. B, pp. 69–76, *Reidel, Dordrecht*, 1978. (Authors' summary) **80b:94032** 94A17
- Simon, P.** On the convergence of Vilenkin-Fourier series. Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* **33** (1979), no. 1–2, 189–196. (D. J. Eustice) **80b:42021** 42C15
- Simon, Petr** Divergent sequences in bicomplex. (Russian) *Dokl. Akad. Nauk SSSR* **243** (1978), no. 6, 1398–1401. (S. A. Peregrudov) **80b:54027** 54D30
- Left-separated spaces: a comment to a paper "Bicomplexa that are representable as the union of a countable number of left subspaces. I, II" (Russian). [Comment. Math. Univ. Carolin.] **20** (1979), no. 2, 361–379, 381–395; MR **80b:54029** by M. G. Tkačenko. *Comment. Math. Univ. Carolin.* **20** (1979), no. 3, 597–604. (V. V. Miškin) **80b:54008** 54A25 (54F05)
- Simon, Udo** (with Lange, Frieder-Jens) Eigenvalues and eigenfunctions of Riemannian manifolds. *Proc. Amer. Math. Soc.* **77** (1979), no. 2, 237–242. (Akira Asada) **80b:58053** 58G25 (53C25)
- Simionici, L.** (with Ciompi, P.) Analysis and optimal design of self-diagnosable systems with repair. *IEEE Trans. Comput.* **28** (1979), no. 5, 362–365. (Authors' summary) **80b:68004** 68A05 (68E10, 94C15)
- Simone, Joseph N.** Concerning hereditarily locally connected continua. *Colloq. Math.* **39** (1978), no. 2, 243–251. (T. Maćkowiak) **80b:54037** 54F25 (54D05, 54D10)
- Continuous images of ordered compacta and hereditarily locally connected continua. *Colloq. Math.* **40** (1978/79), no. 1, 77–84. (L. Skula) **80b:54028** 54D05 (54F05, 54F15)
- Suslinian images of ordered compacta and a totally nonmetric Hahn-Mazurkiewicz



- theorem. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 13(33) (1978), no. 2, 343-346. (M. M. McWaters) **80c:54036** 54F20 (54F05)
- Simonenko, I. B.** (with Kozak, A. V.) Projection methods for the solution of two-dimensional singular equations on a torus. (Russian) *Funktsional. Anal. i Prilozhen.* 12 (1978), no. 1, 74-75. (William L. Perry) **80c:47021** 47B35 (45E99)
- Application of the principle of minimization of areas to the approximate estimation of Christoffel-Schwarz constants. (Russian) *Izv. Severo-Kavkaz. Nauch. Centra Vysl. Shkoly Ser. Estestv. Nauk.* 1978, no. 3, 7-10, 116. (R. Kühnau) **80g:30004** 30C30 (30C20)
- Simoni, A.** (with Marmo, G.; Saletan, E. J.) A general setting for reduction of dynamical systems. *J. Math. Phys.* 20 (1979), no. 5, 856-860. (Mark Adler) **80c:58021** 58F05 (34C05, 70H10)
- (with Marmo, G.; Saletan, E. J.) Reduction of symplectic manifolds through constants of the motion. (Italian and Russian summaries) *Nuovo Cimento B* (11) 50 (1979), no. 1, 21-36. (Richard C. Swanson) **80f:70020** 70H99 (58F05)
- Simonov, M.** (with Füstös, László; Meszéna, György) Cluster analysis. (Hungarian. English and Russian summaries) *Szigma—Mat.-Közgazdasági Folyóirat* 10 (1977), no. 3, 111-148 (1978). (Authors' summary) **80a:62009** 62H30
- Simonnet, Michel** Éléments d'intégration sur les variétés. *Exposé mathématiques*, No. 30, Exp. No. 2, 45 pp., Univ. Amiens, Amiens, 1978. (Sadayuki Yamamoto) **80c:58008** 58C20
- Simonov, A. A.** A study of the bifurcations in certain dynamical systems by the methods of symbolic dynamics. (Russian) *Dokl. Akad. Nauk SSSR* 240 (1978), no. 6, 1297-1300. (L. A. Bunimovich) **80d:34056** 34C35 (58F12, 58F14)
- Simonov, I. V.** A moving load on a layer of an ideally contracting material. (Russian) *Ž. Prikl. Meh. i Tehn. Fiz.* 1979, no. 4, 145-155, 174. (Author's summary) **80k:73029** 73D99 (47H17)
- Simonov, R. O.** Computational arithmetic. (Russian) *Ideas of natural science in Old Russia* (Russian), pp. 63-73, "Nauka", Moscow, 1978. (E. M. Bruins) **80m:01019** 01A35
- Simonovits, András** Self- and social optimization in queues. *Studia Sci. Math. Hungar.* 11 (1976), no. 1-2, 131-138 (1978). (Wayne Winston) **80b:90068** 90B22 (60K25)
- Maximum convergence speed of decentralized control. (Hungarian. English and Russian summaries) *Szigma—Mat.-Közgazdasági Folyóirat* 11 (1978), no. 1-2, 49-67. **80a:90042** 90A16
- Norms, expectations and stability in a linear economy. (Hungarian. English and Russian summaries) *Szigma—Mat.-Közgazdasági Folyóirat* 12 (1979), no. 1-2, 31-56. (Author's summary) **80j:90060** 90B05
- Simonovits, Miklós** (with Sós, Vera T.) Intersection theorems for graphs. II. *Combinatorics* (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II, pp. 1017-1030, *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (Mikhail Deza) **80i:05062b** 05C38 (05C35)
- (with Sós, Vera T.) Intersection theorems for graphs. (French summary) *Problèmes combinatoires et théorie des graphes* (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 389-391, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Mikhail Deza) **80i:05062a** 05C38 (05C35)
- (with Bollobás, Béla; Erdős, Paul; Szemerédi, Endre) Extremal graphs without large forbidden subgraphs. Advances in graph theory (Cambridge Combinatorial Conf., Trinity Coll., Cambridge, 1977). *Ann. Discrete Math.* 3 (1978), 29-41. (Stefan A. Burr) **80a:05119** 05C35
- Simons, Barbara** A fast algorithm for single processor scheduling. *19th Annual Symposium on Foundations of Computer Science* (Ann Arbor, Mich., 1978), pp. 246-252, IEEE, Long Beach, Calif., 1978. (From the introduction) **80c:68080** 68C15 (68C25)
- Simons, D. A.** Scattering of SH waves by thin, semi-infinite inclusions. *Internat. J. Solids and Structures* 16 (1980), no. 2, 177-192. (Author's summary) **80k:73021** 73D15
- Simons, F. H.** (with Overdijk, D. A.) Recurrent and sweep-out sets for Markov processes. *Monatsh. Math.* 86 (1978/79), no. 4, 305-326. (Michael Lin) **80c:60082** 60J05
- Simons, James** (with Bourguignon, Jean-Pierre; Lawson, H. Blaine, Jr.) Stability and gap phenomena for Yang-Mills fields. *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 4, 1550-1553. (M. F. Atiyah) **80b:53028** 53B50 (58E20, 81E10)
- Simons, Leo** More logics without tautologies. *Notre Dame J. Formal Logic* 19 (1978), no. 4, 543-557. (Ayda I. Arruda) **80a:03014** 03B20
- Simons, Stephen** Variational inequalities via the Hahn-Banach theorem. *Arch. Math. (Basel)* 31 (1978/79), no. 5, 482-490. (J. Kyle) **80c:49007** 49A29
- Vector lattices and vector measures. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 7, 1101-1106. (Constantin Niculescu) **80d:46011** 46A40
- Simonovskiy, S. D.** A generalization of the concept of linear convexity. (Russian) *Izv. Vysl. Uchebn. Zaved. Matematika* 1978, no. 5(192), 142-144. (J. Lawrynowicz) **80f:32015** 32F99
- Simovici, Dan A.** Posets and free semigroups. *An. Stiint. Univ. "Al. I. Cuza" Iasi Sect. I a Mat. (N.S.)* 24 (1978), no. 1, 183-187. (T. S. Blyth) **80c:06006** 06A10 (20M05)
- Computing with scattered context grammars with regular restrictions. *Found. Control Engng.* 3 (1978), no. 4, 177-190 (1979). (Klaus Indermark) **80g:68099** 68F05
- (with Istrail, Sorin) Computing grammars and context-sensitive languages. (French summary) *RAIRO Inform. Théor.* 12 (1978), no. 1, 33-48, i. (Johnson M. Hart) **80d:68098** 68F05
- (with Grigoras, Gh.) Even initial feedback vertex set problem is NP-complete. *Inform. Process. Lett.* 8 (1979), no. 2, 64-66. (David A. Plaisted) **80b:68059** 68C25 (68E10)
- Simpson, D. C.** (with Lindfield, G. R.) Modifications of the continuation method for the solution of systems of nonlinear equations. *Internat. J. Math. Math. Sci.* 2 (1979), no. 2, 299-308. (Authors' summary) **80c:65055** 65H10
- Simpson, Henry C.** (with Cohen, Donald S.; Hagan, Patrick S.) Spatial structures in predator-prey communities with hereditary effects and diffusion. *Math. Biosci.* 44 (1979), no. 3-4, 167-177. (Authors' summary) **80c:92025** 92A15
- Simpson, Stephen G.** Basis theorems and countable admissible ordinals. *Colloque International de Logique* (Clermont-Ferrand, 1975), pp. 161-165, *Colloques Internat. CNRS*, 249, CNRS, Paris, 1977. (Stanley H. Stahl) **80d:03045** 03D60 (03E15)
- Short course on admissible recursion theory. *Generalized recursion theory, II* (Proc. Second Sympos., Univ. Oslo, Oslo, 1977), pp. 355-390, *Studies in Logic and Foundations of Math.*, 94, North-Holland, Amsterdam, 1978. (Anne Leggett) **80f:03049** 03D60
- Sims, Bralley** (with Giles, J. R.; Gregory, D. A.) Geometrical implications of upper semi-continuity of the duality mapping on a Banach space. *Pacific J. Math.* 79 (1978), no. 1, 99-109. (Mark A. Smith) **80b:46025** 46B20
- Sims, Charles C.** A method for constructing a group from a subgroup. *Topics in algebra* (Proc. 18th Summer Res. Inst., Austral. Math. Soc., Austral. Nat. Univ., Canberra, 1978), pp. 125-136, *Lecture Notes in Math.*, 697, Springer, Berlin, 1978. (Shui Chi Chang) **80c:20033** 20D50
- Sims, Craig S.** (with Asher, Robert B.) Optimal and suboptimal results in full- and reduced-order linear filtering. *IEEE Trans. Automat. Control* 23 (1978), no. 3, 469-472. (Authors' summary) **80a:93170** 93E11
- Sims, S. E.** A note on some convergence properties of spline functions. *Comput. Math. Appl.* 4 (1978), no. 3, 277-279. (C. A. Hall) **80d:65024** 65T07
- Simon, Daniel** On pure semi-simple Grothendieck categories. I. *Fund. Math.* 100 (1978), no. 3, 211-222. (Wolfgang Grözl) **80a:18008** 18E15
- (with Skowronski, A.) On the category of commutative connected graded Hopf algebras over a perfect field. *Fund. Math.* 101 (1978), no. 2, 137-149. (Bodo Pareigis) **80b:16019** 16A24 (14L15)
- (with Leszczyński, Zbigniew) On pure semisimple Grothendieck categories and the exchange property. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 1, 41-46. (Wolfgang Grözl) **80a:18016** 18E15
- Categories of representations of species. *J. Pure Appl. Algebra* 14 (1979), no. 1, 101-114. (V. Diab) **80b:18008** 18E15
- Sin, L. I.** Logical-term equivalent transformations of Janov schemes. (Russian) *Programmirovaniye* 1978, no. 6, 11-19, 95. (G. Mirkowska) **80c:68040** 68B10
- Sinai, Ja. G.** Mathematical foundations of the renormalization group method in statistical physics. *Mathematical problems in theoretical physics* (Proc. Internat. Conf., Univ. Rome, Rome, 1977), pp. 303-311, *Lecture Notes in Phys.*, 80, Springer, Berlin, 1978. (Michel Romero) **80f:82024** 82A15 (81E15)
- (with Hanin, K. M.) Existence of free energy for models with long-range random Hamiltonians. *J. Statist. Phys.* 20 (1979), no. 6, 573-584. (J. Fritz) **80g:82009** 82A05 (60C60)
- Sinai, F. R.** A homeomorphism classification of wildly imbedded two-spheres in  $S^2$ . *Pacific J. Math.* 77 (1978), no. 1, 255-271. (O. G. Harrold) **80a:57015** 57N12 (57M30, 57N40)
- Sinanjan, S. O.** The completeness of polynomials in the space  $L^p$ . (Russian) *Mat. Zametki* 24 (1978), no. 1, 73-83, 142. (V. V. Salauv) **80i:30011** 30B60 (30C10, 46E30)
- Sinanoglu, Oktay** (with Nathanson, Gilbert) The metric geometry of near equilibrium irreversible thermodynamics. *J. Chem. Phys.* 72 (1980), no. 5, 3127-3129. (Authors' summary) **80m:82028** 82A35
- Sinclair, Allan M.** Bounded approximate identities, factorization, and a convolution algebra. *J. Funct. Anal.* 29 (1978), no. 3, 308-318. (T. W. Palmer) **80c:46054** 46H05 (43A20)
- Cohen's factorization method using an algebra of analytic functions. *Proc. London Math. Soc.* (3) 39 (1979), no. 3, 451-468. (B. E. Johnson) **80m:46048** 46H25
- Sinclair, D. K.** (with Jones, D. R. T.; Kogut, John) Electrodynamics of the planar model: its phase diagram, continuum limit, and mass spectrum. *Phys. Rev. D* (3) 19 (1979), no. 6, 1882-1905. (Authors' summary) **80c:81109** 81L05
- Sinclair, G. B.** (with Dempsey, J. P.) On the stress singularities in the plane elasticity of the composite wedge. (French summary) *J. Elasticity* 9 (1979), no. 4, 373-391. (Authors' summary) **80k:73015** 73C45
- Sinclair, Marius** Augmented Lagrangean relaxations in general mixed integer programming. *Quaestiones Math.* 3 (1978/79), no. 2, 115-146. (Leon Cooper) **80c:90108** 90C10
- Sindermann, Peter** ★ Interpolation und Quadratur für Lebesgue-integrierbare Funktionen unter Verwendung von Intervallfunktionalen. Dissertation, Gesamthochschule Duisburg, Duisburg, 1979. *Gesamthochschule Duisburg, Duisburg*, 1979. iii + 79 pp. (From the text) **80j:65018** 65D32
- Sine, Robert** Structure and asymptotic behavior of abstract dynamical systems. *Nonlinear Anal.* 2 (1978), no. 1, 119-127. (L. Janos) **80d:54051** 54H20 (28C10, 47D05)
- (with Kreinović, V. Ja.) Remarks on billiards. *Amer. Math. Monthly* 86 (1979), no. 3, 204-206. (R. L. Adler) **80c:28021** 28D10 (52A20, 54H20, 58F15)
- On nonlinear contraction semigroups in sup norm spaces. *Nonlinear Anal.* 3 (1979), no. 6, 885-890. (G. F. Webb) **80c:47082** 47H10
- (with Jamison, Benton) Unique ergodicity for certain random translations. *Proc. Amer. Math. Soc.* 75 (1979), no. 1, 73-74. (Yves Derriennic) **80d:28027** 28C10 (60J15)
- (with Lin, Michael) A spectral condition for strong convergence of Markov operators. *Z. Wahrsch. Verw. Gebiete* 47 (1979), no. 1, 27-29. (Yves Derriennic) **80d:47010** 47A35 (60J05)
- (with Montgomery, John T.; Thomas, Edward) Some topological properties of weakly almost periodic mappings. *Topology Appl.* 11 (1980), no. 1, 69-85. (V. V. Obuhovskii) **80a:54078** 54H20 (47D05)
- Singelarov, V. M.** Synthesis of time-optimal control. (Russian) *Adapt. Sistemy Avtomat. Upravleniya* No. 7 (1979), 23-29, 127. (Author's summary) **80g:93058** 93C99 (49D07)
- Singai, M. K.** (with Arya, Shashi Prabha) A note on peripherally  $\mathbb{R}$ -paracompact spaces. *Kyungpook Math. J.* 18 (1978), no. 1, 99-104. (R. Hodel) **80a:54036** 54D18
- Singare, S. M.** (with Pachpatte, B. G.) On some discrete generalizations of an inequality of Gronwall. *Chinese J. Math.* 6 (1978), no. 2, 121-135. (E. F. Beckenbach) **80b:26025** 26D15
- (with Pachpatte, B. G.) Wendroff type discrete inequalities and their applications. *J. Math. Phys. Sci.* 13 (1979), no. 2, 149-167. (Ulrich Eichardt) **80c:65151** 65Q05
- Singatullin, R. S.** ★ Риманова геометрия и общая теория относительности. (Russian) (Riemannian geometry and general relativity) *Perm. Gos. Univ., Perm*, 1976. 143 pp. (Vadim Komkov) **80d:83034** 83C35
- (with Kuzeev, R. R.) The gravitational field of a charged massive body in a homogeneous and isotropic cosmological model. (Russian) *Gravitatsiya i Teor. Otноситel'nosti* No. 12 (1977), 148-152. (V. Ja. Kreinović) **80c:83011** 83C15 (53B50)
- Mapping the flow lines of a charged fluid in general relativity by the geodesic lines. (Russian) *Gravitatsiya i Teor. Otноситel'nosti* No. 12 (1977), 153-158. (J. Lawrynowicz) **80f:83014** 83C10

- Construction of a metric of Riemannian space-time according to the properties of probe particle motion. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 2, 320-323. (Olga M. Kiseleva) **80c:83004** 83B05 (53B50)
- Singer, Burton** (with Frydman, Halina) Total positivity and the embedding problem for Markov chains. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 2, 339-344. (Anthony G. Pakes) **80b:60090** 60J25
- Singer, David A.** (with Gluck, Herman) Scattering of geodesic fields. I. *Ann. of Math.* (2) 108 (1978), no. 2, 347-372. (John Bolton) **80c:53046** 53C20 (57R70)
- (with Gluck, Herman) Scattering of geodesic fields. II. *Ann. of Math.* (2) 110 (1979), no. 2, 205-225. (John Bolton) **80c:53073** 53C22 (58G99)
- Singer, I.** (with Bacopoulos, A.; Godini, G.) On best approximation in vector-valued norms. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976), Vol. I*, pp. 89-100. *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (Joseph M. Lambert) **80j:41053** 41A65
- On the Pontryagin maximum principle for constant-time linear control systems in Banach spaces. *J. Optim. Theory Appl.* 27 (1979), no. 2, 315-321. (Y. Cherruault) **80i:93042** 93C25
- Singer, Isadore** Some remarks on the Gribov ambiguity. *Comm. Math. Phys.* 60 (1978), no. 1, 7-12. (Judith M. Arms) **80d:53025** 53C05 (53C80, 58D05, 58D30, 81E99)
- (with Atiyah, Michael Francis; Hitchin, N. J.) Self-duality in four-dimensional Riemannian geometry. *Proc. Roy. Soc. London Ser. A* 362 (1978), no. 1711, 425-461. (J. H. Rawnsley) **80d:53023** 53C05 (53C25, 58A30, 58G10, 81C99)
- See also Kolata, Gina Bari, **80c:01056**
- Singer, Ivan** Some classes of nonlinear operators generalizing the metric projections onto Chebyshev subspaces. *Theory of nonlinear operators (Proc. Fifth Internat. Summer School, Central Inst. Math. Mech. Acad. Sci. GDR, Berlin, 1977)*, pp. 245-257. *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1978, 6, Akademie-Verlag, Berlin, 1978. (P. S. Kenderov) **80j:47089** 47H99 (41A65)
- On the distance of non-reflexive spaces to the collection of all conjugate spaces. *Bull. Austral. Math. Soc.* 18 (1978), no. 3, 461-464. (J. H. M. Whitfield) **80b:46031** 46B20
- Generalizations of methods of best approximation to convex optimization in locally convex spaces. II. Hyperplane theorems. *J. Math. Anal. Appl.* 69 (1979), no. 2, 571-584. (Vladimir L. Levin) **80m:41017** 41A50 (49A50, 49B27)
- Some new applications of the Fenchel-Rockafellar duality theorem: Lagrange multiplier theorems and hyperplane theorems for convex optimization and best approximation. *Nonlinear Anal.* 3 (1979), no. 2, 239-248. (Carl G. Looney) **80d:49006** 49A27 (49A50)
- (with Franchetti, Carlo) Deviation and farthest points in normed linear spaces. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 3, 373-381. (F. Deutsch) **80m:41023** 41A65
- Singer, Michael F.** The model theory of ordered differential fields. *J. Symbolic Logic* 43 (1978), no. 1, 82-91. (S. R. Kogalovskii) **80a:03044** 03C60 (12H05)
- Singh, B. P.** (with Singh, Kanahya L.) Quasiconvex mappings and common fixed points. *Mathematica (Cluj)* 20(43) (1978), no. 2, 199-207. (Heinrich Steinlein) **80b:47061** 47H09 (47H10)
- Singh, Bahadur** (with Sedransk, J.) Sample size selection in regression analysis when there is nonresponse. *J. Amer. Statist. Assoc.* 73 (1978), no. 362, 362-365. (David Bellhouse) **80a:62018** 62D05 (62F15, 62J05)
- Singh, Baidan** Projective motion in an  $n$ -dimensional special Kawaguchi space. *Indian J. Pure Appl. Math.* 10 (1979), no. 2, 183-190. (A. Kawaguchi) **80c:53031** 53B40
- Singh, Balwant** On two numerical criteria for normal flatness in codimension one. *Math. Nachr.* 83 (1978), 241-246. (G. B. Gurevič) **80j:14012** 14E15 (13H15)
- See also Abhyankar, Shrawan S., **80m:14016**
- Singh, Bhagat** On oscillation and asymptotic nonoscillation of functional retarded equations. *Studia Sci. Math. Hungar.* 10 (1975), no. 3-4, 355-363 (1978). (Curtis C. Travis) **80c:34111** 34K15
- Necessary and sufficient conditions for eventually vanishing oscillatory solutions of functional equations with small delays. *Internat. J. Math. Math. Sci.* 1 (1978), no. 3, 269-283. (V. Staiikos) **80c:34077** 34K15
- A correction to: "Forced oscillations in general ordinary differential equations with deviating arguments" [Hiroshima Math. J. 6 (1976), no. 1, 7-14; MR 53 #6054]. *Hiroshima Math. J.* 9 (1979), no. 1, 297-302. (K. Zima) **80b:34099** 34K15
- On slow oscillation and nonoscillation in retarded equations. *Internat. J. Math. Math. Sci.* 2 (1979), no. 3, 523-530. (Wadi Mahfoud) **80b:34100** 34K15
- Necessary and sufficient condition for maintaining oscillations and nonoscillations in general functional equations and their asymptotic properties. *SIAM J. Math. Anal.* 10 (1979), no. 1, 18-31. (M. K. Grammatikopoulos) **80b:34092** 34K15
- Singh, C.** A system of inequalities and nondifferentiable mathematical programming. *J. Optim. Theory Appl.* 27 (1979), no. 2, 291-299. (Siegfried Schaible) **80c:90102** 90C30
- Singh, D. B.** On the radius of univalence of some functions analytic in the unit disc. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 7, 1107-1114. (Carl P. McCarty) **80f:30011** 30C45
- Singh, Dinesh** (with Mishra, Babban Prasad) On  $A(R, \lambda, k)$  summability methods. *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 3-4, 170-174 (1978). (S. M. Mazhar) **80h:40004** 40G99
- Singh, Harshinder** The mixed semigroup relation. *Indian J. Pure Appl. Math.* 9 (1978), no. 4, 389-393. (A. B. Buche) **80a:47067** 47D05
- Singh, I. J.** (with Johri, V. B.; Goswami, G.) Spatially homogeneous and anisotropic expanding universe. *Acta Phys. Acad. Sci. Hungar.* 45 (1978), no. 4, 299-308 (1979). (Ilija Lukačević) **80g:83007** 83C15
- Singh, Ishwar** (with Sharma, Bhu Dev) On the entropy function of degree  $\beta$ . *Inform. Sci.* 18 (1979), no. 3, 213-221. (P. Kannappan) **80b:99010** 39B40 (94A17)
- (with Sharma, Bhu Dev) A new generalization of entropy and its characterization. *Kybernetika (Prague)* 15 (1979), no. 5, 366-375. (Authors' summary) **80j:94011** 94A17
- Singh, J.** (with Pandey, B. N.) Estimation of variance of normal population using prior information. *J. Indian Statist. Assoc.* 15 (1977), 141-150. (Authors' summary) **80d:62025** 62F10
- (with Pandey, M.) A note on testing mean of a normal population when variance is unknown. *J. Indian Statist. Assoc.* 16 (1978), 145-146. (Nanak Chand) **80j:62023** 62F03
- Singh, J. B.** (with Verma, B. G.) Propagation of magnetogasdynamical spherical shock waves in an exponential medium. *Astrophys. and Space Sci.* 63 (1979), no. 1, 253-259. (Giulio Mattei) **80g:85005** 85A30 (76W05)
- Singh, K. D.** (with Nigam, A.) On almost decomposable pair of scalar functions. *Math. Balkanica* 6 (1976), 230-236 (1978). (R. Roşca) **80j:53029** 53B30
- (with Srivastava, Ramesh Chandra) On  $p$ -analytic vectors. *Rev. Mat. Hisp.-Amer.* (4) 38 (1978), no. 2-3, 116-130. (Yoshio Matsuyama) **80c:53023** 53B35
- (with Singh, Rakeshwar) On almost para-contact metric manifolds with semisymmetric metric connections. *Demonstratio Math.* 12 (1979), no. 2, 331-341. (R. Roşca) **80k:53056** 53C15
- (with Kumar, Amod) On paracontact manifolds. *Demonstratio Math.* 12 (1979), no. 2, 351-357. (R. Roşca) **80k:53057** 53C15
- Singh, K. N.** (with Tripathi, L. M.) On the Nörlund summability of the conjugate derived series of the Fourier series. *Acta Cienc. Indica* 4 (1978), no. 4, 413-417. (L. Gogoladze) **80k:42015** 42A24
- Singh, K. P.** (with Goyal, V. B.) Maximum principles for a certain class of semilinear elliptic partial differential equations. *J. Math. Anal. Appl.* 69 (1979), no. 1, 1-7. (Moshe Marcus) **80g:35048a** 35J30 (35B50)
- (with Goyal, V. B.) Erratum: "Maximum principles for a certain class of semilinear elliptic partial differential equations" [J. Math. Anal. Appl. 69 (1979), no. 1, 1-7]. *J. Math. Anal. Appl.* 72 (1979), no. 2, 791. (Editors) **80g:35048b** 35J30
- Singh, K. R.** (with Mohan, C.) Nonradial oscillations of models of the generalized Roche series. *Astrophys. and Space Sci.* 64 (1979), no. 2, 467-479. (Authors' summary) **80j:85006** 85A15 (76N99)
- Singh, Kanahya L.** A fixed-point theorem for multivalued densifying mappings. *Mathematica (Cluj)* 20(43) (1978), no. 1, 71-75. (I. A. Rus) **80m:47057** 47H10
- (with Singh, B. P.) Quasiconvex mappings and common fixed points. *Mathematica (Cluj)* 20(43) (1978), no. 2, 199-207. (Heinrich Steinlein) **80b:47061** 47H09 (47H10)
- Construction of fixed points for densifying mappings. *Riv. Mat. Univ. Parma* (4) 4 (1978), 55-62 (1979). (V. V. Obuhovskii) **80i:47078** 47H09
- Fixed point iterations using infinite matrices. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 689-703. *Academic Press, New York*, 1979. (I. A. Rus) **80g:47069** 47H10
- Fixed points for generalized contraction mappings. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 3, 297-305. (I. A. Rus) **80m:47058** 47H10
- Singh, Kuldeep** Equivalence classes of the 3rd Grassmann space over a 5-dimensional vector space. *Internat. J. Math. Math. Sci.* 1 (1978), no. 3, 297-305. (Samuel A. Ilon) **80j:14046** 14M15
- (with Gupta, Hansraj) The largest  $r$  for which  $(n+k)!/n!(k+r)!$  is an integer. *Indian J. Pure Appl. Math.* 10 (1979), no. 10, 1249-1265. (Stanley J. Benkoski) **80m:10002** 10A20
- Singh, M.** (with Dey, A.) Two-way elimination of heterogeneity. *J. Roy. Statist. Soc. Ser. B* 40 (1978), no. 1, 58-63. (K. R. Shah) **80i:62068** 62K99 (62F10)
- (with Dey, A.) On analysis of some augmented block designs. *Biometrical J.* 21 (1979), no. 1, 87-92. (U. B. Paik) **80m:62072** 62K10
- Singh, M. M. P.** A generalized Laplace transform  $L_\lambda$  of a class of generalized functions. *Ranchi Univ. Math. J.* 8 (1977), 81-90 (1978). (Hans-Jürgen Glaeske) **80k:44001** 44A10
- Singh, Madan G.** (with Hassan, Mohamed F.) Corrigendum: "Local and global optimal control for non-linear systems using two-level methods" [Internat. J. Systems Sci. 8 (1977), no. 12, 1375-1383]. *Internat. J. Systems Sci.* 9 (1978), no. 10, 1197-1198. (Editors) **80b:93071** 93C10
- (with Hassan, Mohamed F.; Titli, André) Near optimal decentralised control with a pre-specified degree of stability. *Automatica—J. IFAC* 15 (1979), no. 4, 483-488. (Edward J. Davison) **80g:93063** 93D05
- (with Hassan, Mohamed F.) Controllers for linear interconnected dynamical systems with prespecified degree of stability. *Internat. J. Systems Sci.* 10 (1979), no. 3, 339-350. (Authors' summary) **80c:93044** 93B99 (90D99, 93D05)
- Singh, Namprasad** Some inequalities for the  $H$ -function. (Hindi. English summary) *Vijnana Parishad Amsandhan Patrika* 21 (1978), no. 1, 89-95. (R. S. Dahiya) **80n:33010** 33A35
- $H$ -function of two variables and temperature in an inhomogeneous bar. (Hindi. English summary) *Vijnana Parishad Amsandhan Patrika* 22 (1979), no. 1, 67-72. (Author's summary) **80c:80007** 80A20 (33A35)
- Singh, Nirajan** A generalization of a theorem of Titchell. *Proc. Amer. Math. Soc.* 70 (1978), no. 1, 49-56. (R. N. Mohapatra) **80b:40006** 40G99
- Singh, Padam** The selection of samples of two units with inclusion probabilities proportional to size. *Biometrika* 65 (1978), no. 2, 450-454. (V. P. Godambe) **80d:62015** 62D05
- Singh, Prem** (with Das, R. N.) Radius of convexity for a certain subclass of close to convex functions. *J. Indian Math. Soc. (N.S.)* 41 (1977), no. 3-4, 363-369 (1978). (S. Ruscheweyh) **80a:30010** 30C45
- (with Chand, Rattan) On certain schlicht mappings. *Indian J. Pure Appl. Math.* 10 (1979), no. 9, 1167-1174. (S. K. Bajpai) **80j:30015** 30C45
- Singh, Purnayama** (with Sharma, V. P.; Misra, U. N.) Fluctuating boundary layer on a heated horizontal plate. (Spanish summary) *Acta Mech.* 30 (1978), no. 1-2, 111-128. (R. Manohar) **80j:76032** 76N05
- (with Srivastava, K. K.) Variational solution of heat convection in the channel flow with the help of GPDP. *Acta Phys. Acad. Sci. Hungar.* 45 (1978), no. 3, 201-211 (1979). (Authors' summary) **80c:80008** 80A20 (49B22, 76C05)
- (with Sharma, V. P.; Misra, U. N.) Three dimensional free convection flow and heat transfer along a porous vertical plate. *Appl. Sci. Res.* 34 (1978), no. 1, 105-115. (Authors' summary) **80a:76046** 76R99 (35Q99)
- (with Verma, R. L.) Free convection fluctuating flow on a horizontal magnetized plate. *Acta Phys. Acad. Sci. Hungar.* 46 (1979), no. 2, 77-96. (Authors' summary) **80m:76081** 76W05 (76R05)
- (with Sharma, V. P.; Misra, U. N.) Exact solution of transient heat transfer



- between a fluid and a porous plate. *Pure Appl. Math. Sci.* **10** (1979), no. 1-2, 135-144. (Authors' summary) **80m:80011** 80A20
- Singh, R. K. (with Komal, B. S.) Composition operators. *Bull. Austral. Math. Soc.* **18** (1978), no. 3, 439-446. (Paul S. Muhly) **80b:47038** 47B35
- (with Kumar, Ashok) Characterizations of invertible, unitary, and normal composition operators. *Bull. Austral. Math. Soc.* **19** (1978), no. 1, 81-95. (E. Durszt) **80e:47030** 47B38
- (with Gupta, D. K.) Regular Borel measures and composition operators on  $L^p(\mu)$ . *Indian J. Pure Appl. Math.* **10** (1979), no. 4, 502-504. (Alan Shuchat) **80e:47031** 47B38
- (with Gupta, D. K.; Komal, B. S.) Some results on composition operators in  $l^2$ . *Internat. J. Math. Math. Sci.* **2** (1979), no. 1, 29-34. (Mikio Kato) **80i:47043** 47B37
- Singh, R. N. (with Mishra, R. S.) On an invariant submanifold in a  $f(5,3)$ -structure manifold. *Indian J. Pure Appl. Math.* **9** (1978), no. 10, 1033-1038. (Yoshiaki Maeda) **80b:53027** 53C15
- Singh, Radhey S. Nonparametric estimation of derivatives of average of  $\mu$ -densities with convergence rates and applications. *SIAM J. Appl. Math.* **35** (1978), no. 4, 637-649. (M. Csörgö) **80c:62032** 62G05
- Mean squared errors of estimates of a density and its derivatives. *Biometrika* **66** (1979), no. 1, 177-180. (Wolfgang Wertz) **80j:62040** 62G05
- On necessary and sufficient conditions for uniform strong consistency of estimators of a density and its derivatives. *J. Multivariate Anal.* **9** (1979), no. 1, 157-164. (Luc P. Devroye) **80k:62058** 62G05
- Singh, Rakeshwar (with Singh, K. D.) On almost para-contact metric manifolds with semisymmetric metric connections. *Demonstratio Math.* **12** (1979), no. 2, 331-341. (R. Rosca) **80c:53056** 53C15
- Singh, Ram (with Singh, Vikramaditya) The radii of starlikeness of certain classes of close-to-convex functions. *Indian J. Pure Appl. Math.* **8** (1977), no. 12, 1497-1504. (Authors' summary) **80b:30016** 30C45
- Singh, Ram Sharan (with Sharma, V. D.) The growth of discontinuities in a nonequilibrium flow of a relaxing gas. *Quart. J. Mech. Appl. Math.* **32** (1979), no. 4, 331-338. (Authors' summary) **80k:76057** 76L05
- Singh, Ramji (with Pandey, R. N.) A general differential equation for classical polynomials. *Kyungpook Math. J.* **18** (1978), no. 2, 233-237. (H. L. Manocha) **80c:33009** 33A65
- (with Pandey, R. N.) Asymptotic behaviour of the generalized polynomial. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **21** (1978), no. 4, 307-314. (From the summary) **80b:33024** 33A70
- (with Pandey, R. N.) Some special properties of classical polynomials. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **22** (1979), no. 2, 155-161. (Authors' summary) **80b:33024** 33A65
- (with Pandey, R. N.) A general differential equation for classical polynomials. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **22** (1979), no. 2, 179-185. (D. P. Gupta) **80k:33007** 33A30 (33A65)
- (with Pandey, R. N.) An effort towards unification of classical polynomials. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **22** (1979), no. 3, 239-251. (Rekha Srivastava) **80m:33010** 33A30 (33A35)
- A note on integral representations for a set of polynomials suggested by Laguerre polynomials. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **22** (1979), no. 4, 371-374. (Rekha Srivastava) **80k:33015** 33A65
- Singh, S. D. (with Srivastava, A. N.; Singh, S. N.) On a function defined by generalized Rodrigues' formula. *Indian J. Pure Appl. Math.* **10** (1979), no. 1, 124-127. (H. L. Manocha) **80c:33010** 33A65
- (with Srivastava, A. N.; Singh, S. N.) Operational derivation of generating functions of a generalized function. *Indian J. Pure Appl. Math.* **10** (1979), no. 3, 326-329. (J. N. Pandey) **80j:33029** 33A70 (44A40)
- Singh, S. K. On the maximum modulus and the maximum term of an entire function. *Bull. Soc. Math. Greece (N.S.)* **19** (1978), no. 1, 98-105. (Fred Gross) **80i:30043** 30D15
- (with Berg, John R.) The growth of entire and meromorphic functions. *Hokkaido Math. J.* **8** (1979), no. 1, 85-91. (S. Hellerstein) **80m:30027** 30D20 (30D30)
- Singh, S. L. Some fixed point theorems in complete metric spaces. *Ranchi Univ. Math. J.* **8** (1977), 44-48 (1978). (L. Janos) **80j:54040** 54H25
- On a fixed point theorem in metric spaces. *Math. Ed. (Siwan)* **12** (1978), no. 3, A62-A64. (Haskell Cohen) **80f:54047** 54H25
- On fixed and common fixed points of mappings. *Acta Cienc. Indica* **5** (1979), no. 4, 159-165. (I. A. Rus) **80m:54061** 54H25
- Some contractive type principles on 2-metric spaces and applications. *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 1, 1-11. (I. A. Rus) **80k:54088** 54H25 (54E99)
- Singh, S. N. (with Prasad, Y. N.) Some higher operational techniques in the theory of special functions. *Indian J. Pure Appl. Math.* **8** (1977), no. 11, 1298-1307. (A. M. Mathai) **80b:33010** 33A35 (44A20)
- (with Hussain, M. A.) On generalized polynomial set  $D_n(x; a, k)$ . *Indian J. Pure Appl. Math.* **9** (1978), no. 11, 1158-1162. (L. Carlitz) **80b:10018** 10A40 (05A10, 33A35)
- (with Srivastava, A. N.) A note on generalized Laguerre polynomials. *Kyungpook Math. J.* **18** (1978), no. 2, 207-209. (W. A. Al-Salam) **80c:33010** 33A70 (33A65)
- (with Rai, P. N.) Representation of generalized Hermite polynomials. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **21** (1978), no. 3, 269-273. (S. L. Kalla) **80b:33021** 33A65
- (with Srivastava, A. N.) On a new generalized function. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **21** (1978), no. 4, 383-386. (S. L. Kalla) **80b:33025** 33A70
- (with Hussain, M. A.) Operational formulae for even and odd Bragg's polynomials. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **23**(71) (1979), no. 3, 307-312. (S. Saran) **80k:33016** 33A65
- (with Srivastava, A. N.; Singh, S. D.) On a function defined by generalized Rodrigues' formula. *Indian J. Pure Appl. Math.* **10** (1979), no. 1, 124-127. (H. L. Manocha) **80c:33010** 33A65
- (with Srivastava, A. N.; Singh, S. D.) Operational derivation of generating functions of a generalized function. *Indian J. Pure Appl. Math.* **10** (1979), no. 3, 326-329. (J. N. Pandey) **80j:33029** 33A70 (44A40)
- (with Hussain, M. A.; Srivastava, A. N.) Bilinear generating functions for orthogonal polynomials related to ultraspherical polynomials. *Indian J. Pure Appl. Math.* **10** (1979), no. 3, 330-333. (H. L. Manocha) **80j:33017** 33A65
- (with Srivastava, A. N.) On the Konhauser polynomials  $Y_n^{(x;k)}$ . *Indian J. Pure Appl. Math.* **10** (1979), no. 9, 1121-1126. (H. M. Srivastava) **80k:33017** 33A65 (42C05)
- (with Hussain, M. A.) Bilateral generating functions for orthogonal polynomials related to Hermite polynomials. *Indian J. Pure Appl. Math.* **10** (1979), no. 12, 1504-1507. (J. P. Singhal) **80j:33018** 33A65
- Singh, S. P. See Singh, Sankatha P.
- Singh, Sahib Bound for the solutions of a Diophantine equation in prime Galois fields. *Indian J. Pure Appl. Math.* **8** (1977), no. 11, 1428-1430. (S. E. Schuur) **80m:10010** 10B10 (10A25)
- Integer points on special hyper-elliptic curves in  $GF(p)$ . *Indian J. Pure Appl. Math.* **10** (1979), no. 10, 1213-1215. (M. A. Kenku) **80k:14036** 14G15 (10B15, 14H45)
- Singh, Sankatha P. (with Ray, Barada K.) Remarks on some fixed point theorems. II. *Indian J. Pure Appl. Math.* **9** (1978), no. 9, 881-885. (I. A. Rus) **80b:47078** 47H10
- (with Sehgal, V. M.) A fixed point theorem for the sum of two mappings. *Japon. J. Math.* **23** (1978/79), no. 1, 71-75. (Christian Fenske) **80a:47009** 47H10
- Application of fixed point theorems in approximation theory. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 389-394. Academic Press, New York, 1979. (P. V. Subrahmanyam) **80j:41043** 41A50 (54H25)
- An application of a fixed-point theorem to approximation theory. *J. Approx. Theory* **25** (1979), no. 1, 89-90. (From the text) **80j:41026** 41A65
- Singh, Shailgram (with Singh, Uday Narayan) A generalized fixed-point theorem. *Bull. Soc. Roy. Sci. Liège* **48** (1979), no. 5-8, 228-231. (S. K. Kaul) **80k:54009** 54H25 (47H10)
- Singh, Shankar (with Singh, Vijendra Pal) A probabilistic approach for testing large-scale integrated circuits. *Internat. J. Comput. Inform. Sci.* **7** (1978), no. 3, 283-294. (Ernest S. Kuh) **80a:94048** 94C05
- Singh, Shiva Nandan (with Dennis, S. C. R.) Calculation of the flow between two rotating spheres by the method of series truncation. *J. Comput. Phys.* **28** (1978), no. 3, 297-314. (Robert Pearson) **80g:76020** 76D99 (65N35, 65P05)
- Singh, Sukhjit A linking axiom and retracts. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astron. Phys.* **26** (1978), no. 9-10, 817-823. (John G. Hocking) **80g:54022** 54C55 (55M15, 57N15)
- (with Davenport, Robert J.) On factors of closed cells. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astron. Phys.* **26** (1978), no. 9-10, 841-843. (H. W. Lambert) **80c:57008** 57N15
- On a problem of Borsuk. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979), no. 1, 129-134. (S. Mardešić) **80i:55011** 55P55 (54C15, 54C56)
- Singh, Surjeet (hnp-rings over which every module admits a basic submodule. *Pacific J. Math.* **76** (1978), no. 2, 509-512. (L. Bican) **80j:16011** 16A33
- (with Talwar, Sudha) Modules over bounded hereditary Noetherian prime rings. *Arch. Math. (Basel)* **32** (1979), no. 2, 134-142. (J. C. Robson) **80g:16008** 16A14
- (with Mehdi, Fazal) Multiplication modules. *Canad. Math. Bull.* **22** (1979), no. 1, 93-98. (Robert Gilmer) **80f:13006** 13C05 (13C13, 13F05)
- Some decomposition theorems on abelian groups and their generalisations. II. *Osaka J. Math.* **16** (1979), no. 1, 45-55. (J. C. Robson) **80g:16007** 16A14 (20K10)
- (with Mohamed, Saad) Weak  $q$ -rings with zero singular ideal. *Proc. Amer. Math. Soc.* **76** (1979), no. 1, 25-30. (Javed Ahsan) **80f:16027** 16A48
- Singh, T. (with Yadav, R. B. S.) Cylindrically symmetric self-gravitating fluids with pressure equal to energy density. *Acta Phys. Acad. Sci. Hungar.* **45** (1978), no. 2, 107-112 (1979). (N. Rosen) **80c:83023** 83C55
- (with Yadav, R. B. S.) Some exact solutions of charged fluid spheres in Einstein-Cartan theory. *Acta Phys. Polon. B* **9** (1978), no. 10, 831-836. (Authors' summary) **80c:83015a** 83C20 (53B50)
- (with Yadav, R. B. S.) Static fluid spheres in Einstein-Cartan theory. *Acta Phys. Polon. B* **9** (1978), no. 10, 837-847. (Authors' summary) **80c:83015b** 83C20 (53B50)
- (with Yadav, R. B. S.) Static fluid spheres in Einstein-Cartan theory. *Indian J. Pure Appl. Math.* **10** (1979), no. 1, 14-25. (Authors' summary) **80c:83045** 83D05
- (with Rai, L. N.) On spherically symmetric solutions of a scalar-tensor theory of gravitation in a Lyra manifold. *Indian J. Pure Appl. Math.* **10** (1979), no. 11, 1432-1436. (Kenneth Dunn) **80k:83048** 83D05
- Singh, T. Gokulchandra Some bounds for the multiplier of a finite group. *Indian J. Pure Appl. Math.* **10** (1979), no. 11, 1383-1388. (Ralph Strebel) **80j:20049** 20J05 (20C25)
- Singh, Tikam On the absolute summability factors of Fourier-Laguerre expansion. *Indian J. Pure Appl. Math.* **7** (1976), no. 9, 961-968. (Author's summary) **80c:42003** 42A24
- Corrigendum to: "On absolute summability factors of Fourier-Hermite series" [Bull. Calcutta Math. Soc. **68** (1976), no. 2, 125-130; MR **57** #3734]. *Bull. Calcutta Math. Soc.* **70** (1978), no. 1, 55. (Editors) **80m:42013** 42A24 (42C10)
- A note on absolute summability of Laguerre series. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **22** (1979), no. 2, 169-173. (Author's summary) **80b:42013** 42C10 (33A65)
- Singh, U. B. (with Singh, U. P.) On semisymmetric connection parameters in Finsler subspaces. *Indian J. Pure Appl. Math.* **9** (1978), no. 12, 1254-1262. (Siegfried Steiner) **80k:53049** 53B40
- Singh, U. P. (with John, V. N.) On induced and intrinsic connections of Randers' hypersurface. *Indian J. Pure Appl. Math.* **9** (1978), no. 11, 1188-1196. (H. Rund) **80a:53038** 53B40
- (with Singh, U. B.) On semisymmetric connection parameters in Finsler subspaces. *Indian J. Pure Appl. Math.* **9** (1978), no. 12, 1254-1262. (Siegfried Steiner) **80k:53049** 53B40
- (with Chaubey, G. C.) Curvature theories of Finsler subspaces with the standpoint

- of semi-symmetric connections. *Indian J. Pure Appl. Math.* **10** (1979), no. 1, 112-123. (H. Rund) **80b:53021** 53B40  
(with Srivastava, R. J.) On induced theory of semi-symmetric and quarter-symmetric linear connections. *Indian J. Pure Appl. Math.* **10** (1979), no. 4, 479-485. (A. Švec) **80e:53013** 53B15  
(with John, V. N.; Prasad, B. N.) Finsler spaces preserving Killing vector fields. *J. Math. Phys.* **13** (1979), no. 3, 265-271. (Yoshihiro Ichijō) **80b:53027** 53B40
- Singh, Uday Narayan (with Singh, Shaligram) A generalized fixed-point theorem. *Bull. Soc. Roy. Sci. Liège* **48** (1979), no. 5-8, 228-231. (S. K. Kaul) **80a:54089** 54H25 (47H10)
- Singh, V. Periodic solutions of Schwarzschild's type in the relativistic restricted problem of three bodies. *Indian J. Pure Appl. Math.* **7** (1976), no. 12, 1351-1357. (Author's summary) **80m:70009** 70F07
- Singh, V. B. (with Dwivedi, A. P.) A formal solution of simultaneous triple integral equations involving  $H$ -function of  $n$  variables  $H(x_n)$ . *Proc. Nat. Acad. Sci. India Sect. A* **47** (1977), no. 4, 212-220. (R. U. Verma) **80a:45003** 45F10 (33A30)  
(with Dwivedi, A. P.) Simultaneous triple integral equations associated with  $H$ -function. *Acta Cienc. Indica* **4** (1978), no. 1, 79-85. (S. L. Kalla) **80a:45011** 45F10 (33A35, 45H05)
- Singh, Vijendra Pal (with Singh, Shanker) A probabilistic approach for testing large-scale integrated circuits. *Internat. J. Comput. Inform. Sci.* **7** (1978), no. 3, 283-294. (Ernest S. Kuh) **80a:94048** 94C05
- Singh, Vikramaditya Univalent functions with bounded derivative in the unit disc. *Indian J. Pure Appl. Math.* **8** (1977), no. 11, 1370-1377. (James A. Hummel) **80b:30018** 30C45  
(with Singh, Ram) The radii of starlikeness of certain classes of close-to-convex functions. *Indian J. Pure Appl. Math.* **8** (1977), no. 12, 1497-1504. (Authors' summary) **80b:30016** 30C45  
(with Chichra, Pran Nath) An extension of Becker's criterion of univalence. *J. Indian Math. Soc. (N.S.)* **41** (1977), no. 3-4, 353-361 (1978). (G. Schöber) **80j:30024** 30C55  
Bounds on the curvature of level lines under certain classes of univalent and locally univalent mappings. *Indian J. Pure Appl. Math.* **10** (1979), no. 2, 129-144. (John G. Milcetic) **80c:30014** 30C45  
(with Ruscheweyh, Stephan) On a Briot-Bouquet equation related to univalent functions. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 2, 285-290. (P. T. Mocanu) **80i:30022** 30C45 (34A20)
- Singh, Vimal A note on continued fraction inversion. *IEEE Trans. Automat. Control* **24** (1979), no. 4, 664-666. (Author's summary) **80e:93015** 93A13 (65D99, 68C05)  
(with Kumar, Alok) Inversion of the matrix continued fraction. *IEEE Trans. Automat. Control* **24** (1979), no. 4, 666-667. (Authors' summary) **80e:93014** 93A13 (65F05, 68C05)
- Singh, Vinendra (with Roy, S. M.) Completeness of tests of local hidden variable theories. *J. Phys. A* **12** (1979), no. 7, 1003-1009. (Authors' summary) **80f:81014** 81B10 (26D15)  
(with Biswas, S. N.; Datta, K.) Analytic continued fraction theory for a class of confinement potentials. *Lett. Math. Phys.* **3** (1979), no. 1, 73-81. (Björn von Sydow) **80d:81017** 81C05 (30B70)
- Singhal, A. (with Arya, Shashi Prabha) A note on pairwise  $D_1$  spaces. (Serbo-Croatian summary) *Glas. Mat. Ser. III* **14**(34) (1979), no. 1, 147-150. (William Lindgren) **80f:54023** 54E55
- Singhal, A. K. (with Ramachandra Rao, B. S.) A note on an orthogonality relation for stress analysis in a multilayered laminated disc. *Indian J. Pure Appl. Math.* **10** (1979), no. 9, 1146-1150. (Yi-Yuan Yu) **80j:73014** 73C99
- Singhal, B. M. Some identities and hypergeometric functional relations. *Indian J. Pure Appl. Math.* **7** (1976), no. 10, 1203-1212. (R. N. Jain) **80i:33006** 33A30  
Operational techniques with certain double generalized transform. *Indian J. Pure Appl. Math.* **7** (1976), no. 11, 1305-1314. (S. D. Bajpai) **80j:44007** 44A20 (33A30)
- Singhal, J. P. (with Joshi, C. M.) Operational formulas associated with a class of polynomials unifying the generalized Hermite and Laguerre polynomials. *Rev. Mat. Hisp.-Amer.* (4) **38** (1978), no. 6, 280-288. (W. A. Al-Salam) **80f:33018** 33A70  
(with Bhati, S. S.) Triple Whittaker transforms of generalised hypergeometric functions. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **22** (1979), no. 4, 375-387. (H. M. Srivastava) **80b:33006** 33A30 (44A20)
- Singh Chandel, R. C. (with Bhargava, S. K.) Some polynomials of R. Panda and the polynomials related to them. *Bull. Inst. Math. Acad. Sinica* **7** (1979), no. 2, 145-149. (From the summary) **80m:33023** 33A70
- Singhal, B. M. (with Rathore, T. S.; Kibe, A. V.) Continued fraction inversion and expansion. *IEEE Trans. Automat. Control* **24** (1979), no. 2, 349-350. (Authors' summary) **80c:65027** 65D05
- Singhal, N. M. (with Deza, Mikhail; Erdős, Paul) Combinatorial problems on subsets and their intersections. *Studies in foundations and combinatorics*, pp. 259-265, *Advances in Math., Suppl. Studies*, 1, Academic Press, New York, 1978. (David E. Daykin) **80e:05006** 05A05 (05B40)  
(with McCarthy, David; Vanstone, S. A.) A graph-theoretical approach to embedding  $(r, 1)$ -designs. *Graph theory and related topics (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 289-304, Academic Press, New York, 1979. (R. C. Mullin) **80j:05038** 05B30  
(with Shrikhande, S. S.) A note on embedding of orthogonal arrays of strength two. *J. Statist. Plann. Inference* **3** (1979), no. 3, 267-271. (E. Seiden) **80j:05025** 05B15 (62K10)
- Singhof, Wilhelm Generalized higher order cohomology operations induced by the diagonal mapping. *Math. Z.* **162** (1978), no. 1, 7-26. (David C. Johnson) **80a:55003** 55M30  
Minimal coverings of manifolds with balls. *Manuscripta Math.* **29** (1979), no. 2-4, 385-415. (Jack Weinstein) **80b:55012** 55M30 (57Q65, 57Q99)
- Singh Sohi, Nirmal See Sohi, Nirmal Singh
- Singley, Donald H. (with Bowman, Robert H.) Almost hypersurface structures. *J. Differential Geom.* **12** (1977), no. 4, 513-522 (1978). (C. T. J. Dodson) **80b:53025** 53C15 (53C05, 53C40)
- Singmaster, David Some Catalan correspondences. *J. London Math. Soc.* (2) **19** (1979), no. 2, 203-206. (D. G. Rogers) **80e:05020** 05A15
- Sinha, A. S. C. Two trophic levels model for population growth depending on past history. *Internat. J. Systems Sci.* **9** (1978), no. 12, 1325-1330. (K. E. Swick) **80i:92018** 92A15  
On the stability of nonlinear stochastic systems. *Internat. J. Systems Sci.* **10** (1979), no. 9, 1041-1054. (S. M. Hrisanov) **80j:93128** 93E15
- Sinha, Agam Nath (with Sen, Pranab Kumar) Progressively censored tests for clinical experiments and life testing problems based on weighted empirical distributions. *Comm. Statist. A—Theory Methods* **8** (1979), no. 9, 871-897. (George W. Williams) **80b:62065** 62G10 (62L10)
- Sinha, B. B. Analytic vector fields in almost Sasakian manifold. (Turkish summary) *Istanbul Üniv. Fen Fak. Mecm. Ser. A* **40** (1975), 33-37 (1978). **80e:53017** 53B20  
(with Prasad, Gunraj) On the geometry of relativistic electromagnetic fluid flows. I. *Indian J. Pure Appl. Math.* **9** (1978), no. 5, 447-456. (P. C. Vaidya) **80g:83026** 83C50 (53B50)  
(with Narain, Dhruwa) Polynomial structure on almost paracontact manifold. *Indian J. Pure Appl. Math.* **9** (1978), no. 8, 753-760. (N. Prakash) **80e:53040** 53C15  
(with Sharma, Ramesh) Hypersurfaces in an almost paracontact manifold. *Indian J. Pure Appl. Math.* **9** (1978), no. 10, 1083-1090. (Y. Katsurada) **80i:53029** 53C40  
(with Narain, Dhruwa) Hypersurfaces of almost paracontact metric manifold. *Indian J. Pure Appl. Math.* **9** (1978), no. 12, 1298-1304. (V. Mihova-Nehmer) **80d:53036** 53C45  
(with Prasad, Gunraj) Spacelike motions admitted by the magnetofluid space-times. (Italian) *Nuovo Cimento B* (11) **52** (1979), no. 1, 105-112. (A. F. da F. Teixeira) **80b:83019** 83C40  
(with Prasad, Gunraj) Spacelike FCRC symmetry mappings admitted by imperfect magnetofluid space-times. (Italian summary) *Nuovo Cimento B* (11) **54** (1979), no. 2, 401-412. (Authors' summary) **80m:76090** 76Y05
- Sinha, Bimal Kumar (with Wieand, H. S.) Admissibility and inadmissibility of the MLE when the parameter space is restricted to integers. *Calcutta Statist. Assoc. Bull.* **26** (1977), no. 101-104, 113-116 (1978). (Glen Meeden) **80f:62011** 62C15  
(with Wieand, H. S.) Bounds on the efficiencies of four commonly used nonparametric tests of location. *Sankhyā Ser. B* **39** (1977), no. 2, 121-129. (Authors' summary) **80e:62060** 62G20
- Sinha, K. P. (with Sivaram, C.) Strong spin-two interaction and general relativity. *Phys. Rep.* **51** (1979), no. 3, 111-187. (From the summary) **80d:83045** 83C45 (81M05)
- Sinha, Kalyan Relative scattering and time delay in presence of a uniform electric field. *Rep. Math. Phys.* **14** (1978), no. 1, 65-73. (R. C. Gilbert) **80g:81068** 81F15 (35P25, 47A40)
- Sinha, Kishore A series of BIB designs. *J. Austral. Math. Soc. Ser. A* **27** (1979), no. 1, 88-90. (D. Sotteau) **80c:05034** 05B05
- Sinha, N. K. (with El-Sherief, H.) Efficient algorithm for determining controllability and observability of large-scale composite systems. *Internat. J. Systems Sci.* **9** (1978), no. 11, 1295-1302. (Edward W. Kamen) **80a:93045** 93B05  
(with Mahalanabis, A. K.) On the design of stationary feedback regulators for linear discrete systems. *Internat. J. Systems Sci.* **9** (1978), no. 12, 1373-1386. (Kimi Kanai) **80b:93166** 93E20 (93B40)  
(with Hickin, J.) Applications of projective reduction methods to estimation and control. *J. Cybernet.* **8** (1978), no. 2, 159-181. (Authors' summary) **80e:93011** 93A15  
(with El-Sherief, H.) Stochastic approximation algorithm for the identification of linear multivariable systems. *IEEE Trans. Automat. Control* **24** (1979), no. 2, 331-333. (Authors' summary) **80b:93133** 93E10  
(with El-Sherief, H.) Bootstrap estimation of parameters and states of linear multivariable systems. *IEEE Trans. Automat. Control* **24** (1979), no. 2, 340-343. (S. G. Tzafestas) **80d:93072a** 93E11 (93E12)  
(with El-Sherief, H.) On the convergence and unbiasedness of: "Stochastic approximation algorithm for the identification of linear multivariable systems" [IEEE Trans. Automat. Control **24** (1979), no. 2, 331-333; MR **80b:93133**]. *IEEE Trans. Automat. Control* **24** (1979), no. 3, 493-495. (Authors' summary) **80j:93111** 93E03  
(with Kuszya, B.) Synthesis of optimal input signals for system identification. *Internat. J. Systems Sci.* **10** (1979), no. 3, 251-258. (Shinzo Kitamura) **80a:93024** 93B30 (93E12)  
(with Elrazaz, Z.) First- and second-order eigenvalue sensitivities of aggregated models. *Internat. J. Systems Sci.* **10** (1979), no. 4, 385-394. (Authors' summary) **80b:93049** 93B35  
(with El-Sherief, H.) Identification and modeling for linear multivariable discrete-time systems: a survey. *J. Cybernet.* **9** (1979), no. 1, 43-71. (Andrzej W. Olbrot) **80d:93077** 93E12  
(with El-Sherief, H.) Identification of multivariable systems in the transfer-function matrix form. *J. Cybernet.* **9** (1979), no. 2, 113-125. (Arunabha Bagchi) **80i:93059** 93E12 (93C35)  
See also Kao, Y. S.; et al., **80a:65087** and Sprekel, D.; et al., **80d:93072b**
- Sinha, P. K. A new condition for output feedback decoupling of multivariable systems. *IEEE Trans. Automat. Control* **24** (1979), no. 3, 476-478. (Author's summary) **80e:93011** 93A10 (93C35)
- Sinha, R. M. K. (with Mahabala, H. N.) Machine recognition of Devanagari script. *IEEE Trans. Systems Man Cybernet.* **9** (1979), no. 8, 435-441. (Authors' summary) **80d:68122** 68G10
- Sinha, R. S. (with Faruqi, S. A.) On projectively related recurrent and projective recurrent Finsler spaces. *Indian J. Pure Appl. Math.* **10** (1979), no. 4, 394-399. (Siegfried Steiner) **80d:53021** 53B40
- Sinha, Rajiv (with Mittal, S. C.; Arora, J. P.) On the degree of approximation of polynomial operators. *Acta Cienc. Indica* **5** (1979), no. 3, 123-127. (Authors' summary) **80g:41009** 41A10
- Sinha, S. C. (with Chou, C. C.) Approximate eigenvalues for systems with variable parameters. *Trans. ASME Ser. E J. Appl. Mech.* **46** (1979), no. 1, 203-205. (Authors' summary) **80c:65177** 65L15 (65L10)
- Sinha, S. P. (with Agarwal, J. P.) Exponentially weighted  $L_p$  and minimax polynomial approximations. *Pure Appl. Math. Sci.* **9** (1979), no. 1-2, 19-29. (Authors' summary) **80d:41009** 41A10



- Sinha, S. R.** (with Prasad, Kanhaiya) On the absolute Riesz summability of a factored Fourier series. *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 3, 223-229. (S. Izumi) **80m:42016** 42A28
- Sinha, T. K.** Diffraction of a plane pulse due to a rigid quarter space upon an elastic half space. *Indian J. Mech. Math.* 16 (1978), no. 2, 48-65. (Author's summary) **80m:73023** 73D25
- Sinivčev, V.** A group-theoretic approach to the dynamics of multipin systems. V. (Russian. Estonian and English summaries) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* 27 (1978), no. 3, 295-306. (Author's summary) **80m:81046** 81C40 (22E70)
- A group-theoretic approach to the dynamics of multipin systems. VI. (Russian. Estonian and English summaries) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* 28 (1979), no. 2, 115-123, 179. (Author's summary) **80m:81038** 81C99 (20C35)
- Sinjavski, M. I.** Finding the singular points of the solution of the second Painlevé equation by means of power series. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 35 (1978), 68-72, 164. (Author's summary) **80m:65190** 65L99
- Sinkarenko, A. P.** (with Baženov, V. G.; Ugodnikov, A. G.) Numerical analysis of elastoplastic deformation of shells with curvilinear apertures under impulse loading. (Russian) *Prikl. Meh.* 15 (1979), no. 5, 48-53, 110. (Authors' summary) **80f:73066** 73L15
- Sinkhorn, Richard** A relationship between stochastic matrices and eigenvalues of products. *Linear Algebra Appl.* 23 (1979), 53-63. (Author's summary) **80d:15024** 15A51
- Sin'kov, M. V.** (with Gubareni, N. M.) ★Непозиционные представления в многомерных числовых системах. (Russian) [Nonpositional representations in multidimensional number systems] Edited by G. E. Puhov. "Naukova Dumka", Kiev, 1979. 138 pp. (K. Szymiczek) **80j:10001** 10-01 (16A18, 94A29)
- Sint, P. P.** See *Composit Lectures*, **80f:62003**
- Sintzoff, Michel** Ensuring correctness by arbitrary postfixing-points. *Mathematical foundations of computer science, 1978 (Proc. Seventh Sympos., Zakopane, 1978)*, pp. 484-492. *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (V. Čížanský) **80d:68024** 68B10
- (with van Lamsweerde, Axel) Formal derivation of strongly correct concurrent programs. *Acta Inform.* 12 (1979), no. 1, 1-31. (Authors' summary) **80e:68034** 68B10
- Sitatal, Minors** (with Gill, Dhanwant S.; Lösche, Christian) Stepwise test procedures and approximate chi-square analysis. *Ann. Inst. Statist. Math.* 30 (1978), no. 3, 365-375. (S. John) **80h:62041** 62H15
- Šipilina, A. V.** (with Onipov, I. L.; Pačenko, V. P.) The computation of flows of a nonviscous gas in channels with a strongly changing cross-section. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 18 (1978), no. 4, 964-973, 1069. (Authors' summary) **80f:76027** 76N15 (65P05)
- Šipilina, L. B.** (with Markovskii, A. V.) Machine realization of operations with bracketed Boolean expressions. (Russian) *Algorithmic studies in combinatorics (Russian)*, pp. 172-183, 187. "Nauka", Moscow, 1978. (Authors' summary) **80e:94040** 94C10 (68H05)
- Šipka, I. G.** (with Kolodii, B. Ja.) Existence of the solution of a nonlinear integro-differential equation. (Ukrainian. Russian summary) *Visnik L'viv. Derž. Univ. Ser. Meh.-Mat.* No. 12 (1977), 29-31, 94. (Authors' summary) **80m:45019** 45K05
- (with Martynenko, Mih. D.) A boundary value problem for a metaharmonic fourth-order equation in regions with a gap. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 5, 396-398, 475. (G. Wildenhain) **80k:31003** 31A30 (30E25, 35J40)
- Šipol, Jan** Integrals on lattice-ordered groups. (Russian summary) *Math. Slovaca* 27 (1977), no. 4, 431-439. (Author's summary) **80f:28016** 28C10
- Sipp, F.** See *Schipp, F.*
- Sipser, Michael** (with Lichtenstein, David) GO is p-space hard. *19th Annual Symposium on Foundations of Computer Science (Ann Arbor, Mich., 1978)*, pp. 48-54. *IEEE, Long Beach, Calif.*, 1978. (From the introduction) **80e:68114** 68C25
- Halting space-bounded computations. *19th Annual Symposium on Foundations of Computer Science (Ann Arbor, Mich., 1978)*, pp. 73-74. *IEEE, Long Beach, Calif.*, 1978. (From the text) **80e:68137** 68C40 (03D10)
- Sitadinov, S. H.** (with Matvičevskaja, G. P.) ★Абсолютная Бурья и его математическая трудя. (Russian) [al-Būrī and his mathematical works] "Prosvetienie", Moscow, 1978. 95 pp. (E. S. Kennedy) **80m:01011** 01A30
- (with Gafurov, M. U.) Some generalizations of the results of Erdős and Katz connected with the strong law of large numbers and their applications. (Russian) *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 207-209. *Reidel, Dordrecht*, 1978. (S. A. Book) **80f:60031** 60F15
- (with Komekov, B.) Limit behavior of the distribution of randomly indexed sequences of random variables. (Russian. Uzbek summary) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1978, no. 6, 29-36. (Dominik Szyal) **80e:60035** 60F05
- See also *Mathematics in the East in the Middle Ages*, **80i:01004**
- Strazdinski, T. K.** Questions of measurement, stability, sensitivity and invariance of processes with distributed parameters. (Russian) *Kibernet. i Vychisl. Tehn.* 1978, no. 39, 17-26, 114. (Claudia Simionescu) **80g:49041** 49E99
- Sirbu, Elena** (with Gontineac, M.) Some properties of the basic derivative operators. (Romanian. English summary) *Bul. Inst. Politehn. Iași Sect. I* 24(28) (1978), no. 1-2, 17-20. (B. Crstici) **80m:40003** 40A99
- Sirigu, W. A.** Theory of flame spread above solids. *Lectures on combustion theory (Courant Inst., New York Univ., New York, 1977)*, pp. 207-235. *New York Univ., New York*, 1978. (Alan Jeffrey) **80d:76072** 76N15
- One-dimensional analysis of combustion in a spark-ignition engine. *Lectures on combustion theory (Courant Inst., New York Univ., New York, 1977)*, pp. 236-269. *New York Univ., New York*, 1978. (Author's summary) **80d:76073** 76N15
- Sit'kov, K. F.** (with Guseinov, A. I.; Allahverdiev, Dž. Ė.) Words about Mstislav Vsevolodovič Keldyš. (Russian) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 6, 3-8. (Editors) **80j:01037c** 01A70
- Sitruena, H. R.** (with Chou, F. S.) Computation of optimal controls for nonlinear distributed-parameter systems using multivariate spline functions. *Internat. J. Systems Sci.* 9 (1978), no. 12, 1387-1395. (Gerard G. L. Meyer) **80f:93032** 93B40
- Minimal-order observers for linear functions of a state vector. *Internat. J. Control* 29 (1979), no. 2, 235-254. (A. S. C. Sinha) **80f:93026** 93B05
- (with Chou, F. S.) Convergence of the control parameterization Ritz method for nonlinear optimal control problems. *J. Optim. Theory Appl.* 29 (1979), no. 3, 369-382. (Pierre-Louis Lions) **80m:49027** 49D15
- Širjaev, A. N.** (with Kabanov, Ju. M.; Lipcer, R. Š.) Absolute continuity and singularity of locally absolutely continuous probability distributions. I. (Russian) *Mat. Sb. (N.S.)* 107(149) (1978), no. 3, 364-415, 463. (Jean Mémin) **80e:60056a** 60G30
- (with Kabanov, Ju. M.; Lipcer, R. Š.) Absolute continuity and singularity of locally absolutely continuous probability distributions. II. (Russian) *Mat. Sb. (N.S.)* 100(150) (1979), no. 1, 32-61, 143. (Jean Mémin) **80e:60056b** 60G30
- (with Engelbert, H. J.) On the sets of convergence of generalized submartingales. *Stochastics* 2, no. 3, 155-166 (1979). (A. N. Al-Hussaini) **80m:60061** 60G48
- See also *Fleming, U.*; et al., **80e:93003**
- Širjaev, V. M.** Semilattices of width 3 whose decomposable elements form a chain. *Semigroup Forum* 17 (1979), no. 3, 201-240. (R. Beazer) **80e:06001** 06A12
- Sirkas, Monroe G.** See *Birnbaum, Z. William*, **80e:62019**
- Širkov, D. V.** (with Kazakov, D. I.; Tarasov, O. V.) Analytic extension of results of the perturbation theory model  $g\varphi^4$  into the domain  $g \geq 1$ . (Russian. English summary) *Theoret. Mat. Fiz.* 38 (1979), no. 1, 15-25. (From the summary) **80e:81066** 81E10
- Sirlin, A.** Current algebra formulation of radiative corrections in gauge theories and the universality of the weak interactions. *Rev. Modern Phys.* 50 (1978), no. 3, 573-605. (Author's summary) **80d:81125a** 81G25
- Erratum: "Current algebra formulation of radiative corrections in gauge theories and the universality of the weak interactions" (Rev. Modern Phys. 50 (1978), no. 3, 573-605). *Rev. Modern Phys.* 50 (1978), no. 4, 905. (Editors) **80d:81125b** 81G25
- Siroid, I. P.** A nonselfadjoint analogue of nonreflecting potentials. (Russian) *Mathematical analysis and probability theory (Russian)*, pp. 168-172, 222. "Naukova Dumka", Kiev, 1978. (Stefan Balint) **80m:34022** 34B25 (47B40)
- Širokov, Ju. M.** Quantum and classical mechanics in the representation of a phase space. (Russian. English summary) *Fiz. Elementarn. Častic i Atom. Jadr* 10 (1979), no. 1, 5-50. (M. M. Skirganov) **80e:81025** 81C05 (58F05, 81D05)
- Unified formalism for quantum and classical scattering theory. (Russian. English summary) *Theoret. Mat. Fiz.* 38 (1979), no. 3, 313-320. (V. S. Of'hojskij) **80e:81149** 81F05 (35P25, 47A40)
- Širokov, N. A.** Ideals and factorization in algebras of analytic functions that are smooth up to the boundary. (Russian) *Spectral theory of functions and operators. Trudy Mat. Inst. Steklov.* 130 (1978), 196-222, 223. (B. Korenblum) **80j:46085** 46J15 (30D55)
- Standard ideals of the algebra  $H_1^1$ . (Russian) *Funkcional. Anal. i Prilozhen.* 13 (1979), no. 1, 86-87. (S. V. Hruščev) **80e:46082** 46J20
- Širokov, V. A.** (with Gavrilik, O. M.) Analysis of representations of the  $SU(4, 1)$  group of hadron dynamical symmetry and the masses of charmed particles. *Jadernaja Fiz.* 28 (1978), no. 1, 199-206 (Russian); translated as *Soviet J. Nuclear Phys.* 28 (1978), no. 1, 100-103 (1979). (Philip Huddleston) **80e:81100** 81G40 (22E70)
- Širokova, E. A.** Some questions on the univalence of solutions of inverse boundary value problems. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 10(197), 90-94. (S. N. Kudrjašov) **80h:30039** 30E25 (30C55)
- (with Aksen'ev, L. A.; Hohlov, Ju. E.) The uniqueness of the solution of the exterior inverse boundary value problem. (Russian) *Mat. Zametki* 24 (1978), no. 3, 319-330, 445. (V. B. Dybin) **80f:30034** 30E25
- Šironosov, V. A.** (with Grin', V. T.; Kraiko, A. N.; Tiličeva, N. I.) Analysis of one-dimensional flow stability in a channel with arbitrary variation of stationary flow parameters between the closing shock cross section and channel outlet. *Prikl. Mat. Meh.* 41 (1977), no. 4, 637-645 (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 4, 651-659 (1978). (Authors' summary) **80f:76026** 76L05
- Širov, A. I.** (with Ževlakov, K. A.; Slin'ko, A. M.; Šestakov, I. P.) ★Кольца, близкие к ассоциативным. (Russian) [Rings that are nearly associative] Современная Алгебра. [Monographs in Modern Algebra] "Nauka", Moscow, 1978. 431 pp. (Harry F. Smith) **80h:17002** 17-02 (17Cxx, 17Dxx)
- Sirugue, M.** (with Combe, Ph.; Rodriguez, R.; Sirugue-Collin, M.) A uniqueness theorem for anticommutation relations and commutation relations of quantum spin systems. *Comm. Math. Phys.* 63 (1978), no. 3, 219-235. (Derek W. Robinson) **80f:82047** 82A67 (20C35, 22D12)
- (with Combe, Ph.; Rodriguez, R.; Sirugue-Collin, M.) On the quantization of spin systems and Fermi systems. *J. Math. Phys.* 20 (1979), no. 4, 611-616. (Derek W. Robinson) **80f:81026** 81C10
- See also *Feynman path integrals*, **80e:81014**
- Sirugue-Collin, M.** (with Combe, Ph.; Rodriguez, R.; Sirugue, M.) A uniqueness theorem for anticommutation relations and commutation relations of quantum spin systems. *Comm. Math. Phys.* 63 (1978), no. 3, 219-235. (Derek W. Robinson) **80f:82047** 82A67 (20C35, 22D12)
- (with Combe, Ph.; Rodriguez, R.; Sirugue, M.) On the quantization of spin systems and Fermi systems. *J. Math. Phys.* 20 (1979), no. 4, 611-616. (Derek W. Robinson) **80f:81026** 81C10
- See also *Feynman path integrals*, **80e:81014**
- Sirvanci, Mete** (with Yang, Grace L.) Corrigenda: "Estimation of a time-truncated exponential parameter used in life testing" [J. Amer. Statist. Assoc. 72 (1977), no. 358, 444-447; MR 56 #40951]. *J. Amer. Statist. Assoc.* 74 (1979), no. 366, part 1, 516. (Editors) **80e:62105** 62N05 (60F05, 62G05)
- Šišatškil, S. P.** Unicité et stabilité de problèmes de Cauchy pour des équations du second ordre. *Étude numérique des grands systèmes (Proc. Sympos., Novosibirsk, 1976)*, pp. 92-99. *Méthodes Math. de l'Informatique*, 7, Dunod, Paris, 1978. (Alan Jeffrey) **80e:35002** 35A05 (35L15, 35R25)
- Uniqueness and stability of some Cauchy problems for second-order equations. (Russian) *Numerical methods in mathematical physics, geophysics and optimal control (Sympos., Novosibirsk, 1976)* (Russian), pp. 209-215, 237. "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (Author's summary) **80i:35112** 35L15
- Šišigina, T. B.** The optimal weight function of a nonlinear coordinated filter. (Russian) *Control of dynamical systems (Russian)*, pp. 290-298, 326. *Leningrad. Univ., Leningrad*, 1978. (Author's summary) **80e:93123** 93E11

- Šiška, Jaromír On homotopical equivalence of tolerance spaces. *Comment. Math. Univ. Carolin.* 19 (1978), no. 4, 705–713. (O. Frink) **80j:05052** 05B99 (55P10)
- Šiška, A. A. Asymptotic behavior of the solution of a singular nonlinear system of ordinary differential equations. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 3, 444–457, 572. (V. Šeda) **80j:34056** 34E15
- Šiškin, G. I. A difference scheme for the solution of elliptic equations with small parameters multiplying the derivatives. (Russian) *Mathematical models and numerical methods (Papers, Fifth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 89–92, Banach Center Publ., 3, PWN, Warsaw, 1978. (From the text) **80d:65111** 65N20
- A difference scheme for the solution of an elliptic equation with a small parameter in a region with a curvilinear boundary. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 6, 1466–1475, 1629. (Ju. K. Dem'janovič) **80b:65131** 65N20
- The numerical solution of elliptic equations with small parameter multiplying the highest derivatives. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 4, 804–808. (T. Stýš) **80f:65137** 65P05
- Šitkov, A. E. A nonlinear boundary value problem for a quasilinear elliptic equation. (Russian) *Boundary value problems for partial differential equations (Russian)*, pp. 157–160, 168, "Naukova Dumka", Kiev, 1978. (Stefan Balint) **80m:35028** 35J25 (with Skripnik, I. V.) Solutions of the Dirichlet problem that are regular in a closed domain for the Monge-Ampère equations. (Russian) *Mat. Fiz. No. 23* (1978), 87–90, 115. (Ja. A. Roitberg) **80a:35035** 35J25 (53C45) (with Skripnik, I. V.) Coercivity of the bilinear form generated by a pair of elliptic operators in the space  $W_2^1(\Omega)$ . (Russian) *Mat. Fiz. No. 24* (1978), 111–115, 124. (D. M. Eidus) **80f:35051** 35J40
- Šitkovskii, G. I. (with Rumjancev, N. V.) Waiting time distributions in the system  $M/G_1/G_2(\text{end})/1$  and  $M/G_1/G_2(\text{in})/1$ . (Russian. English summary) *Issled. Operacii i ASU No. 12* (1978), 108–114, 133. (H. T. Tašmanov) **80j:60107** 60K25
- Štáler, Miroslav Über ein Iterationsverfahren für die Lösung spezieller linearer Gleichungssysteme mit einer zyklischen Matrix. (Czech summary) *Apl. Mat.* 23 (1978), no. 4, 295–299. (W. Niethammer) **80b:65049** 65F10
- Über eine Modifikation eines verallgemeinerten Überrelaxationsverfahrens. (Czech and Russian summaries) *Apl. Mat.* 24 (1979), no. 5, 348–354. (G. Maess) **80i:65034** 65F10
- Štítný, I. A. ★ Введение в теорию эллиптических уравнений. (Russian) [Introduction to the theory of elliptic equations] *Moskov. Gos. Univ., Moscow*, 1979. 184 pp. (T. Stýš) **80g:35041** 35Jxx (35–01)
- The Cauchy problem for hypoelliptic systems and representation of the interaction. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 7, 1337–1339, 1344. (I. Ju. Kriv'skii) **80i:35051** 35H05 (81C99)
- Štislák, František On the boundedness of the solutions of a second-order differential equation with retarded argument. (Slovak. English and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* 32 (1975), 31–45. (Author's summary) **80j:34062** 34K15
- Štívor, V. S. (with Bryčkov, Ju. A.; Prudnikov, A. P.) Operational calculus. (Russian) *Mathematical analysis*, Vol. 16 (Russian), pp. 99–148, 151, *VINITI, Moscow*, 1979. (L. Berg) **80g:44010** 44A40 (44–02)
- Ští, William (with Johnson, Joseph) On the differential transcendence polynomials of finitely generated differential field extensions. *Amer. J. Math.* 101 (1979), no. 6, 1249–1263. (K. Okugawa) **80m:12029** 12H05
- Sitaram, Alladi Positive definite distributions on  $K^*/G/K$ . *J. Funct. Anal.* 27 (1978), no. 2, 179–184. (P. C. Trombi) **80g:43017** 43A85 (22E45, 43A35)
- Sitaramachandra Rao, R. (with Murty, G. Sri Rama Chandra) On a theorem of Niven. *Canad. Math. Bull.* 22 (1979), no. 1, 113–115. (Jau-Shyong Shiue) **80g:10061** 10L10 (10A20)
- (with Krishnaiah, P. V.) On Berndt's method in arithmetical functions and contour integration. *Canad. Math. Bull.* 22 (1979), no. 2, 177–185. (Bruce C. Berndt) **80b:10008** 10A22 (30B50)
- (with Siva Rama Sarma, A.) Some identities involving the Riemann zeta function. *Indian J. Pure Appl. Math.* 10 (1979), no. 5, 602–607. (Jean-Marie De Koninck) **80b:10047** 10H05
- Sita Ramasiah, V. Arithmetical sums in regular convolutions. *J. Reine Angew. Math.* 303/304 (1978), 265–283. (D. Reardon) **80j:10006** 10A20
- Sitaraman, V. Professor C. T. Rajagopal (1903–1978). *J. Math. Phys. Sci.* 12 (1978), no. 5, i–xvi. (I. plate). (Editors) **80a:01044** 01A70
- (with Nambooripad, K. S. S.) Some congruences on regular semigroups. *J. Algebra* 57 (1979), no. 1, 10–25. (S. Sribala) **80b:20098** 20M10
- Sitaramaya, Malladi On Picard and Montel's theorems—a differential geometric aspect. *Proceedings of the Conference on Mathematical Analysis and its Applications (Inst. Engrs., Mysore, 1977)*, pp. M1–M16, *Mathematics Rep.*, 91, Inst. Math. Sci., Madras, 1978. (Samuel I. Goldberg) **80f:32018** 32H25 (53C20)
- Šitkova, K. V. Method of the hyperspherical functions and the properties of light nuclei. *Nuclear Phys. A* 331 (1979), no. 2, 365–388. (From the summary) **80j:81106** 81G35
- Šitjak, V. N. (with Anisimov, V. V.) Enlargement of a nonhomogeneous Markov chain with rare nonstationary transition densities. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist. No. 19* (1978), 18–28, 156. (M. Iosifescu) **80b:60096** 60J27
- Šitnikov, V. M. Finite groups with a standard component isomorphic to  $M_{24}$ . (Russian) *Mat. Zametki* 26 (1979), no. 3, 321–335, 492. (V. V. Kabanov) **80j:20014** 20D05
- Šitnikova, E. G. A lemma on the growth for elliptic systems. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 2, 367–369, 384. (J. Chastina) **80e:35021** 35J55
- abu-Sitta, A. M. See Abu-Sitta, A. M.
- Silver, Robin (with Cohen, Jacques; Auty, David) Evaluating and improving recursive descent parsers. *IEEE Trans. Software Engrg.* 5 (1979), no. 5, 472–480. (Authors' summary) **80f:68096** 68F25
- Siu, M. K. (with Chan, Y. K.; Tong, Po) Two-dimensional binary arrays with good autocorrelation. *Inform. and Control* 42 (1979), no. 2, 125–130. (L. D. Baumert) **80j:94029** 94B25 (05B30)
- Siu, Yau Tong (with Yau, Shing Tung) Errata to the paper: "Complete Kähler manifolds with nonpositive curvature of faster than quadratic decay" [Ann. of Math. (2) 105 (1977), no. 2, 225–264; MR 55 #10719]. *Ann. of Math. (2)* 109 (1979), no. 3, 621–623. (H. Wu)
- 80b:32022** 32C10 (53C55, 58E20)
- Complex-analyticity of harmonic maps and strong rigidity of compact Kähler manifolds. *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 5, 2107–2108. (John C. Wood) **80j:58031** 58E20 (31C12, 53C55, 58C10)
- Slivák, Bohuslav Representations of finite lattices by orders on finite sets. (Russian summary) *Math. Slovaca* 28 (1978), no. 2, 203–215. (B. M. Schein) **80b:06007** 06B15
- Sivaram, C. (with Sinha, K. P.) Strong spin-two interaction and general relativity. *Phys. Rep.* 51 (1979), no. 3, 111–187. (From the summary) **80d:83045** 83C45 (81M05)
- Sivaramakrishnan, R. Multiplicative even functions (mod  $r$ ). I. Structural properties. *J. Reine Angew. Math.* 302 (1978), 32–43. (J. Chidambaraswamy) **80i:10012a** 10A22
- Multiplicative even functions (mod  $r$ ). II. Identities involving Ramanujan sums. *J. Reine Angew. Math.* 302 (1978), 44–50. (J. Chidambaraswamy) **80i:10012b** 10A22
- Square-reduced residue systems (mod  $r$ ) and related arithmetical functions. *Canad. Math. Bull.* 22 (1979), no. 2, 207–220. (I. Danicic) **80b:10007** 10A20
- Siva Rama Sarma, A. (with Sitaramachandra Rao, R.) Some identities involving the Riemann zeta function. *Indian J. Pure Appl. Math.* 10 (1979), no. 5, 602–607. (Jean-Marie De Koninck) **80b:10047** 10H05
- Sivardière, Jean Classes d'éléments conjugués des groupes cristalllographiques. (English summary) *Acta Cryst. Sect. A* 34 (1978), no. 6, 895–900. (Author's summary) **80a:2006** 20H15
- Šivarova, A. (with Željazkov, I.) Low-frequency surface waves in a cylindrical nonisothermal plasma column. *Czechoslovak J. Phys. B* 29 (1979), no. 10, 1091–1103. (E. G. Broadbent) **80j:76054** 76X05
- Sivatskii, G. I. (with Matkovsky, Bernard J.) Propagation of a pulsating reaction front in solid fuel combustion. *SIAM J. Appl. Math.* 35 (1978), no. 3, 465–478. (Richard J. Field) **80c:80009** 80A25 (35B32)
- (with Matkovsky, Bernard J.) Acceleration effects on the stability of flame propagation. *SIAM J. Appl. Math.* 37 (1979), no. 3, 669–685. (Authors' summary) **80g:80005** 80A25 (35B99, 76E15)
- (with Matkovsky, Bernard J.) An asymptotic derivation of two models in flame theory associated with the constant density approximation. *SIAM J. Appl. Math.* 37 (1979), no. 3, 686–699. (Authors' summary) **80g:80006** 80A25 (35B99, 76N15)
- Sivazlian, B. D. (with Mahoney, J. F.) Group replacement of a multicomponent system which is subject to deterioration only. *Adv. in Appl. Probab.* 10 (1978), no. 4, 867–885. (H. Taylor) **80d:90042** 90B25
- Sliz, V. N. (with Ignatenko, V. N.; Stenin, A. A.) Synthesis of optimal controls in systems with terminal data. (Russian) *Adapt. Sistemy Avtomat. Upravleniya No. 7* (1979), 29–34, 127. (Authors' summary) **80g:93039** 93C15
- Sizer, Walter S. Group retractions induced by a total order. *Houston J. Math.* 5 (1979), no. 2, 267–268. (W. E. Deskins) **80j:06019** 06F15 (20M99)
- Šizuk, P. I. (with Černikov, V. V.) The coefficients of  $\alpha$ -convex functions of order  $\beta$ . (Russian) *Mat. Zametki* 24 (1978), no. 5, 679–686, 734. (P. T. Mocanu) **80g:30010** 30C45
- Sjerve, Denis Generalized homological reduction theorems. *Algebraic topology (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 262–275, *Lecture Notes in Math.*, 673, Springer, Berlin, 1978. (K. S. Sarkaria) **80j:55021** 55R05 (18G10)
- See also Algebraic topology, **80b:55002**
- Sjöberg, Lars On the existence of solutions for the method of Bjerhammar in the continuous case. *Bull. Géodésique* 53 (1979), no. 3, 227–230. (K. R. Koch) **80j:86003** 86A30
- Integral formulas for heterogeneous data in physical geodesy. *Bull. Géodésique* 53 (1979), no. 4, 297–315. (Author's summary) **80k:86007** 86A30 (65U05, 93Exx)
- Sjödin, T. (with Ivert, P.-A.) On the impossibility of a finite propositional lattice for quantum mechanics. *Helv. Phys. Acta* 51 (1978), no. 5–6, 635–636 (1979). (Authors' summary) **80g:06005** 06A23 (03G12)
- Sjödin, Tord Capacities of compact sets in linear subspaces of  $\mathbb{R}^n$ . *Pacific J. Math.* 78 (1978), no. 1, 261–266. (V. M. Isakov) **80k:31004** 31B10 (46E35)
- Sjögren, L. (with Sjölander, A.) Kinetic theory of classical liquids. I. Basic theory. *Ann. Physics* 110 (1978), no. 1, 122–155. (Douglas Henderson) **80f:82030a** 82A35
- Kinetic theory of classical liquids. II. Numerical results on the density fluctuations in liquid argon. *Ann. Physics* 110 (1978), no. 1, 156–172. (Douglas Henderson) **80f:82030b** 82A35
- Kinetic theory of classical liquids. III. Numerical results on the transverse current correlation in liquid argon. *Ann. Physics* 110 (1978), no. 1, 173–179. (Douglas Henderson) **80f:82030c** 82A35
- Sjölander, A. (with Sjögren, L.) Kinetic theory of classical liquids. I. Basic theory. *Ann. Physics* 110 (1978), no. 1, 122–155. (Douglas Henderson) **80f:82030a** 82A35
- Sjölin, Per Lipschitz continuity of spherical means. *Linear spaces and approximation (Proc. Conf., Math. Res. Inst., Oberwolfach, 1977)*, pp. 229–234, *Internat. Sci.-Institute Numer. Math.*, 40, Birkhäuser, Basel, 1978. (R. Kaufman) **80j:42031** 42B05
- (with Peyrière, Jacques) Regularity of spherical means. *Ark. Mat.* 16 (1978), no. 1, 117–126. (Hans P. Heinig) **80d:46061** 46E35
- A relation between Fourier transforms in one and two variables. *Approximation theory (Papers, Vth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 241–245, Banach Center Publ., 4, PWN, Warsaw, 1979. (Satoru Igari) **80m:42026** 42B15 (42B10)
- Sjöstrand, Johannes (with Melrose, Richard) Propagation of singularities pour des problèmes aux limites d'ordre 2. *Séminaire Goulaouic-Schwartz (1977/1978)*, 9 pp. *École Polytech., Palaiseau*, 1978. (Ju. V. Egorov) **80d:35088** 35L20 (35S11)
- Sur la propagation des singularités analytiques pour certains problèmes de Dirichlet. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 14, A673–A674. (Author's summary) **80c:58026** 58G17 (35L30, 35S10)
- Sjuc, Andras See Szucs, A.
- Skagerstam, B. S. (with Balachandran, A. P.; Marmo, G.; Stern, A.) Magnetic monopoles with no strings. *Nuclear Phys. B* 162 (1980), no. 3, 385–396. (Authors' summary) **80k:81160** 81G10
- (with Balachandran, A. P.; Marmo, G.; Stern, A.) Spinning particles in general relativity. *Phys. Lett. B* 89 (1980), no. 2, 199–202. (Authors' summary) **80m:83029** 83C99



- Skalnikov, A. A.** (with Kostjuhenko, A. G.) Summability of expansions in eigenfunctions of differential operators and of convolution operators. (Russian) *Funktsional. Anal. i Prilozhen.* 12 (1978), no. 4, 24-40. (Johannes Elschner) **80d:34017** 34B05 (47A70, 47E05, 47G05)
- Skalner, Bogdan** (with Brückner, Damian; Podhorodnyi, Marian) Stochastic processes via a sequential approach. (Polish. English summary) *Univ. Ślaski w Katowicach Prace Nauk.-Prace Mat.* No. 8 (1978), 80-87. (A. I. Ponomarenko) **80h:60047** 60G05
- Problems of overtaking in dynamical systems. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Ślask. Mat.-Fiz.* No. 29 (1979), 131-153. (Author's summary) **80j:93052** 93C05 (93E20)
- Problems of attenuation in the dynamics of nonlinear systems. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Ślask. Mat.-Fiz.* No. 29 (1979), 155-172. (Author's summary) **80j:93056** 93C10
- Skarab, H.** See *Comptat Lectures*, **80f:62003**
- Skarab, V.** A theorem concerning the diagrams in the dynamics of correlations. I. (French summary) *Acad. Roy. Belg. Bull. Cl. Sci.* (5) **64** (1978), no. 9, 578-596. (Author's summary) **80m:82035a** 82A40 (58E07)
- A theorem concerning the diagrams in the dynamics of correlations. II. *Acad. Roy. Belg. Bull. Cl. Sci.* (5) **64** (1978), no. 11, 795-813. (Author's summary) **80m:82035b** 82A40 (58E07)
- Steel, Robert D.** Scaling for numerical stability in Gaussian elimination. *J. Assoc. Comput. Mach.* 26 (1979), no. 3, 494-526. (David R. Kincaid) **80e:65051** 65F35 (65F05)
- Equivalent forms of multistep formulas. *Math. Comp.* 33 (1979), no. 148, 1229-1250. (Karl-Heinz Bachmann) **80j:65027** 65L05
- Stelboe, Stig** (with Haji, Ibrahim N.) Time-domain analysis of nonlinear systems with finite number of continuous derivatives. *IEEE Trans. Circuits and Systems* 26 (1979), no. 5, 297-303. (Authors' summary) **80e:93057** 93C10 (94C05)
- True worst-case analysis of linear electrical circuits by interval arithmetic. *IEEE Trans. Circuits and Systems* 26 (1979), no. 10, 874-879. (Author's summary) **80h:94048** 94C05
- Skelton, Robert E.** (with Likins, Peter W.) Techniques of modeling and model error compensation in linear regulator problems. *Control and dynamic systems: advances in theory and applications*, Vol. 14, pp. 1-101, Academic Press, New York, 1978. (Jean-Pierre Lepeltier) **80a:93076** 93C05
- Observability measures and performance sensitivity in the model reduction problem. *Internat. J. Control* 29 (1979), no. 4, 541-556. (O. I. Nwokah) **80f:93027** 93B07
- Skendić, Marija** On power series in the operator  $(s-a)^{-1}$ . Generalized functions and operational calculus (Proc. Conf., Varna, 1975), pp. 192-196, *Bulgar. Acad. Sci., Sofia*, 1979. (From the introduction) **80g:44012** 44A40
- Skiba, A. N.** A criterion for membership of a finite group in a local formation. (Russian) *Finite groups (Proc. Gomel Sem., Gomel, 1975-1977)* (Russian), pp. 166-169, 176, "Nauka i Tekhnika", Minsk, 1978. (I. D. Macdonald) **80a:20027** 20D10
- Formations that are generated by finite groups. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 2, 101-103, 188. (J. Wiegold) **80a:20022** 20D10
- Local formations of finite groups with  $S_2$ -closed subformations. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 8, 677-680, 764. (Ja. G. Berković) **80m:20018** 20D10
- Skilbenko, I. T.** (with Popov, V. A.) Calculation of classes of partially specified automata with identified states. (Russian) *Automat. i Vychisl. Tehn. (Riga)* 1978, no. 2, 11-12, 91. (A. N. Melikhov (Melihov)) **80h:68054** 68D99
- (with Lysenko, E. V.; Popov, V. A.) Decomposition of logic circuits into standard parts. (Russian) *Automat. Sistemy Upravleniya i Prirody* **45** (1978), 95-101, 4-5. (Authors' summary) **80a:94060** 94C10 (03G05)
- Skil, M. I.** (with Meliev, T. K.) Asymptotic representation of solutions of a system of second-order linear differential equations with small parameter of fractional rank multiplying the derivative. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 4 (1979), 264-267. (Snezana Hristova) **80j:34069** 34E05
- Skilling, John H.** (with Wolfe, Douglas A.) Distribution-free tests for ordered alternatives in a randomized block design. *J. Amer. Statist. Assoc.* 73 (1978), no. 362, 427-431. (J. V. Deshpande) **80a:62062** 62G10
- Skilnjak, S. S.** Classification of syntactical definitions that are oriented towards the strategy of scanning. (Russian) *Questions in the construction of programming systems* (Russian), pp. 89-103, *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (A. V. Anisimov) **80j:68070** 68F25 (68C25)
- Skirmantas, R. B.** Difference schemes of high order accuracy for some weakly nonlinear elliptic equations. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 18 (1978), no. 4, 165-173, 203. (J. Mikliček) **80a:65027** 65N05
- Skitovik, A. V.** The problem of center in the case of a complex stationary point that is separable into simple saddle points. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 10, 1814-1823, 1917. (L. Reizigs) **80b:34029** 34C05
- Skjeldred, Tor** Cohomology eigenvalues of equivariant mappings. *Comment. Math. Helv.* 53 (1978), no. 4, 634-642. (Czes Kosniowski) **80m:57035** 57S10
- Combinatorial geometry and actions of compact Lie groups. *Pacific J. Math.* 79 (1978), no. 1, 197-205. (Czes Kosniowski) **80m:57037** 57S15
- Sklar, Lawrence** Probability as a theoretical concept. Single-case probabilities. *Synthese* 40 (1979), no. 3, 409-414. (Mario Bunge) **80f:03014** 03A05
- Skjland, E. K.** A class of potentials for the nonstationary Dirac equation. (Russian) Questions in quantum field theory and statistical physics. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 77 (1978), 214-226, 232. (Author's summary) **80g:81015** 81C05 (35Q20)
- The method of the inverse scattering problem and the quantum nonlinear Schrödinger equation. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 6, 1337-1341. (J. Wiesner) **80f:81102** 81F99 (35P99)
- Skliarevich, A. N.** (with Cvetkova, E. N.) Analytic description of the cases of the appearance of hazards in an automaton element with possible faults. (Russian) *Discrete systems, formal languages and algorithm complexity* (Russian), pp. 43-53, *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1977. (Krzysztof Sapiecha) **80h:94052** 94C10
- Derivation of a fault detection test of a combinatorial automaton by tests of automata having a reduced number of nonbranching input signals. (Russian) *Automat. i*
- Vychisl. Tehn. (Riga)* 1978, no. 2, 19-24, 91. (Author's summary) **80e:68065** 68D35 (94C99)
- ★ *Основы логических методов проверки автоматов.* (Russian) [Foundations of logical methods of testing automata] "Zinatne", Riga, 1979. 191 pp. (errata insert). (R. Shirladze) **80h:94058** 94C10
- Sklyarov, L. N.** (with Glasko, V. B.; Kulik, N. I.; Tihonov, A. N.) An inverse problem of heat conductivity. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 3, 768-774, 799. (Frederick A. Howes) **80f:80005** 80A20 (65N30)
- Sklyarov, L. I.** (with Rvačov, V. L.; Tonica, V. S.) A set of prime closing functions of three-valued logic. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 2 (1979), 90-94, 155. (V. V. Gorlov) **80j:03093** 03G99 (03B50, 26B40)
- Skobov, Ju. A.** The construction of a set of control tests for a given fault in digital computers. (Russian) *Discrete systems, formal languages and algorithm complexity* (Russian), pp. 66-83, *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1977. (Krzysztof Sapiecha) **80h:94053** 94C10
- Skobelev, V. G.** Irreducible sets of representatives of a family of sets. (Russian) *Discrete systems, formal languages and algorithm complexity* (Russian), pp. 54-65, *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1977. (K. K. Dzhanseitov and G. P. Egor'čev) **80i:05005** 05A05 (04A99)
- Skoda, Henri** Morphismes surjectifs et fibrés linéaires semi-positifs. *Séminaire Pierre Lelong-Henri Skoda (Analyse), Année 1976/77*, pp. 290-324, *Lecture Notes in Math.*, 694, Springer, Berlin, 1978. (G. M. Henkin) **80b:32027** 32L99 (32F99)
- Morphismes surjectifs de fibrés vectoriels semi-positifs. *Ann. Sci. École Norm. Sup.* (4) 11 (1978), no. 4, 577-611. (G. M. Henkin) **80j:32047** 32L15 (32F30)
- See also *Séminaire: Pierre Lelong-Henri Skoda (Analyse)*, **80a:32001**
- Skof, Fulvia** (with Fochi, Margherita) Criteria of continuity for the solution of Cauchy's functional equation. (Italian) *Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* 111 (1977), no. 5-6, 467-472. (Editors) **80e:39001** 39B20
- (with Fochi, Margherita) Some criteria for the continuity of additive functions. (Italian) *Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* 112 (1978), no. 5-6, 351-359. (I. Stamate) **80m:39006** 39B20
- Skolov, V. A.** (with Poljak, B. T.) Solution of least squares problems. (Russian) *Ekonom. i Mat. Metody* 14 (1978), no. 6, 1173-1180. (From the text) **80c:65139** 65K10 (65D10)
- Skolnikov, P. L.** (with Stražev, V. I.) Dyal symmetry of vector and spinor fields. (Russian. English summary) *Acta Phys. Polon. B* 10 (1979), no. 2, 121-129. (Authors' summary) **80d:81083** 81E10 (22E05, 53C10)
- Skopec, I. M.** (with Kantor, I. L.) Freudenthal trilinear systems. (Russian) *Trudy Sem. Vektor. Tenzor. Anal.* 18 (1978), 250-263. (H. de Vries) **80b:17005** 17B20 (17A40)
- Skopec, Z. A.** (with Tihomirov, A. S.) Mapping of some systems of quadratic manifolds of the space  $P_3$  into the space  $P_6$ . (Russian) *Modern geometry* (Russian), pp. 94-102, *Leningrad. Gos. Ped. Inst., Leningrad*, 1978. (R. M. Geidel'man) **80a:14054** 14M12 (14E99)
- Skopec, V. V.** (with Gladkii, A. V.) An iteration method for the solution of boundary value problems. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 5, 19-21. (From the text) **80c:65191** 65N20
- Skopin, A. I.** Transmetabelian groups. (Russian) Rings and linear groups. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 75 (1978), 159-163, 198. (L. A. Kurdačenko) **80j:20037** 20F12
- A group of exponent 8. (Russian) Rings and linear groups. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 75 (1978), 164-165, 198-199. (J. Mennicke) **80g:20052** 20F40
- (with Aleksandrov, P. S.; Bafmakov, M. I.; Borevič, Z. I.; Kublanovskaja, V. N.; Sobolev, S. L.; Jakovlev, A. V.) Dmitrii Konstantinovič Faddeev (on the occasion of his seventieth birthday). (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 2(206), 223-229. (Editors) **80h:01024** 01A70
- Skopin, M. A.** On the problem of convergence factors. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 3, 58-62, 156. (A. L. Brodskii) **80g:42019** 42C10
- Skordev, D.** A normal form theorem for recursive operators in iterative combinatory spaces. *Z. Math. Logik Grundlag. Math.* 24 (1978), no. 2, 115-124. (Igor Lavrov) **80c:03062** 03D60
- The first recursion theorem for iterative combinatory spaces. *Z. Math. Logik Grundlag. Math.* 25 (1979), no. 1, 69-77. (Igor Lavrov) **80g:03049** 03D75
- Skordev, G. S.** The shape of solenoidal spaces. (Russian) *C. R. Acad. Bulgare Sci.* 31 (1978), no. 9, 1101-1102. (Y. Kodama) **80e:54046** 54F43 (55P55)
- The shape of compact, connected and finite-dimensional groups. (Russian) *C. R. Acad. Bulgare Sci.* 31 (1978), no. 12, 1517-1518. (Y. Kodama) **80h:55038** 55P55 (22E99, 54C56)
- (with Górniewicz, Lech) Coincidence of continuous mappings. (Russian) *Fund. Math.* 101 (1978), no. 3, 171-180. (Louis A. Talman) **80e:55004** 55M20
- Skoric, M. M.** (with ter Haar, D.) Higher electron nonlinearities in the dynamics of Langmuir collapse. *Phys. B + C* 98 (1979/80), no. 3, 211-221. (Authors' summary) **80k:82053** 82A45 (76W05)
- Skornjakov, I. A.** (with Kifer, M. I.) Hilbert-Kuga-Sato varieties and parabolic differentials. (Russian) Algebraic numbers and finite groups. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 86 (1979), 94-113, 190. (K.-B. Gundlach) **80j:10036** 10D21 (14J40)
- Skornjakov, L. A.** Unary algebras with regular endomorphism monoids. *Acta Sci. Math. (Szeged)* 40 (1978), no. 3-4, 375-381. (M. E. Adams) **80c:08002** 08A60
- Axiomatizability of a class of injective polygons. (Russian) *Trudy Sem. Petrovsk. No. 4* (1978), 233-239. (O. V. Belegradskij) **80c:03037** 03C60
- Regularity of the wreath product of monoids. *Semigroup Forum* 18 (1979), no. 1, 83-86. (André Lentin) **80e:20077** 20M10
- Skorobogatov, A. A.** (with Makarov, V. L.) Solution of boundary value problems for a generalized biharmonic equation in unbounded domains. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 36 (1978), 123-130, 167. (Jiří Nedoma) **80d:35049** 35J40 (65N20)
- Skorobogatov, G. A.** (with Firsova, N. E.) Markov quantum kinetic equations for a system with a finite number of particles. (Russian) *Ž. Fiz. Him.* 52 (1978), no. 11, 2838-2842. (Hans Kaper) **80g:82028** 82A35

- Skorohod, A. V.** (with Koroljuk, V. S.; Portenko, M. I.; Turbin, A. F.) ★Справочник по теории вероятностей и математической статистике. (Russian) [A manual on probability theory and mathematical statistics] "Naukova Dumka", Kiev, 1978. 582 pp. (R. M. Dudley) **80b:60002** 60-01 (62-01)
- ★Случайные линейные операторы. (Russian) [Random linear operators] "Naukova Dumka", Kiev, 1978. 200 pp. (A. T. Bharucha-Reid) **80b:60090** 60H25 (60G48, 60H05)
- (with Gihman, I. I.) ★Controlled stochastic processes. Translated from the Russian by Samuel Kotz. Springer-Verlag, New York-Heidelberg, 1979. vii+237 pp. ISBN 0-387-90410-7 (Editors) **80b:60081** 60H10 (60J60, 93E20)
- (with Ahmedova, G. M.) The distribution of functionals of some processes with independent increments with a delaying boundary. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 1, 54-62, 111. (M. Iosifescu) **80i:60162** 60J30
- See also Probability distributions in infinite-dimensional spaces, **80j:60002**
- Skorospelov, V. A.** Cubic spline interpolations as a means of approximating three-dimensional curves. (Russian) *Vychisl. Sistemy No. 75 Metody Splain-Funkcii* (1978), 36-44, 138. (Anton Hut'a) **80i:65013** 65D05
- Skotnikov, A. P.** (with Artem'ev, M. Ju.; Gaez, G. P.; Krenkel', T. È.) An algorithm for forming symmetric systems of Walsh functions. *Radiotekhn. i Elektron.* 23 (1978), no. 7, 1432-1440 (Russian); translated as *Radio Engng. Electron. Phys.* 23 (1978), no. 7, 68-74 (1979). (Authors' summary) **80m:94005** 94A11
- Skong, D. L.** (with Park, C.) Distribution estimates of barrier-crossing probabilities of the Yeh-Wiener process. *Pacific J. Math.* 78 (1978), no. 2, 455-466. (N. M. Zinchenko) **80c:60093** 60J65 (60G15)
- Skowronski, A.** (with Simson, Daniel) On the category of commutative connected graded Hopf algebras over a perfect field. *Fund. Math.* 101 (1978), no. 2, 137-149. (Bodo Pareigis) **80a:16019** 16A24 (14L15)
- Skowronski, J. M.** (with Vincent, Thomas L.) Controllability with capture. *J. Optim. Theory Appl.* 29 (1979), no. 1, 77-86. (T. Parthasarathy) **80i:93015** 93B05 (90D26)
- Skriginov, M. M.** The Bette-Sommerfeld conjecture. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 3, 533-534. (Woodford W. Zachary) **80i:35138** 35P05
- Proof of the Bette-Sommerfeld conjecture in dimension 2. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 1, 39-42. (V. D. Kolmanenko) **80i:35053** 35P05 (81F99)
- (with Venkov, A. B.) On the question of H. Weyl's formula in the spectral theory of automorphic functions. (Russian) *Funktsional. Anal. i Prilozhen.* 13 (1979), no. 1, 67-68. (J. Szmidt) **80i:10036** 10D40 (22E40, 30F35, 58G25)
- Skrupnik, A. I.** Problem-oriented software for asymptotic methods of nonlinear mechanics. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 2* (1979), 133-136, 158. (Author's summary) **80c:70030** 70K99 (34E05)
- Skrupnik, I. V.** Higher order quasilinear elliptic equations with continuous generalized solutions. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 6, 1104-1118, 1151. (B. P. Panejah) **80a:35053** 35J65
- (with Šiklov, A. È.) Solutions of the Dirichlet problem that are regular in a closed domain for the Monge-Ampère equations. (Russian) *Mat. Fiz. No. 23* (1978), 87-90, 115. (Ja. A. Roitberg) **80a:35035** 35J25 (53C45)
- (with Šiklov, A. È.) Coercivity of the bilinear form generated by a pair of elliptic operators in the space  $W_2^1(\Omega)$ . (Russian) *Mat. Fiz. No. 24* (1978), 111-115, 124. (D. M. Eidus) **80i:35051** 35J40
- Solvability of the nonlinear Dirichlet problem in a narrow strip. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 3, 569-573. (J. Danes) **80m:35035** 35J65
- See also Boundary value problems for partial differential equations, **80i:35003**
- Skrupnik, V. P.** On small factors multiplying the derivatives. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazakh. SSR Ser. Fiz.-Mat.* 1978, no. 1, 36-40, 91. (Snezana Hristova) **80a:34082** 34E15
- Behavior of the solutions for systems of functional-differential equations. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 9* (1979), 701-704, 776. (G. S. Ladde) **80m:34073** 34K15
- Skrjago, A. M.** On compact regular semigroups of complex matrices. *Semigroup Forum* 15 (1977), no. 2, 95-101. (Author's introduction) **80a:22004** 22A15
- Skrupnik, G. I.** A recurrence procedure for detecting nonuniqueness of phase measurements. (Russian) *Avtometrija* 1978, no. 3, 8-13, 121. (Author's summary) **80a:94005** 94A05
- Skrupnik, I. V.** See Skrupnik, I. V.
- Skubacevskii, A. I.** (with Onanov, G. G.) Differential equations with deviating arguments in stationary problems of the mechanics of deformable bodies. (Russian) *Prikl. Meh.* 15 (1979), no. 5, 39-47, 109. (Authors' summary) **80c:73055** 73K99 (35R10)
- Skubenko, B. F.** (with Bakiev, K.; Pen, A. S.) On an upper bound for the product of linear inhomogeneous forms. (Russian) *Mat. Zametki* 23 (1978), no. 6, 789-797. (R. A. Rankin) **80b:10040a** 10E15
- (with Narzullaev, H. N.) A refinement of the estimate of the arithmetical minimum of the product of inhomogeneous linear forms (on the inhomogeneous Minkowski conjecture). (Russian) *Studies in number theory, 5. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 82 (1979), 88-94, 166. (R. A. Rankin) **80a:10040b** 10E15
- Skudlarek, Hans-Ludwig** On a two-sided version of Reiter's condition and weak containment. *Arch. Math. (Basel)* 31 (1978/79), no. 6, 605-610. (Alan L. T. Paterson) **80b:43010** 43A65 (22D10)
- Une mesure maximale dont le support ne contient pas de points extrémaux. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 23, A1069-A1070. (Author's summary) **80d:28030** 28C10
- (with Felix, Rainer; Henrichs, Rolf Wim) Topological Frobenius reciprocity for projective limits of Lie groups. *Math. Z.* 165 (1979), no. 1, 19-28. (Alan L. T. Paterson) **80c:22010** 22D10 (22E30)
- Skula, Ladislav** On a problem of Znam. (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* 32 (1975), 87-90. (Editors) **80i:10004** 10A05
- (with Janák, Jaroslav) On the integers  $x_i$  for which  $x_1 \cdots x_{i-1} x_{i+1} \cdots x_n + 1$  holds. (Russian summary) *Math. Slovaca* 28 (1978), no. 3, 305-310. (V. C. Harris) **80c:10007** 10A05
- Skupień, Z.** Finding all maximal path factors of a tree and related problems. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II, pp. 1031-1040, Colloq. Math. Soc. János Bolyai, 18, North-Holland, Amsterdam, 1978. (Pavel Tomáš) 80c:05051* 05C05 (05C38, 68E10)
- Skurat'skii, A. I.** The problem of the generation of free groups by two unitriangular matrices. (Russian) *Mat. Zametki* 24 (1978), no. 3, 411-414, 447. (A. D. Mednykh) **80d:20044** 20H20
- Skurbin, V. I.** See Systems analysis of industrial production, **80a:90048**
- Škutín, L. I.** Exact formulation of equations of nonlinear deformation of thin shells. (Russian) *Prikl. Problemy Proc. i Plast.* No. 9 (1978), 19-25, 147. (Author's summary) **80b:73050** 73L10
- Skvorcov, D. P.** The logic of infinite problems and the Kripke model on atomic semilattices of sets. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 4, 798-801. (L. L. Maksimova) **80i:03040** 03B55
- (with Maksimova, L. L.; Šehtman, V. B.) Impossibility of finite axiomatization of Medvedev's logic of finite problems. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 5, 1051-1054. (G. E. Minc) **80c:03021** 03B55 (03B45)
- Skvorcov, G. E.** See Cercignani, Carlo, **80a:82042**
- Skvorcov, V. A.** (with Wade, W. R.) Generalization of some results concerning Walsh series and the dyadic derivative. (Russian summary) *Anal. Math.* 5 (1979), no. 1, 249-255. (W. Spletstösser and P. L. Butzer) **80i:42017** 42C10 (26A24)
- See also de Guzman, Miguel, **80b:28005**
- Skym, Sven** On good ETOL forms. *Theoret. Comput. Sci.* 7 (1978), no. 3, 263-272. (A. Salomaa) **80d:68100** 68F05
- Slabospitskii, O. S.** (with Kirichenko, M. F.) Conditions of identifiability for dynamical systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 10* (1979), 849-852, 881. (Editors) **80m:70020** 70G99 (93E11)
- Slack, J. M. W.** A serial threshold theory of regeneration. *J. Theoret. Biol.* 82 (1980), no. 1, 105-140. (Fred L. Bookstein) **80m:92001** 92A05
- Slade, Norman A.** (with Ross, George G.) A predator-prey viewpoint of a single species population. *J. Theoret. Biol.* 77 (1979), no. 4, 513-522. (Authors' summary) **80c:92017** 92A15
- Śladek, Andrzej** (with Błaszczyk, Bronisława; Kula, Mieczysław; Szczepanik, Bonifacy; Szczepanik, Lucyna; Szymczek, Kazimierz) ★Zbiór zadań z teorii grup. (Polish) [A collection of problems on group theory] Edited and with a foreword by Szymczek. Uniwersytet Śląski, Katowice, 1979. 148 pp. (Paul Jambor) **80i:20001** 20-01
- Sladký, Karel** Sensitive optimality criteria for continuous time Markov decision processes. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978), Vol. B, pp. 211-225, Reidel, Dordrecht, 1978. (E. I. Kistauri) 80c:90112* 90C40
- Šlafman, Š. M.** (with Štenc, M. A.) Convergence of the finite element method in the nonlinear theory of oscillations of thin elastic shells, with the inertia of revolution taken into account. (Russian) *Izv. Severo-Kavkaz. Nauchn. Centra Vysš. Školy Ser. Estest. Nauk.* 1979, no. 2, 20-24, 109. (Authors' summary) **80i:73071** 73L99 (65N30)
- Slagle, J. R.** (with Chang, C. L.) Using rewriting rules for connection graphs to prove theorems. *Artificial Intelligence* 12 (1979), no. 2, 159-178. (Michael Bauer) **80i:68077** 68G15 (03B35, 68E10)
- Šlahor, Ludomir** On the solution of the de la Vallée Poussin problem by using quasilinearization. *Math. Nachr.* 87 (1979), 23-33. (Pietro Marzulli) **80b:65065** 65L10
- Slansky, R.** (with Gell-Mann, M.; Ramond, P.) Color embeddings, charge assignments, and proton stability in unified gauge theories. *Rev. Modern Phys.* 50 (1978), no. 4, 721-744. (A. O. Barut) **80c:81116** 81G05 (22E70)
- Slater, B. H.** Singular subjects. *Dialogue* 18 (1979), no. 3, 362-372. (Editors) **80g:03008** 03A05
- Slater, Morton** (with Newman, Donald J.) Waring's problem for the ring of polynomials. *J. Number Theory* 11 (1979), no. 4, 477-487. (S. E. Schuur) **80m:10016** 10B35 (10J99)
- Slater, Peter J.** (with Bange, David W.; Barkauskas, Anthony E.) A constructive characterization of trees with two disjoint minimum dominating sets. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978), pp. 101-112, Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978. (H. Joseph Straight) 80c:05060* 05C05
- Structure of the k-centra in a tree. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978), pp. 663-670, Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978. (R. A. Meltzer) 80c:05064* 05C05 (05C99)
- A characterization of soft hypergraphs. *Canad. Math. Bull.* 21 (1978), no. 3, 335-337. (C. Berge) **80d:05041** 05C65
- (with Maurer, Stephen B.) On k-minimally n-edge-connected graphs. *Discrete Math.* 24 (1978), no. 2, 185-195. (András Frank) **80c:05094** 05C40 (05C20)
- Centers to centroids in graphs. *J. Graph Theory* 2 (1978), no. 3, 209-222. (R. C. Entringer) **80a:05074** 05C05 (05C99)
- (with Entringer, R. C.) A theorem on critically 3-connected graphs. *Nanta Math.* 11 (1978), no. 2, 141-145. (Paul A. Catlin) **80i:05065** 05C40
- Path coverings of the vertices of a tree. *Discrete Math.* 25 (1979), no. 1, 65-74. (G. Chartrand) **80d:05034** 05C38 (05C05)
- Slatkin, M.** (with Wade, M. J.) Group selection on a quantitative character. *Proc. Nat. Acad. Sci. U.S.A.* 75 (1978), no. 7, 3531-3534. (Charles J. Mode) **80a:92022** 92A15
- Slavkova, M. Ja.** (with Čelankov, B.) Investigation of canonical systems in the case of resonance of arbitrary rank. (Bulgarian. Russian and English summaries) *Godišnik Vist. Učebn. Zaved. Prilozna Mat.* 12 (1976), no. 1, 125-142 (1978). (Authors' summary) **80d:34042** 34C15
- Slavov, A. A.** (with Faddeev, L. L.) ★Введение в квантовую теорию калибровочных полей. (Russian) [Introduction to the quantum theory of gauge fields] "Nauka", Moscow, 1978. 240 pp. (James D. Fabry) **80m:81053** 81E10 (53C80)
- Supersymmetric gauge theories and their possible applications to the weak and electromagnetic interactions. *Uspehi Fiz. Nauk* 124 (1978), no. 3, 487-508 (Russian); translated as *Soviet Phys. Uspekhi* 21 (1978), no. 3, 240-251. (M. A. Rashid) **80c:81120** 81G15 (22E70, 81D20, 81G10)
- Slavov, D. A.** (with Il'in, V. A.; Imašev, M. S.) Causality and regularization. (Russian)



- Vestnik Moskov. Univ. Ser. III Fiz. Astron.* 19 (1978), no. 6, 35–41. (Authors' summary) **80c:81112** 81F99
- Slavutin, E. I. (with Bašmakova, I. G.; Gnedenko, B. V.; Kuzičeva, Z. A.; Medvedev, F. A.; Ožigova, E. P.; Partin, A. N.; Rudakov, A. N.; Šel'nikov, O. B.; Juškevič, A. P.) ★Математика XIX века. (Russian) [XIXth century mathematics] Математическая логика. Алгебра. Теория чисел. Теория вероятностей [Mathematical logic. Algebra. Number theory. Probability theory] Edited by A. N. Kolmogorov and A. P. Juškevič. "Nauka", Moscow, 1978. 255 pp. (I. Grattan-Guinness) **80c:01010** 01A55 (with Bašmakova, I. G.; Rozenfel'd, B. A.) The Arabic text of Diophantus' *Aritmetica*. (Russian) *Istor.-Mat. Issled.* No. 23 (1978), 192–225, 358. (E. M. Bruins) **80d:01005** 01A20 (01A30)
- Sledd, W. T. On multipliers of  $H^p$  spaces. *Indiana Univ. Math. J.* 27 (1978), no. 5, 797–803. (M. Abel) **80b:42010** 42B15 (30D55, 46J15)
- Sledge, Frank See Hall, Charles, **80j:41006**
- Sherman, B. D. Multiparameter spectral theory in Hilbert space. *J. Math. Anal. Appl.* 65 (1978), no. 3, 511–530. (Patrick J. Browne) **80c:47021** 47A70 (with Roach, G. F.) Coupled operator systems and multiparameter spectral theory. *Proc. Roy. Soc. Edinburgh Sect. A* 80 (1978), no. 1–2, 23–34. (Patrick J. Browne) **80d:47027** 47A70 (with Browne, Patrick J.) Solvability of a linear operator system. II. *Questiones Math.* 3 (1978/79), no. 2, 155–165. (B. V. Loginov) **80b:47012** 47A50 (with Roach, G. F.) On the spectral theory of operator bundles. II. *Applicable Anal.* 9 (1979), no. 1, 29–36. (Patrick J. Browne) **80b:47024** 47A70 (34B25) (with Browne, Patrick J.) Nonlinear multiparameter Sturm-Liouville problems. *J. Differential Equations* 34 (1979), no. 1, 139–146. (F. Max Stein) **80m:34017** 34B25 (with Bradley, J. Scott)  $K$ -positive ordinary differential operators of the third order. *J. Math. Anal. Appl.* 70 (1979), no. 1, 249–257. (M. Otelbaev) **80b:47055** 47E05 (with Browne, Patrick J.) Regular multiparameter eigenvalue problems with several parameters in the boundary conditions. *J. Math. Anal. Appl.* 72 (1979), no. 1, 29–33. (F. Max Stein) **80m:34018** 34B25 (with Browne, Patrick J.) Analytic perturbations of multiparameter eigenvalue problems. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 119, 257–263. (R. M. Dzabaz-Zade) **80j:47024** 47A70 (47A55)
- Sjölpen, Gérard L. G. (with Dzinotiyewi, Henneri A. M.) A note on measures on foundation semigroups with weakly compact orbits. *Pacific J. Math.* 81 (1979), no. 1, 61–69. (Anne C. Baker) **80f:43002** 43A05 (28C10)
- L-multiplicators for foundation semigroups with identity element. *Proc. London Math. Soc.* (3) 39 (1979), no. 2, 299–330. (Alan L. T. Paterson) **80k:43003** 43A10 (22A20)
- Sleky, Arunas G. (with Avizienis, Algirdas) A modified bi-imaginary number system. *Proceedings of the 4th IEEE Symposium on Computer Arithmetic (Santa Monica, Calif., 1978)*, pp. 48–55. *IEEE, Long Beach, Calif.*, 1978. (Authors' summary) **80g:68014** 68B05 (68A05)
- Slonimzon, K. M. (with Nemirovskii, Ju. V.) On the question of the propagation of elastic stress waves in continuously inhomogeneous anisotropic media. (Russian) *Ž. Prikl. Meh. i Tehn. Fiz.* 1979, no. 5, 126–134, 159. (Authors' summary) **80b:73028** 73D99
- Slonim, M. Instability of steady shearing flows in a nonlinear viscoelastic fluid. *Arch. Rational Mech. Anal.* 68 (1978), no. 3, 211–225. (Jacques Mauss) **80c:76004** 76A10 (76E05)
- Damped conservation laws in continuum mechanics. *Nonlinear analysis and mechanics: Heriot-Watt Symposium, Vol. III (Heriot-Watt Univ., Edinburgh)*, pp. 135–173. *Res. Notes in Math.*, 30, Pitman, London, 1979. (R. R. Huilgol) **80g:73008** 73B20 (35L65) (with Ball, J. M.) Nonharmonic Fourier series and the stabilization of distributed semilinear control systems. *Comm. Pure Appl. Math.* 32 (1979), no. 4, 555–587. (S. E. Aiderous) **80f:93065** 93D99 (34H05)
- Slonev, M. A. (with Šlaifman, S. M.) Convergence of the finite element method in the nonlinear theory of oscillations of thin elastic shells, with the inertia of rotation taken into account. (Russian) *Izv. Severo-Kavkaz. Nauch. Centra Vys. Školy Ser. Estestv. Nauk.* 1979, no. 2, 20–24, 109. (Authors' summary) **80f:73071** 73L99 (65N30)
- Slonov, A. G. The method of local collocation in the eigenvalue problem. (Russian) *Cisl. Metody Meh. Sploin. Sredy* 9 (1978), no. 5 *Matematičeskoe Modelirovanie*, 105–114. (J. B. Butler, Jr.) **80b:65073** 65L15 Estimates of the eigenvalues of equations of the stability of a compressible boundary layer. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1335–1339, 1360. (Author's summary) **80c:76060** 76N05
- Slonin, L. I. Betti theorem and orthogonality relations for eigenfunctions. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* 14 (1979), no. 1, 83–87. (Russian); translated as *Mech. Solids* 14 (1979), no. 1, 74–77. (From the summary) **80b:73030** 73D99 (49G05)
- Slonovskiy, A. P. (with Rvačov, V. L.; Popivkii, V. I.) Solution of a three-dimensional non-steady-state heat conduction problem under boundary conditions that change with time. (Russian) *Cisl. Metody Meh. Sploin. Sredy* 9 (1978), no. 6 *Mat. Modelirovanie*, 125–135. (B. Vujanović) **80m:80009** 80A20
- Slonov, A. M. (with Zevlakov, K. A.; Šestakov, I. P.; Širlov, A. I.) ★Кольца, близкие к ассоциативным. (Russian) [Rings that are nearly associative] Современная Алгебра. [Monographs in Modern Algebra] "Nauka", Moscow, 1978. 431 pp. (Harry F. Smith) **80b:17002** 17-02 (17Cxx, 17Dxx)
- Slonik, K. (with Sander, Wolfgang) A generalization of a theorem of Banach. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 2, 382–384. (A. Appert) **80b:54036** 54E52
- Sloneko, A. O. See Aho, A.; et al., **80g:68036** and *Studies in constructive mathematics and mathematical logic*, **80j:03005**
- Slonovskii, V. B. (with Buhonin, Ju. S.) A method of coding incoherent optical signals. (Russian) *Avtometrija* 1979, no. 2, 31–40, 123. (Authors' summary) **80g:94011** 94A12
- Slivinskis, Algimantas Equilibrium in a game of dynamic economic models. (Russian. Lithuanian and English summaries) *Mat. Metody v Social. Nauk.—Trudy Sem. Procezy Optimal. Upravleniya II Sekcija No. 10* (1978), 75–86, 123. (E. Vilkas) **80b:90040** 90A16
- Slivinskis, V. Methods of minimal realization of linear dynamical stationary systems. Introduction. (Russian. English and Latvian summaries) *Statist. Problemy Upravleniya* —Trudy Sem. Procezy Optimal. Upravleniya V Sekcija No. 33 (1979), 31–74, 113. (Author's summary) **80d:93051** 93C99 (93B15)
- Sljusearuk, V. E. On the question of absolute exponential stability of linear differential equations of lagging type in a Banach space. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 8, 1526–1528, 1535–1536. (Russell C. Thompson) **80a:34118** 34K30 (34G10)
- Application of Wiener's theorem on absolutely convergent Fourier series to the study of equations in the space of almost periodic vector sequences. (Russian) *Trudy Funktsional. Anal. i Prilozhen.* No. 29 (1978), 127–134, v. (Author's summary) **80a:47043** 47B37 (42A28)
- Solution of linear functional equations in the space of functions bounded on  $\mathbb{R}^n$ . (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 3, 416–422, 431. (G. I. Sulhaniivili) **80d:39008** 39B40
- Strongly absolutely asymptotically stable solutions of linear differential equations with lags in a Banach space. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 9, 1614–1619, 1724–1725. (C. Corduneanu) **80b:34108** 34K20 (34K30)
- Bounded solutions of nonlinear almost periodic discrete systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 7* (1979), 519–522, 590. (R. Kodnár) **80c:39013** 39B70 (47H15)
- Bounded solutions of nonlinear almost periodic functional-differential equations. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 8* (1979), 615–618, 687. (C. Corduneanu) **80c:34099** 34K15
- Sljusear, V. A. (with Jankelevič, R. P.) Impossibility of phase transition into the superradiating state in a gauge-invariant system which is in thermodynamic equilibrium. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 1, 124–129. (V. P. Kalashnikov) **80j:82012** 82A25 (81K05)
- Sloan, Alan A note on exponentials of distributions. *Pacific J. Math.* 79 (1978), no. 1, 207–224. (W. A. J. Luxemburg) **80m:46035** 46F10 (03H05, 47D05)
- Sloan, D. M. (with Bramley, J. S.) Note on the Riccati method for differential eigenvalue problems of odd order. *J. Comput. Phys.* 30 (1979), no. 2, 296–305. (Authors' summary) **80c:65178** 65L15
- Sloan, Ian H. (with Graham, Ivan G.) On the compactness of certain integral operators. *J. Math. Anal. Appl.* 68 (1979), no. 2, 580–594. (S. Newberger) **80j:47059** 47G05 (47B38)
- Sloane, A. (with Marek, J.) A finite rotating body in general relativity. (Italian and Russian summaries) *Nuovo Cimento B* (11) 51 (1979), no. 1, 45–52. (Brian O. J. Tupper) **80c:83007** 83C15
- Sloane, Nell J. A. (with MacWilliams, F. Jessie; Odlyzko, Andrew M.; Ward, Harold N.) Self-dual codes over GF(4). *J. Combin. Theory Ser. A* 26 (1978), no. 3, 288–318. (Raymond Hill) **80f:94016** 94B05 (05B05) (with Conway, John H.; Odlyzko, Andrew M.) Extremal self-dual lattices exist only in dimensions 1 to 8, 12, 14, 15, 23, and 24. *Mathematika* 25 (1978), no. 1, 36–43. (R. A. Rankin) **80d:10045** 10E20
- Self-dual codes and lattices. *Relations between combinatorics and other parts of mathematics (Proc. Sympos. Pure Math., Ohio State Univ., Columbus, Ohio, 1978)*, pp. 273–308. *Proc. Sympos. Pure Math., XXXIV, Amer. Math. Soc., Providence, R.I.*, 1979. (E. F. Assmus, Jr.) **80f:10037** 10E30 (94Bxx) (with Huffman, W. C.) Most primitive groups have messy invariants. *Adv. in Math.* 32 (1979), no. 2, 118–127. (Klaus Pommerenig) **80c:20056** 20G20 (13E15) (with Conway, John H.; Pless, Vera) Self-dual codes over GF(3) and GF(4) of length not exceeding 16. *IEEE Trans. Inform. Theory* 25 (1979), no. 3, 312–322. (V. A. Zinov'ev) **80b:94026** 94B05 (with van Lint, Jacobus H.; MacWilliams, F. Jessie) On pseudo-random arrays. *SIAM J. Appl. Math.* 36 (1979), no. 1, 62–72. (J.-M. Goethals) **80b:95011** 05B15 See also Roselle, David P., **80c:01057**
- Sloboda, Fridrich An imperfect conjugate direction method of the Gaussian type for minimization. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section I, pp. 567–580. *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (C. A. Botsaris) **80b:65041** 65K10 (90C25, 90C30)
- Slobodinskaja, T. V. (with Petrosjan, L. A.) Antagonistic pursuit game with several participants and incomplete information. (Russian) *Control of dynamical systems (Russian)*, pp. 195–213, 320. *Leningrad. Univ., Leningrad*, 1978. (Authors' summary) **80f:90172** 90D26
- Slobodanin, N. M. Existence of the equilibrium situation in infinite  $n$ -person positional games. (Russian) *Control of dynamical systems (Russian)*, pp. 213–219, 321. *Leningrad. Univ., Leningrad*, 1978. (Author's summary) **80f:90180** 90D99
- Słociński, Marek A Szegő type property for two doubly commuting contractions. *Ann. Polon. Math.* 36 (1979), no. 1, 49–53. (T. Andó) **80b:47014** 47A45
- Sloman, S. B. Decrease of correlations in two-dimensional models with continuous group symmetry. (Russian. English summary) *Teoret. Mat. Fiz.* 37 (1978), no. 3, 427–430. (Editors) **80f:81073** 81E10 (22E70, 82A05)
- Slownik, David Searching for the 27th Mersenne prime. *J. Recreational Math.* 11 (1978/79), no. 4, 258–267. (H. J. Godwin) **80g:10013** 10A25
- Slownik, Roman Scheduling preemptable tasks on unrelated processors with additional resources to minimize schedule length. *Information systems methodology (Proc. Second Conf. European Cooperation Inform., Venice, 1978)*, pp. 536–547. *Lecture Notes in Comput. Sci.*, 65, Springer, Berlin, 1978. (Author's summary) **80g:68050** 68C15 (68B20)
- Modèles et méthodes d'allocation optimale de moyens limités dans le complexe d'opérations—orientations nouvelles. *Cybernetika* 21 (1978), no. 2, 125–139. (Author's summary) **80a:90061** 90B35 (90B05, 90C05)
- Slugla, S. N. Majorant test for the stability of a control system. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* 1978, no. 12, 84–87. (O. G. Nakonečnij) **80c:93101** 93D05
- van der Sluis, A. Gershgorin domains for partitioned matrices. *Linear Algebra Appl.* 26 (1979), 265–280. (F. Szidarovszky) **80f:15015** 15A24 (15A18)
- Sluspecki, Jerzy (with Halkowska, Katarzyna; Pióróg-Rzepecka, Krystyna) ★Logika i teoria mnogości. (Polish) [Logic and set theory] Państwowe Wydawnictwo Naukowe (PWN), Warsaw, 1978. 309 pp. (Mieczysław Omyła) **80a:03001** 03-01 (04-01)
- Slutsky, Steven Equilibrium under  $\alpha$ -majority voting. *Econometrica* 47 (1979), no. 5,

- 1113-1125. (Maurice Salles) **80j:90020** 90A08
- Slutz, Donald (with Coffman, Edward G., Jr.; Leung, Joseph Y.-T.) On the optimality of fast heuristics for scheduling and storage allocation problems. *Found. Control Engrg.* 3 (1978), no. 4, 161-169 (1979). (Jacek Blaźewicz) **80d:68044** 68C15 (68B15)
- Slutzki, Gloria (with Engelfriet, Joost) Bounded nesting in macro grammars. *Inform. and Control* 42 (1979), no. 2, 157-193. (Authors' summary) **80c:68184** 68F05
- Sluz, Roman (with Hač, Aleksander) A nonlinear Hilbert-Riemann problem with boundary conditions of the class  $L_p^2$ . *Demonstratio Math.* 12 (1979), no. 2, 359-372. (S. A. Tersenov) **80m:30047** 30E25
- Smagin, V. V. The rate of convergence of the Galerkin method of solution of an abstract quasilinear parabolic equation. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 9, 1720-1721, 1728. (A. A. Fonarev) **80m:65048** 65J15
- Smagina, Ye. M. Synthesis of nonstationary linear systems with given dynamic characteristics. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1977, no. 6, 172-179 (Russian); translated as *Engrg. Cybernetics* 15 (1977), no. 6, 131-138 (1978). (Author's summary) **80a:93077** 93C05
- Smaligic, A. (with Gava, E.; Omero, C.) Classical solutions in a generally covariant model with fermions. *Leti. Nuovo Cimento* (2) 26 (1979), no. 10, 289-293. (José M. Cerveró) **80m:81063** 81E99 (81M05)
- Smale, Stephen (with Hirsch, Morris W.) On algorithms for solving  $f(x) = 0$ . *Comm. Pure Appl. Math.* 32 (1979), no. 3, 281-313. (Luciano Biazini) **80b:65061** 65H10 (58C30)
- See also Cairns, Stewart S. **80c:01011**
- Small, Charles Sums of powers in arithmetic progressions. *Canad. Math. Bull.* 21 (1978), no. 4, 505-506. (Ted Chinburg) **80f:10060** 10J99
- Small, Lance W. (with Joseph, Anthony) An additivity principle for Goldie rank. *Israel J. Math.* 31 (1978), no. 2, 105-114. (Marie-Paule Malliavin) **80j:17005** 17B35 (16A12, 17B30)
- (with Amitsur, S. A.) Polynomials over division rings. *Israel J. Math.* 31 (1978), no. 3-4, 353-358. (D. A. Jordan) **80f:16022** 16A39
- (with Lanski, Charles; Resco, Richard) On the primitivity of prime rings. *J. Algebra* 59 (1979), no. 2, 395-398. (Afzal Beg) **80i:16009** 16A12 (16A20)
- (with Resco, Richard; Wadsworth, Adrian R.) Tensor products of division rings and finite generation of subfields. *Proc. Amer. Math. Soc.* 77 (1979), no. 1, 7-10. (H. J. Weiner) **80j:16020** 16A39 (16A08, 16A33, 16A45)
- Smalley, Larry L. Gravitational radiation in asymptotic de Sitter space. *Internat. J. Theoret. Phys.* 17 (1978), no. 1, 5-20. (K. Yano) **80b:83049** 83D05 (53C50)
- Comment on scalar-metric-torsion gravitational theories. *Phys. Rev. D* (3) 18 (1978), no. 10, 3896-3897. (B. Z. Moroz) **80d:83081** 83D05
- Post-Newtonian approximation of the Poincaré gauge theory of gravitation. *Phys. Rev. D* (3) 21 (1980), no. 2, 328-331. (Author's summary) **80k:83016** 83C25
- Smals, S. O. (with Auslander, Maurice; Bautista Ramos, Raymundo; Platzeck, María Inés; Reiten, Idun) Almost split sequences whose middle term has at most two indecomposable summands. *Canad. J. Math.* 31 (1979), no. 5, 942-960. (Manabu Harada) **80j:16021** 16A64
- Samsonko, T. L. (with Makarov, V. L.) Application of best schemes with an exact spectrum to the Sturm-Liouville problem with discontinuous coefficients. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 36 (1978), 130-139, 167. (Authors' summary) **80a:65183** 65L15
- Šmarda, Bohumil Polarity compatible with a closure system. *Czechoslovak Math. J.* 29(104) (1979), no. 1, 13-20. (Werner Poguntke) **80b:06004** 06A15
- Samarzewski, R. (with Malinowski, H.) A numerical method for solving the Abel integral equation. (Polish summary) *Zastos. Mat.* 16 (1977/78), no. 2, 275-281. (J. Sprekels) **80a:65270** 65R20
- (with Malinowski, H.) Numerical solutions of a class of Abel integral equations. *J. Inst. Math. Appl.* 22 (1978), no. 2, 159-170. (Frank G. Hagin) **80c:65253** 65R20 (45L10)
- On weak Chebyshev subspaces and Chebyshev approximation by their elements. (Polish summary) *Zastos. Mat.* 16, no. 3, 475-483 (1979). (Allan Pinkus) **80f:41018** 41A50
- (with Malinowski, H.) On the numerical solution of an Abel integral equation. (Polish summary) *Zastos. Mat.* 16, no. 3, 497-503 (1979). (Abha Ghoshal) **80b:65108** 65R20 (82A45)
- Šmatkov, B. A. (with Alešin, A. V.) Dual turnpike theorems. (Russian) *Ekonom. i Mat. Metody* 14 (1978), no. 5, 949-957. (Mohamed El-Hodiri) **80c:90030** 90A16
- Smeers, Yves (with Ecker, J. G.; Gochet, Willy) A modified reduced gradient method for dual posynomial programming. *J. Optim. Theory Appl.* 26 (1978), no. 2, 265-275. (T. R. Jefferson) **80b:90111** 90C25
- (with Gochet, Willy) A branch-and-bound method for reversed geometric programming. *Oper. Res.* 27 (1979), no. 5, 982-996. (J. Falk) **80m:90074** 90C30
- Šmejkal, Jaromír Data smoothing by means of IIR and FIR filters. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes* (Prague, 1978), Vol. B, pp. 227-237, Reidel, Dordrecht, 1978. (Author's summary) **80g:94018** 94A12
- Šmelev, V. A. (with Garmak, V. A.) A switching circuit consisting of unreliable relays. (Russian) *Information networks and their analysis* (Russian), pp. 140-144, 218, "Nauka", Moscow, 1978. (Authors' summary) **80i:94020** 94C10
- Šmelev, V. V. (with Uzdémir, A. P.) Integer dynamic problems of economic planning with network constraints. I. *Avtomat. i Telemekh.* 1978, no. 7, 106-115 (Russian. English summary); translated as *Automat. Remote Control* 39 (1978), no. 7, part 2, 1025-1033. (Rainer Burkard) **80d:90082** 90C39 (90C10)
- Solving integer linear programming problems by the penalty function method. *Avtomat. i Telemekh.* 1978, no. 11, 149-157 (Russian); translated as *Automat. Remote Control* 39 (1978), no. 11(2), 1700-1707 (1979). (Author's summary) **80f:90093** 90C10
- Šmeleva, I. V. The motion of Lagrange's gyroscope in a gravitational field. (Russian) *Differentsial'nye Uravneniya* (Ryazan) No. 11 (1978), 179-186. (Ljubomir Lilov) **80c:70003** 70E05 (34D10)
- Smeljanšek, R. L. (with Gaisarjan, S. S.) On the question of software organization of problem-describing languages. (Russian) *Vestnik Moskov. Univ. Ser. XV Vychisl. Mat. Kibernet.* 1978, no. 2, 42-48. (Horst Reichel) **80a:68026** 68B99
- Construction of the solution of a problem by means of permutation rules. (Russian) *Vestnik Moskov. Univ. Ser. XV Vychisl. Mat. Kibernet.* 1979, no. 2, 56-64, 71-72. (Author's summary) **80i:68064** 68F05
- Šmel'kin, A. L. Some factor groups of a free product. (Russian) *Trudy Sem. Petrovsk.* No. 5 (1979), 209-216. (V. N. Remeslennikov) **80m:20025** 20E06
- Smelov, V. V. Single-valued formation of conditions on interior and exterior boundaries of the domain in the odd  $P_{2N+1}$  approximation of the method of spherical harmonics. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 1, 248-252, 272. (Author's summary) **80b:78010** 78A99 (33A45)
- Smekten, Z. (with Bittner, R.) Exterior differential forms in operational calculus. *Generalized functions and operational calculus* (Proc. Conf., Varna, 1975), pp. 35-40. *Bulg. Acad. Sci., Sofia*, 1979. (József Dodziuk) **80k:58001** 58A10 (44A40)
- Smetanin, Ju. M. Estimation of time for computing a class of programs by means of a two-processor system with common memory. (Russian) *Control of dynamical systems* (Russian), pp. 220-226, 321, Leningrad. Univ., Leningrad, 1978. (Author's summary) **80g:68063** 68C25 (68B20)
- Smickih, S. V. (with Zabreiko, P. P.) On the problem of calculating the index of a zero singular point of completely continuous vector fields with positive operators. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 2 (Russian), pp. 52-69, Yaroslavl. Gos. Univ., Yaroslavl, 1977. (Ulrich Kosel) **80m:47063** 47H15 (58E05)
- (with Zabreiko, P. P.) A theorem of M. G. Kreĭn and M. A. Rutman. (Russian) *Funktsional. Anal. i Prilozhen.* 13 (1979), no. 3, 81-82. (A. V. Buhvalov) **80j:47059** 47B55
- Šmidt, G. See Schmidt, Günter
- Šmidt, R. A. Subgroups of the general linear group over the field of quotients of a principal ideal ring. (Russian) *Algebraic numbers and finite groups. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 86 (1979), 185-187, 192. (A. I. Skuratkiĭ) **80c:20055** 20G15
- Smilun, L. B. Regular sets and finite automata over  $\beta$ -groups. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 4, 120-125. (I. M. Havel) **80c:68038** 68D05
- The degree of unsolvability of algorithmic problems connected with automata operation on groups. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 5, 9-12. (Max I. Kanovich) **80d:03037** 03D05 (03D35, 68C30)
- Smilansky, U. (with Levit, S.; Möhring, K.; Dreyfus, T.) Focal points and the phase of the semiclassical propagator. *Ann. Physics* 114 (1978), no. 1-2, 223-242. (Author's summary) **80d:81044** 81C99
- Smiley, T. J. (with Shoesmith, D. J.) ★Multiple-conclusion logic. *Cambridge University Press, Cambridge-New York*, 1978. xiii+396 pp. ISBN 0-521-21765-2 (J. A. Kalman) **80k:03001** 03-02 (03B50, 05C20)
- Smirnov, A. B. (with Pavlov, I. V.) Optimal recording of random flows of events. *Avtomat. i Telemekh.* 1978, no. 6, 38-49 (Russian); translated as *Automat. Remote Control* 39 (1978), no. 6, part 1, 808-817. (Richard F. Serfozo) **80d:60117** 60K10
- Smirnov, A. I. The dynamics of increasing-genetic makeup of a biological population in a mathematical model. (Russian) *Trudy Inst. Mat. i Meh. Ural. Nauch. Centr Akad. Nauk SSSR* No. 22. *Metody Planirovan. Promyshl. Proizvodstva* (1977), 91-98, 102 (lost errata). (Hans Kaper) **80g:92056** 92A15
- Smirnov, D. M. The correspondence between regularly definable varieties of unary algebras and semigroups. (Russian) *Algebra i Logika* 17 (1978), no. 4, 468-477, 491. (Jaroslav Ježek) **80g:08011** 08A60 (08B20)
- Smirnov, E. Ja. (with Zubov, V. I.; Ermolin, V. S.; Sergeev, S. L.) ★Управление вращательным движением твердого тела. (Russian) [Control of the rotary motion of a solid body] *Leningrad. Univ., Leningrad*, 1978. 200 pp. (Editors) **80b:93012** 93A99 (70E15)
- The problem of controlling the three-axis orientation of rigid bodies. (Russian) *Control of dynamical systems* (Russian), pp. 226-231, 321-322, Leningrad. Univ., Leningrad, 1978. (Author's summary) **80g:93064** 93D05 (70E15)
- Properties that arise in the relay stabilization of stable oscillations. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 6, 1144-1146, 1152. (Author's summary) **80c:93102** 93D05
- Smirnov, Ju. F. (with Aserova, R. M.; Tolstol, V. N.; Šustov, A. P.) An algebraic approach to the analysis of the geometry of deformed nuclei in the Hartree-Fock method with projections. (Russian. Kazakh summary) *Materials of the 28th Meeting on Nuclear Spectroscopy and the Structure of Atomic Nuclei (Alma-Ata, 1978)* (Russian). *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1978, no. 6, 67-75, 95. (Authors' summary) **80c:81124** 81G35 (22E70)
- (with Kukulin, V. I.; Neudačín, V. G.) Interaction of composite particles and the Pauli principle. (Russian. English summary) *Fiz. Elementar. Častic i Atom. Jadra* 10 (1979), no. 6, 1236-1293. (Authors' summary) **80m:81105** 81G35 (81F10)
- Smirnov, Ju. M. (with Nepomnjaščii, G. M.) Retraction of mappings. (Russian) *Czechoslovak Math. J.* 29(104) (1979), no. 3, 366-377. (T. Maćkowiak) **80b:54014** 54C15 (54C10, 54C55)
- Smirnov, M. M. ★Equations of mixed type. Translated from the Russian. *Translations of Mathematical Monographs*, 51. *American Mathematical Society, Providence, R.I.*, 1978. 232 pp. ISBN 0-8218-4501-2 (Editors) **80a:35090** 35M05
- A boundary value problem of the Biczade-Samarskii type for an equation of mixed type of the second kind. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astron.* 1979, vyp. 1, 77-83, 134. (Author's summary) **80c:35111** 35M05
- Smirnov, V. A. Twisted Cartesian products. (Russian) *Mat. Zametki* 24 (1978), no. 5, 723-732, 735. (Csaba Hatvány) **80c:55039** 55U10 (18G30)
- Smirnova, T. N. Ser Numerical methods and questions in the organization of calculation. **80a:65013**
- Smirnova, V. B. (with Leonov, G. A.) Asymptotic solutions of a system of integro-differential equations with periodic nonlinear functions. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 6, 1406-1412, 1440. (K. Seitz) **80a:45025** 45M05 (45J05)
- Smith, A. C. A one-parameter method for accelerating the convergence of sequences and series. *Comput. Math. Appl.* 4 (1978), no. 2, 157-171. (G. A. Watson) **80b:65006** 65B10 (40A05)
- Asymptotic estimates of sums of series using difference equations. *Utilitas Math.* 13 (1978), 249-269. (W. A. Al-Salam) **80d:40001** 40A25 (39A10)



- Smith, A. F. M. (with Makov, U. E.) A quasi-Bayes sequential procedure for mixtures. *J. Roy. Statist. Soc. Ser. B* 40 (1978), no. 1, 106-112. (Adolfo Gili) **80a:62013** 62C10
- Smith, Bruce D. An application of nonstandard model theory. *J. Algebra* 58 (1979), no. 2, 502-507. (Oda Kühn) **80i:17021** 17C50 (03C60, 03H05, 16A38)
- Smith, Carl (with Case, John) Anomaly hierarchies of mechanized inductive inference. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 314-319. *ACM, New York, 1978*. (Michael Bauer) **80d:68047** 68C20 (03D20, 68D05)
- Smith, Claudia (with Hoggatt, Verner E., Jr.) Generating functions of central values in generalized Pascal triangles. *Fibonacci Quart.* 17 (1979), no. 1, 58-67. (M. E. Cohen) **80h:05006** 05A15
- Smith, Crosbie A new chart for British natural philosophy: the development of energy physics in the nineteenth century. *Hist. of Sci.* 16 (1978), no. 34, part 4, 231-279. (R. H. Atkin) **80m:01029** 01A55 (80A10)
- Smith, David W. (with Hocking, R. R.) Maximum likelihood analysis of the mixed model: the balanced case. *Comm. Statist. A—Theory Methods* 7 (1978), no. 13, 1253-1266. (J. K. Baksalary) **80h:62055** 62J10
- Smith, David Woodruff The case of the exploding perception. *Synthese* 41 (1979), no. 2, 239-269. (Editors) **80i:03016** 03A05 (03B45)
- Smith, Dennis H. (with Nourse, James G.) Nonnumerical mathematical methods in the problem of stereoisomer generation. *Proceedings of Bremer Konferenz zur Chemie (Univ. Bremen, Bremen, 1978)*, Part 1. *Match* 6 (1979), 259-279. (Authors' summary) **80j:80007** 80A30 (20H15)
- Smith, Donald R. On: "A renewal decision problem" (*Management Sci.* 24 (1977/78), no. 5, 554-561) by C. Derman, G. J. Lieberman and S. M. Ross. *Management Sci.* 24 (1977/78), no. 5, 562-563. (Author's summary) **80a:90072b** 90B25
- Optimal repairman allocation—asymptotic results. *Management Sci.* 24 (1977/78), no. 6, 665-674. (Masafumi Sasaki) **80c:90069** 90B25
- (with Derman, C.) Renewal decision problem—random horizon. *Math. Oper. Res.* 4 (1979), no. 3, 225-232. (C. Mohan) **80i:90054** 90B25
- (with Palmer, James T.) Universal fixed messages and the Rivest-Shamir-Adleman cryptosystem. *Mathematika* 26 (1979), no. 1, 44-52. (From the introduction) **80m:94071** 94B99
- Smith, E. R. Lectures on graph theory in statistical physics. Compiled from notes taken by J. W. Perram. *Match* No. 4 (1978), 3-84. (Editors) **80a:82015** 82A05 (05Cxx)
- (with Cummings, P. T.; Wright, C. C.; Perram, John W.) Solution of the Ornstein-Zernike equation for a soft-core Yukawa fluid. *J. Statist. Phys.* 21 (1979), no. 6, 659-667. (Authors' summary) **80k:82059** 82A50
- Mean spherical approximation for simple hard sphere fluids. I. Methods of solution. *Molecular Phys.* 38 (1979), no. 4, 725-754. (V. P. Kalashnikov) **80j:82024** 82A50
- Smith, F. T. The separating flow through a severely constricted symmetric tube. *J. Fluid Mech.* 90 (1979), no. 4, 725-754. (T. W. Barrett) **80d:76016** 76C99 (76Z05, 92A09)
- Nonlinear stability of boundary layers for disturbances of various sizes. *Proc. Roy. Soc. London Ser. A* 368 (1979), no. 1735, 573-589. (W. O. Crimale, Jr.) **80k:76045a** 76E30
- Corrections to: "Nonlinear stability of boundary layers for disturbances of various sizes" [*Proc. Roy. Soc. London Ser. A* 368 (1979), no. 1735, 573-589; MR 80k:76045]. *Proc. Roy. Soc. London Ser. A* 371 (1980), no. 1746, 439-440. (Editors) **80k:76045b** 76E30
- Smith, Fredrick On transitive permutation groups in which a 2-central involution fixes a unique point. *Comm. Algebra* 7 (1979), no. 2, 203-218. (David B. Surowski) **80d:20004** 20B10 (20Dxx)
- A note on an Aschbacher theorem. *Comm. Algebra* 7 (1979), no. 2, 219-224. (David B. Surowski) **80d:20005** 20B10
- Smith, G. E. J. (with Sen, A. R.; Butler, G. J.) On a basic assumption in the line transect method. (German summary) *Biometrical J.* 20 (1978), no. 4, 363-369. (Tore Schweder) **80a:62041** 62F10 (62P10)
- (with Sen, A. R.; Tourigny, J.) Corrections to: "On the line transect sampling method" (*Biometrics* 30 (1974), 329-340). *Biometrics* 34 (1978), no. 2, 328-329. (Editors) **80b:62119** 62P99
- Smith, G. F. (with Kiral, E.) Anisotropic constitutive equations and Schur's lemma. *Internat. J. Engrg. Sci.* 16 (1978), no. 10, 773-780. (A. J. M. Spencer) **80k:73005** 73B05
- Smith, G. J. (with Bergmann, Peter G.) Measurability analysis of the magnetic-type components of the linearized gravitational radiation field. *Gen. Relativity Gravitation* 11 (1979), no. 2, 133-147. (Authors' summary) **80m:83024** 83C50
- Smith, Gary R. Numerical study of particle motion in two waves. *Stochastic behavior in classical and quantum Hamiltonian systems (Volta Memorial Conf., Como, 1977)*, pp. 35-43. *Lecture Notes in Phys.*, 93, Springer, Berlin, 1979. (Author's summary) **80k:82054** 82A45
- Smith, Gordon D. ★Numerical solution of partial differential equations. Finite difference methods. Second edition. Oxford Applied Mathematics and Computing Science Series. The Clarendon Press, Oxford University Press, New York, 1978. xii + 304 pp. ISBN 0-19-859625-1, 0-19-859626-X (Georges A. Lebaud) **80c:65003** 65-01 (65N99)
- Smith, Graham (with Dawson, Jeremy) The determination of necessary and sufficient conditions for the existence of a solution to the  $3 \times 3 \times 3$  multi-index problem. (Czech and Russian summaries) *Apl. Mat.* 24 (1979), no. 3, 201-208, iv. (K. G. Murty) **80i:90079** 90C05
- Smith, H. V. The evaluation of the error term in some numerical quadrature formulae. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 3, 468-472. (Editors) **80c:65066** 65D32
- Smith, Hal L. (with Schmitt, Klaus) Positive solutions and conjugate points for systems of differential equations. *Nonlinear Anal.* 2 (1978), no. 1, 93-105. (B. G. Pachpatte) **80a:34033** 34C10
- Periodic solutions of an epidemic model with a threshold. *Conference on Deterministic Differential Equations and Stochastic Processes Models for Biological Systems (San Cristobal, N.M., 1977)*. *Rocky Mountain J. Math.* 9 (1979), no. 1, 131-142. (H. W. Hethcote) **80c:92040** 92A15
- Smith, Harry F. (with Kleinfeld, Erwin) Prime locally  $(-1, 1)$  rings with chain condition. *Comm. Algebra* 7 (1979), no. 2, 163-176. (A. M. Slin'ko) **80c:17002a** 17A30 (17D05)
- Finite-dimensional locally  $(-1, 1)$  algebras. *Comm. Algebra* 7 (1979), no. 2, 177-191. (A. M. Slin'ko) **80c:17002b** 17A30 (17D05)
- Smith, J. (with Whitson, J. C.; Wheaton, J. H.) Calculations involving ion beam source. *J. Comput. Phys.* 28 (1978), no. 3, 408-415. (Authors' summary) **80a:78015** 78A35 (65H10)
- Smith, J. C. On collectionwise normality. *Colloq. Math.* 40 (1978/79), no. 1, 69-76. (J. E. Vaughan) **80d:54020** 54D15 (54D18)
- Applications of shrinkable covers. *Proc. Amer. Math. Soc.* 73 (1979), no. 3, 379-387. (Richard A. Aló) **80b:54023** 54D15
- Smith, J. D. H. Finite equationally complete entropic quasigroups. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 345-356. *Heyn, Klagenfurt, 1979*. (From the introduction) **80c:20086** 20N05
- byatt-Smith, J. G. B. See Byatt-Smith, J. G. B.
- Smith, James E. (with Metz, Gernot) Strongly fault secure logic networks. Special issue on fault-tolerant computing. *IEEE Trans. Comput.* 27 (1978), no. 6, 491-499. (Izzet Cem Göknar) **80m:94103** 94C10 (68A05)
- On the existence of combinational logic circuits exhibiting multiple redundancy. *IEEE Trans. Comput.* 27 (1978), no. 12, 1221-1225. (K. L. Kodandapani) **80a:94063** 94C10
- Comments on: "Redundancy testing in combinational networks" (*IEEE Trans. Computers* C-23 (1974), no. 10, 1029-1047) by H. P. S. Lee and E. S. Davidson. *IEEE Trans. Comput.* 28 (1979), no. 3, 261-262. (Editors) **80g:94105** 94C15 (68E10)
- Universal system diagnosis algorithms. *IEEE Trans. Comput.* 28 (1979), no. 5, 374-378. (Author's summary) **80b:68002** 68A05 (68C05)
- On necessary and sufficient conditions for multiple fault undetectability. *IEEE Trans. Comput.* 28 (1979), no. 10, 801-802. (Author's summary) **80a:94059** 94C10
- Smith, John H. Erratum to: "General trinomials having symmetric Galois group" [*Proc. Amer. Math. Soc.* 63 (1977), no. 2, 208-212; MR 55 #10433]. *Proc. Amer. Math. Soc.* 77 (1979), no. 2, 298. (Editors) **80m:12022** 12E05 (13B25)
- Smith, Kirby C. (with Maxson, Carlton J.) The centralizer of a group automorphism. *J. Algebra* 54 (1978), no. 1, 27-41. (John D. P. Meldrum) **80b:16029** 16A76
- (with Maxson, Carlton J.) The centralizer of a group endomorphism. *J. Algebra* 57 (1979), no. 2, 441-448. (Richard Davitt) **80j:20031** 20D99
- (with Maxson, Carlton J.) Automorphisms of linear automata. *J. Comput. System Sci.* 19 (1979), no. 1, 18-26. (Václav Koubek) **80k:68034** 68D15
- A characterization of quaternion division algebras. *Rocky Mountain J. Math.* 9 (1979), no. 2, 371-375. (L. M. Chawla) **80c:16014** 16A39
- Smith, Larry On ideals in  $Q_2^*$ . *J. Pure Appl. Algebra* 13 (1978), no. 1, 65-70. (H. Suzuki) **80j:55005** 55N20 (57R77)
- (with Cooke, George E.) On realizing modules over the Steenrod algebra. *J. Pure Appl. Algebra* 13 (1978), no. 1, 71-100. (Stanley Kochman) **80k:55018** 55S99
- (with tom Dieck, Tammo) On coincidence points of maps from manifolds to spheres. *Indiana Univ. Math. J.* 28 (1979), no. 2, 251-255. (A. Dold) **80a:55002** 55M20
- (with Rausen, Martin) A geometric interpretation of sphere bundle boundaries and generalized  $J$ -homomorphisms with an application to a diagram of I. M. James. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 117, 113-117. (Michael Eggar) **80c:55026** 55Q50
- Smith, M. J. The optimal location of a single ring road. *Transportation Res. Part B* 13 (1979), no. 2, 151-154. (Edward Minieka) **80d:90038** 90B10 (90C50)
- Smith, M. W. A. (with Roberts, A. P.) The analysis of a parameter identification algorithm which was derived from the continuous time Kalman filter. *Inform. Sci.* 15 (1978), no. 3, 187-210. (Hironao Kawashima) **80j:93119** 93E11
- (with Roberts, A. P.) The identification of the parameters of time-invariant stochastic systems by a method derived from the continuous-time Kalman filter. *Inform. Sci.* 16 (1978), no. 1, 1-30. (Shinzo Kitamura) **80h:93058a** 93E10
- (with Roberts, A. P.) The relationship between a continuous-time identification algorithm based on the deterministic filter and least-squares methods. *Inform. Sci.* 19 (1979), no. 2, 135-154. (Andor Dobó) **80j:93126** 93E12 (93E11)
- (with Roberts, A. P.) A study of the Kalman filter as a state estimator of deterministic and stochastic systems. *Internat. J. Systems Sci.* 10 (1979), no. 8, 895-911. (Andrew P. Sage) **80g:93082** 93E11 (93E10)
- (with Roberts, A. P.) Corrections to the paper: "The identification of the parameters of time-invariant stochastic systems by a method derived from the continuous-time Kalman filter" [*Inform. Sci.* 16 (1978), no. 1, 1-30; MR 80h:93058a]. *Inform. Sci.* 20 (1980), no. 1, 89. (Editors) **80h:93058b** 93E10
- Smith, Manfred C. On a nonlinear Volterra equation of nonconvolution type. *J. Differential Equations* 32 (1979), no. 2, 294-309. (Roderick Wong) **80f:45023** 45M05 (45D05, 45J05)
- Smith, Mark A. A reflexive Banach space that is LUR and not 2R. *Canad. Math. Bull.* 21 (1978), no. 2, 251-252. (Gianfranco Bottaro) **80d:46032** 46B20
- (with Turett, Barry) Rotundity in Lebesgue-Bochner function spaces. *Trans. Amer. Math. Soc.* 257 (1980), no. 1, 105-118. (K. Sundaresan) **80m:46031** 46E40 (46B20)
- Smith, P. A. (with Finke, G.) Primal equivalents to the threshold algorithm. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section I, pp. 185-198. *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (Authors' summary) **80c:90062** 90C08
- Smith, P. W. (with Borosh, Itzhak; Chui, Charles K.) On approximation of  $x^n$  by incomplete polynomials. *J. Approx. Theory* 24 (1978), no. 3, 227-235. (D. J. Leeming) **80i:41008** 41A10
- (with Barrow, David L.) Asymptotic properties of best  $L_{[0,1]}$  approximation by splines with variable knots. *Quart. Appl. Math.* 36 (1978/79), no. 3, 293-304. (R. Barrar) **80c:41004** 41A15
- (with Barrow, David L.) Efficient  $L_2$  approximation by splines. *Numer. Math.* 33 (1979), no. 1, 101-114. (Donald Kershaw) **80i:41010** 41A15 (41A50)
- Smith, Patricia L. (with Hartfiel, D. J.) Remarks on the rows and columns of  $P$  in the matrix equation  $A = PP^*$ . *Czechoslovak Math. J.* 29(104) (1979), no. 1, 57-61. (Yik-Hoi Au-Yeung) **80d:15016** 15A24 (15A57)
- Smith, Patrick F. (with Roseblade, J. E.) A note on the Artin-Rees property of certain polycyclic group algebras. *Bull. London Math. Soc.* 11 (1979), no. 2, 184-185. (Ralph W.

- Wilkerson, R. 000:16008 16A26 (20C07)  
Rings characterized by their cyclic modules. *Canad. J. Math.* 31 (1979), no. 1, 93-111. (L. Bican) 000:16018 16A48  
The AR property and chain conditions in group rings. *Israel J. Math.* 32 (1979), no. 2-3, 131-144. (Kenneth A. Brown) 000:16010 16A27  
On the structure of certain PP-rings. *Math. Z.* 166 (1979), no. 2, 147-157. (J. D. Fuelberth) 000:16020 16A63 (18E40)
- Smith, Paul J. (with Rae, Donald S.; Manderscheid, Ronald W.; Silbergeld, Sam) Exact and approximate distributions of the chi-square statistic for equiprobability. *Comm. Statist. B—Simulation Comput.* 8 (1979), no. 2, 131-149. (Authors' summary) 000:62023 62E15 (62G10)
- Smith, Peter Approximate operators and dual extremum principles for linear problems. *J. Inst. Math. Appl.* 22 (1978), no. 4, 457-465. (T. R. Gičev) 000:49038 49B22  
On the construction of operators and bounding functionals for dual extremum principles. (German and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 2, 111-115. (Author's summary) 000:49010 49A99 (76W05)
- Smith, R. H. (with Mead, R.) On predicting extinction in simple population models. I. Stochastic linearization. *J. Theoret. Biol.* 80 (1979), no. 2, 189-203. (Authors' summary) 000:92030 92A15
- Smith, R. R. An addendum to: "M-ideal structure in Banach algebras" [J. Funct. Anal. 27 (1978), no. 3, 337-349; MR 57 #7175] by Smith and J. D. Ward. *J. Funct. Anal.* 32 (1979), no. 2, 269-271. (F. F. Bonsall) 000:46087 46J30 (46H20)  
On Banach algebra elements of thin numerical range. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 1, 71-83. (A. M. Sinclair) 000:46051 46H05  
(with Ward, Joseph D.) M-ideals in  $B(L)$ . *Pacific J. Math.* 81 (1979), no. 1, 227-237. (Hermann König) 000:47058 47D30 (47B05)  
(with Ward, Joseph D.) Applications of convexity and M-ideal theory to quotient Banach algebras. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 119, 365-384. (F. F. Bonsall) 000:46071 46H05
- Smith, R. W. The origins of the velocity-distance relation. *J. Hist. Astronom.* 10 (1979), no. 3, 133-165. (D. ter Haar) 000:01025 01A60 (83F05, 85A40)
- Smith, Richard F. The construction of definite indecomposable Hermitian forms. *Amer. J. Math.* 100 (1978), no. 5, 1021-1048. (Paul Ponomarev) 000:10021 10C02
- Smith, Robert A. On  $n$ -dimensional Kloosterman sums. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 3, 173-176. (Editors) 000:10033 10G20 (10H26, 10K05)  
On  $n$ -dimensional Kloosterman sums. *J. Number Theory* 11 (1979), no. 3, 3. Chowla Anniversary Issue, 324-343. (Aleksandar Ivić) 000:10052 10G10
- Smith, Ronald Asymptotic solutions of the Erdogan-Chatwin equation. *J. Fluid Mech.* 88 (1978), no. 2, 323-337. (S. I. Pai) 000:76085 76R10 (35C20)
- Smith, Ronald L. The Moore-Penrose inverse of a reticulant. *Linear Algebra Appl.* 22 (1978), 1-8. (George P. Barker) 000:15011 15A09  
Factorization of symmetric singular M-matrices. *Linear Algebra Appl.* 23 (1979), 253-259. (Thomas L. Markham) 000:15009 15A23 (15A09, 15A48)
- Smith, Russell A. The Poincaré-Bendixson theorem for certain differential equations of higher order. *Proc. Roy. Soc. Edinburgh Sect. A* 83 (1979), no. 1-2, 63-79. (Clark Robinson) 000:34064 34C25 (58F22)
- Smith, Stephen D. Even automizers and conjugacy of involutions. *J. Algebra* 54 (1978), no. 2, 504-515. (M. Jesús Irujo) 000:20036 20D20  
On maximal-class 3-groups and strong 3-embedding. *J. Algebra* 56 (1979), no. 2, 396-400. (Shui Chi Chang) 000:20019 20D05  
Large extraspecial subgroups of widths 4 and 6. *J. Algebra* 58 (1979), no. 2, 251-281. (Arthur Reifart) 000:20030 20D08  
(with Ferguson, Pamela A.) Strongly self-centralizing Sylow 3-groups. *J. Algebra* 58 (1979), no. 2, 572-580. (George Glauberman) 000:20014 20D05 (20D20)
- Smith, T. B. Semicalic approximation in the Weyl picture by path summation. *J. Phys. A* 11 (1978), no. 11, 2179-2190. (M. Breitenacker) 000:81042 81D99 (58F06, 58G40)  
Path sums for Brownian motion and quantum mechanics. *Phys. A* 100 (1980), no. 1, 153-166. (Author's summary) 000:82016 82A05 (81C35)
- Smith, Truett L. (with Tsokos, Chris P.) On extending a method of Puri for the study of certain integral functionals of stochastic processes. (Russian summary) *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* 7 (1978), no. 2, 57-71. (Prem S. Puri) 000:60092 60J25
- rayward-Smith, V. J. See Rayward-Smith, V. J.
- Smith, W. Allen ★Elementary numerical analysis. Harper & Row, Publishers, New York-London, 1979. x+470 pp. ISBN 0-06-046312-0 (Paul Jambor) 000:65002 65-01
- Smith, William W. Invertible ideals and overings. *Houston J. Math.* 5 (1979), no. 1, 141-153. (J. W. Brewer) 000:13001a 13A15 (13C11)  
Erratum to: "Invertible ideals and overings" [Houston J. Math. 5 (1979), no. 1, 141-153; MR 80f:13001]. *Houston J. Math.* 5 (1979), no. 3, 419. (J. W. Brewer) 000:13001b 13A15 (13C11)
- Smithson, R. E. (with Muenzenberger, T. B.) Semilattice structures on dendritic spaces. Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977). I. *Topology Proc.* 2 (1977), no. 1, 243-260. (Terence P. Speed) 000:54069 54F50  
A common fixed point theorem for nested spaces. *Pacific J. Math.* 82 (1979), no. 2, 533-537. (S. L. Singh) 000:54041 54H25
- Smoker, Howard Single-case propensities, modality, and confirmation. Single-case probabilities. *Synthese* 40 (1979), no. 3, 497-506. (Douglas Walton) 000:03017 03B45
- Smolderen, J. J. See Numerical methods in fluid dynamics. 000:76002
- Smolencov, N. K. A weak Riemannian structure on a group of diffeomorphisms. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 5, 78-80. (M. Craioveanu) 000:58018 58D05 (76C99)
- Smolin, Lee (with Dell, John) Graded manifold theory as the geometry of supersymmetry. *Comm. Math. Phys.* 66 (1979), no. 3, 197-221. (A. Rouet) 000:83015 83C45 (58A05)  
Towards a theory of spacetime structure at very short distances. *Nuclear Phys. B* 160 (1979), no. 2, 253-268. (Author's summary) 000:81118 81E15 (53B50)
- Smoljanova, Z. A. Correct algorithms in the algebraic closure of a family of pattern recognition algorithms with a special form of instruction information. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 1023-1032, 1084. (Author's summary) 000:68078 68G10
- Stability of a correct pattern recognition algorithm with a special type of learning information. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 5, 1348-1351, 1360. (Author's summary) 000:68081 68G10
- Smoljanov, O. G. A method for proving uniqueness theorems for evolution differential equations. (Russian) *Mat. Zametki* 25 (1979), no. 2, 259-269, 318. (A. Ramm) 000:34082 34G20 (35Q10, 46G99)
- Smoljanski, S. A. (with Zubarev, D. N.; Prozorkevič, A. V.) Derivation of nonlinear generalized equations of quantum relativistic hydrodynamics. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 3, 394-407. (R. P. Gaida) 000:76082 76Y05 (45P05, 82A30)
- Smoller, Joel (with Conley, Charles) Isolated invariant sets of parameterized systems of differential equations. *The structure of attractors in dynamical systems (Proc. Conf., North Dakota State Univ., Fargo, N.D., 1977)*, pp. 30-47. *Lecture Notes in Math.*, 668. Springer, Berlin, 1978. (Gail A. Carpenter) 000:58023 58F10
- Smorodinskij, Ja. A. (with Serebrennikov, V. B.; Šabad, A. E.)  $O_2$ -covariant Hamiltonian formalism for bounded motion in a central field of force. (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 3, 333-358. (Charles L. Hammer) 000:70032 70H05  
(with Lukáč, I.) On the algebra of Gell-Mann matrices for the SU(3) group. *Jadernaja Fiz.* 27 (1978), no. 6, 1694-1702. (Russian); translated as *Soviet J. Nuclear Phys.* 27 (1978), no. 6, 888-892. (Authors' summary) 000:81133 81G40 (22E60)  
The Clebsch-Gordan coefficients, the  $d$ -function of SU(2), and their symmetry. *Ž. Eksp. Teoret. Fiz.* 75 (1978), no. 3, 797-802. (Russian); translated as *Soviet Phys. JETP* 48 (1978), no. 3, 403-405. (Author's summary) 000:81122 81G20 (22E70)
- Smorodinsky, Meir (with Keane, Michael S.) Bernoulli schemes of the same entropy are finitarily isomorphic. *Ann. of Math. (2)* 109 (1979), no. 2, 397-406. (James W. England) 000:28024 28D20  
(with Keane, Michael S.) The finitary isomorphism theorem for Markov shifts. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 2, 436-438. (Alan Saleski) 000:28031 28D20  
(with Thouvenot, J.-P.) Bernoulli factors that span a transformation. *Israel J. Math.* 32 (1979), no. 1, 39-43. (Douglas Lind) 000:28037 28D05
- Smorjinski, Craig  $\omega$ -consistency and reflection. *Colloque International de Logique (Clermont-Ferrand, 1975)*, pp. 167-181. *Colloques Internat. CNRS*, 249, CNRS, Paris, 1977. (Wilfried Sieg) 000:03057 03F30  
Beth's theorem and self-referential sentences. *Logic Colloquium '77 (Proc. Conf., Wrocław, 1977)*, pp. 253-261. *Studies in Logic and Foundations of Math.*, 96. North-Holland, Amsterdam, 1978. (Richard Statman) 000:03023 03B45  
The axiomatization problem for fragments. *Ann. Math. Logic* 14 (1978), 193-221. (Bernd Dahn) 000:03040 03C90 (03B20, 03B45)  
Calculating self-referential statements. I. Explicit calculations. *Studia Logica* 38 (1979), no. 1, 17-36. (Carlo Cellucci) 000:03030 03B30 (03F99)
- Smrz, P. K. Space-time connections in Lie groups. *Proceedings of the International Symposium on Relativity and Unified Field Theory (Calcutta, 1975-1976)*, pp. 139-142. *Bose Inst. Phys. Sci., Univ. Calcutta, Calcutta*, 1978. (From the introduction) 000:83035 83C40 (55R10)  
Relativity and deformed Lie groups. *J. Math. Phys.* 19 (1978), no. 10, 2085-2088. (Peter Szekeres) 000:83015 83C25 (58H15)
- Šmul'jan, B. L. See Wilson, A. G. 000:90030
- Smullyan, Raymond M. Trees and ball games. *Papers in mathematics*, pp. 86-90. *Ann. New York Acad. Sci.*, 321, New York Acad. Sci., New York, 1979. (Perry Smith) 000:04008 04A20 (05A99, 05C05, 90D99)
- Šmyrev, V. I. A stable algorithm for the method of conjugate directions for quadratic programming. (Russian) *Optimizacija No. 19* (36) (1977), 81-99, 155. (Jürgen Gaddam) 000:90092 90C20
- Smth, W. F. Constant limit of a sequence of iterates. *SIAM J. Math. Anal.* 10 (1979), no. 3, 463-471. (C. Tanaka) 000:30031 30D45 (30D05)
- Smythe, N. F. The Burau representation of the braid group is pairwise free. *Arch. Math. (Basel)* 32 (1979), no. 4, 309-317. (Abdul Majeed) 000:20037 20F36 (32C40, 57M25)
- Smythe, R. T. (with Wiernman, John C.) ★First-passage percolation on the square lattice. *Lecture Notes in Mathematics*, 671. Springer-Verlag, Berlin-New York, 1978. viii+196 pp. ISBN 3-540-08928-4 (G. R. Grimmett) 000:60135 60K99
- Snabb, Thomas (with Irwin, John M.; Cellars, Ralph M.) A functorial generalization of Ulm's theorem. *Comment. Math. Univ. St. Paul.* 27 (1978/79), no. 2, 155-177. (E. A. Walker) 000:20044 20K40 (20K10)
- Snaith, Victor P. Algebraic cobordism and K-theory. *Mem. Amer. Math. Soc.* 21 (1979), no. 221, vii+152 pp. (Donald W. Kahn) 000:57060 57R75 (18F25, 55N15, 57R77)  
See also Algebraic topology. 000:55002
- Snapper, Ernst Quadratic spaces over finite fields and codes. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 3, 149-152. (Editors) 000:94016 94B05  
What is mathematics? *Amer. Math. Monthly* 86 (1979), no. 7, 551-557. (K. Inoue) 000:03013 03A05 (00A25)  
Characteristic polynomials of a permutation representation. *J. Combin. Theory Ser. A* 26 (1979), no. 1, 65-81. (H. K. Farahat) 000:20016 20C30 (05A05)  
The three crises in mathematics: logicism, intuitionism and formalism. *Math. Mag.* 52 (1979), no. 4, 207-216. (J. R. Moschovakis) 000:03015 03A05 (01A60, 03-03)
- Sneddon, I. N. See Thermomechanics in solids. 000:73072
- Sneddon, L. (with Green, M. B.; Stinchcombe, R. B.) Equivalence of  $(d+1)$ -dimensional Ising systems of arbitrary spin to a  $d$ -dimensional spin- $\frac{1}{2}$  quantum system. *J. Phys. A* 12 (1979), no. 7, L189-L192. (W. H. Steeb) 000:82048 82A67
- Snell, J. Laurie (with Kemeny, John G.) ★Mathematical models in the social sciences. Reprint of the 1962 original. MIT Press, Cambridge, Mass.-London, 1978. vii+145 pp. ISBN 0-262-61030-2 (Editors) 000:92060 92A20 (90A30)
- Snellman, Håkan (with Tengstrand, Göran) Relativistic scattering of model particles. *J. Math. Phys.* 20 (1979), no. 1, 132-140. (Authors' summary) 000:81108 81F20
- Snepe-Snepe, M. A. (with Arutjunjan, A. V.) Optimal limited access systems with a finite number of waiting places under minimal loads. (Russian) *Information networks and their analysis (Russian)*, pp. 37-45, 216. "Nauka", Moscow, 1978. (Authors' summary) 000:90055 90B22 (68A05, 94C99)



- Saevchenko, K. I. (with Guz', O. M.; Černyšenko, I. S.; Čehov, Val. N.; Čehov, Vik. N.) Studies in the theory of thin shells with apertures (a survey). (Russian) *Prikl. Meh.* 15 (1979), no. 11, 3-37, 141. (Authors' summary) **80c:73002** 73-02
- Saevčeliev, H. P. An application of Frommer's method in the theory of the stability of strongly nonlinear systems of differential equations. (Bulgarian. Russian and English summaries) *Godišnik Viss. Učebn. Zaved. Prirodna Mat.* 12 (1976), no. 1, 225-236 (1978). (Author's summary) **80d:34069** 34D20 (3A34)
- Saładecki, Jan See Bartnicka, Kalina, **80i:01009**
- Saładecki, Jędrzej On Hamiltonian dynamics of particles with gauge degrees of freedom. *Hadronic J.* 2 (1979), no. 3, 642-656. (Hubert Gollek) **80h:81017** 81C10 (58F06)
- Saider, Robert L. Is the Brauer group generated by cyclic algebras? *Ring theory (Proc. Conf., Univ. Waterloo, Waterloo, 1978)*, pp. 279-301, *Lecture Notes in Math.*, 734, Springer, Berlin, 1979. (David J. Saltman) **80k:16010** 16A16 (14C35)
- Salehovich, Moshe Dynamic programming and principles of optimality. *J. Math. Anal. Appl.* 65 (1978), no. 3, 586-606. (C. A. Botsaris) **80c:49024** 49C20
- Sańciek, B. On a modification of the method of Euler polygons for systems of ordinary differential equations. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* No. 20 (1979), 33-41. (Frank G. Hagin) **80f:34011** 34A45
- Saipes, Ray F. S-barreled topological vector spaces. *Canad. Math. Bull.* 21 (1978), no. 2, 221-227. (J. Horváth) **80d:46005** 46A07
- Vector topologies on spaces of sequentially continuous linear transformations. *Yokohama Math. J.* 26 (1978), no. 1, 27-37. (J. Horváth) **80c:46009** 46A32 (47D15)
- Sańć, Ę. Ę. (with Hazin, L. G.) Investigation of the asymptotic stability of equilibrium at 1:3 resonance. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 67* (1978), 54 pp. (M. I. Rahimberdiev) **80c:34033** 34D20
- Degeneration in an elementary problem of the calculus of variations. (Russian) *Mat. Zametki* 24 (1978), no. 5, 707-716, 735. (B. Vujanović) **80c:49024** 49B05
- Saow, Donald R. Formulas for sums of powers of integers by functional equations. *Acquisition Math.* 18 (1978), no. 3, 269-285. (Christian Radoux) **80a:10005** 10A20 (39A10, 39B05)
- Snyder, A. K. Universal interpolating sets and the Nevanlinna-Pick property in Banach spaces of functions. *Pacific J. Math.* 76 (1978), no. 2, 513-525. (Y. Benyamini) **80d:46066** 46E99 (46J15)
- Snyder, Allan W. (with Srinivasan, Mandyam V.) Human psychophysics: functional interpretation for contrast sensitivity versus spatial frequency curve. *Biol. Cybernet.* 32 (1979), no. 1, 9-17. (Authors' summary) **80c:92012** 92A09
- Snyder, Chip Partial fraction decompositions and Kummer congruences for the normalized coefficients of the Laurent expansion of elliptic functions parametrizing a nonsingular cubic curve in Hessian normal form. *J. Reine Angew. Math.* 306 (1979), 60-87. (K. Ramachandra) **80d:10036** 10D12 (14K07)
- Snyder, Donald L. (with Vaca, Marco V.) Estimation and decision for observations derived from martingales. II. *IEEE Trans. Inform. Theory* 24 (1978), no. 1, 32-45. (Author's summary) **80m:93087** 93E10
- (with Hibey, Joseph L.; Van Schuppen, Jan H.) Error-probability bounds for continuous-time decision problems. *IEEE Trans. Inform. Theory* 24 (1978), no. 5, 608-622. (O. A. Glonti) **80a:60061** 60C35 (94C05)
- Snyder, Herbert H. A general solution of Whittaker's type for the biharmonic equation in three variables. *Trans. Illinois State Acad. Sci.* 70 (1977), no. 2, 128-140. (Author's summary) **80c:31006** 31B30
- Snyder, Lawrence (with Lipton, Richard J.) On the power of applicative languages. *Formal description of programming concepts (Proc. IFIP Working Conf., St. Andrews, N.B., 1977)*, pp. 203-209, North-Holland, Amsterdam, 1978. (Authors' summary) **80c:68131** 68C30 (68B05)
- (with Lipton, Richard J.) On synchronization and security. *Foundations of secure computation (Workshop, Georgia Inst. Tech., Atlanta, Ga., 1977)*, pp. 367-385, Academic Press, New York, 1978. (J. Paradaes) **80c:68037** 68B20 (68D90)
- (with Rosenberg, Arnold L.) Bounds on the cost of data encodings. *Math. Systems Theory* 12 (1978/79), no. 1, 9-39. (Authors' summary) **80c:68033** 68B15 (68E10)
- (with Rosenberg, Arnold L.) Minimal-comparison 2, 3-trees. *SIAM J. Comput.* 7 (1978), no. 4, 465-480. (Giorgio Ausiello) **80a:68115** 68H05 (68E10)
- (with Miller, Raymond E.; Pippenger, Nicholas; Rosenberg, Arnold L.) Optimal 2, 3-trees. *SIAM J. Comput.* 8 (1979), no. 1, 42-59. (Richard A. DeMillo) **80c:68050** 68E10 (68B10)
- So, Joseph W. H. A note on the global stability and bifurcation phenomenon of a Lotka-Volterra food chain. *J. Theoret. Biol.* 80 (1979), no. 2, 185-187. (Author's summary) **80g:92031** 92A15
- So, S. I. (with Strotman, D.) Wigner coefficients for SU(6)  $\supset$  SU(3)  $\supset$  SU(2). *J. Math. Phys.* 20 (1979), no. 1, 153-176. (Daniel A. Akyeampang) **80b:81047** 81C40 (20C30, 22E70)
- Sordani, Paolo M. Existence of fixed points of nonexpansive mappings in certain Banach lattices. *Proc. Amer. Math. Soc.* 73 (1979), no. 1, 25-29. (S. Swaminathan) **80c:47051** 47H10 (46B30)
- Sobinski, M. Limit sets in generalized pseudodynamical systems. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* No. 20 (1979), 145-159. (W. R. Utz) **80c:54053** 54H20
- Sobczak, Wojciech (with Malina, Witold)  $\star$ Metody selekcji informacji. (Polish) [Methods of information selection] *Wydawnictwa Naukowo-Techniczne (WNT), Warsaw*, 1978, 158 pp. (Publisher's description) **80c:94001** 94-02 (68H05)
- Sobczyk, Kazimierz On the stochastic model for fatigue crack propagation. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 5-6, 477-481. (Author's summary) **80m:73065** 73M05
- (with Witt, M.) Dynamic response of laminated plates to random loading. *Internat. J. Solids and Structures* 16 (1980), no. 3, 231-238. (Authors' summary) **80m:73056** 73K35
- Sobel, Jordan Howard Sentential notations: unique decomposition. *Notre Dame J. Formal Logic* 20 (1979), no. 2, 377-382. (Editors) **80c:03016** 03B05
- Sobel, Milton (with Olkin, Ingram) Admissible and minimax estimation for the multinomial distribution and for  $k$  independent binomial distributions. *Ann. Statist.* 7 (1979), no. 2, 284-290. (Arthur Cohen) **80d:62010** 62C15 (62H12)
- Sobolevsky, E. Vergleich von klassischen und Born-Wirkungsquerschnitten bei Elektronenstößen am H-Atom. (English summary) *Ann. Physik* (7) 35 (1978), no. 2, 81-98. (Author's summary) **80a:81097** 81F20 (65C05)
- Sobolewski, Wiesław (with Kowalski, Paweł) On the different definitions of the lower semicontinuity, upper semicontinuity, upper semicontinuity, closity and continuity of the point-to-set maps. *Demonstratio Math.* 11 (1978), no. 4, 1053-1063 (1979). (Stojan Nedev) **80j:54010** 54C60
- Sobociński, Bolesław Equational two axiom bases for Boolean algebras and some other lattice theories. *Notre Dame J. Formal Logic* 20 (1979), no. 4, 865-875. (Marcel Guillaume) **80m:06006** 06B05 (06C05, 06D05, 06E05)
- Sobol', G. P. (with Sobol', I. M.) Hypergeometric functions and ordinary linear differential equations with exponential coefficients. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 7, 1212-1215, 1341. (D. P. Gupta) **80i:34009** 34A25 (33A30)
- Sobol', I. M.  $\star$ Meron Moore-Kaplan. (Russian) [The Monte-Carlo method] Third edition, augmented. *Populjarnye Lekcii po Matematike* [Popular Lectures on Mathematics], 46. "Nauka", Moscow, 1978, 64 pp. (Editors) **80g:65006** 65C05
- Weighted quadrature formulas. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 5, 1196-1200, 1216. (A. Coşiu) **80c:41026** 41A55 (65D30)
- (with Levitan, Ju. L.) Experiments in the calculation of integrals of high multiplicity. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 51 (1978), 138-145, 230. (Authors' summary) **80c:65054** 65D30
- Modeling of Compton scattering by relativistic electrons by the Monte Carlo method. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 4, 1034-1037, 1070. (Authors' summary) **80c:81099** 81F99 (65C05)
- (with Sobol', G. P.) Hypergeometric functions and ordinary linear differential equations with exponential coefficients. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 7, 1212-1215, 1341. (D. P. Gupta) **80i:34009** 34A25 (33A30)
- On the systematic search in a hypercube. *SIAM J. Numer. Anal.* 16 (1979), no. 5, 790-793. (Authors' summary) **80f:65072** 65K05 (65C10)
- (with Petrov, Ju. A.) The use of similar trajectories in computations by the Monte Carlo method. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 1, 238-242, 271. (Authors' summary) **80d:65017** 65C05
- Sobolev, A. I. Nonlinear analogues of Shapley's value. (Russian. English summary) *Game theory questions of decision making (Russian)*, pp. 9-18, 126, Nauka Leningrad. Otdel., Leningrad, 1978. (E. Vilkas) **80a:90168** 90D12
- Sobolev, A. V. Abstract oscillation operators. (Russian) *Proceedings of a Seminar on Differential Equations, No. 3 (Russian)*, pp. 72-78, 147, *Kulbyšev. Gos. Univ., Kuybyshev*, 1977. (Authors' summary) **80m:47027** 47B38 (47B05)
- (with Krasnosel'skii, M. A.; Ostrovskii, A. Ju.) Convergence of one-parameter aggregation method. *Avtomat. i Telemekh.* 1978, no. 9, 102-109 (Russian); translated as *Automat. Remote Control* 39 (1978), no. 9, part 2, 1345-1351 (1979). (A. Ramm) **80c:65081** 65F10
- Sobolev, S. L. Les coefficients optimaux des formules d'intégration approximative. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) 5 (1978), no. 3, 455-469. (Marc Duc-Jacquet) **80c:65031a** 65D30
- (with Kantorovič, L. V.; Košelev, A. I.; Oleinik, O. A.) Solomon Grigor'evič Mihlin (on the occasion of his seventieth birthday). (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 2(200), 213-216. (Editors) **80a:01033** 01A70
- Errata: "Les coefficients optimaux des formules d'intégration approximative" [Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4) 5 (1978), no. 3, 455-469; MR 80d:65031a]. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) 6 (1979), no. 4, 729. (Marc Duc-Jacquet) **80c:65031b** 65D30
- More on roots of Euler polynomials. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 4, 801-804. (From the text) **80f:65052** 65H05 (10A40, 65D15)
- (with Aleksandrov, P. S.; Baïmakov, M. I.; Borevici, Z. I.; Kublanovskaja, V. N.; Skopin, A. I.; Jakovlev, A. V.) Dmitrii Konstantinovič Faddeev (on the occasion of his seventieth birthday). (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 2(206), 223-229. (Editors) **80b:01024** 01A70
- See also Erugin, N. P.; et al. **80c:01013**
- Sobolev, V. A. Investigation of differential equations with small parameters multiplying derivatives by the method of integral manifolds. (Russian) *Proceedings of a Seminar on Differential Equations, No. 3 (Russian)*, pp. 78-85, 148, *Kulbyšev. Gos. Univ., Kuybyshev*, 1977. (Authors' summary) **80a:34075** 34E15 (34C30)
- (with Strygin, V. V.) Reduction principles in the theory of differential equations with a manifold of stationary states. (Russian) *Proceedings of a Seminar on Differential Equations, No. 3 (Russian)*, pp. 92-103, 149, *Kulbyšev. Gos. Univ., Kuybyshev*, 1977. (Authors' summary) **80k:34069** 34D15
- (with Strygin, V. V.) Permissibility of changing over to precessional equations of gyroscopic systems. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* 13 (1978), no. 5, 10-17 (Russian); translated as *Mech. Solids* 13 (1978), no. 5, 7-13. (P. C. Parks) **80c:70005** 70E05 (34D10)
- Sobolev, V. I. (with Ljusternik, L. A.)  $\star$ Elemente der Funktionalanalysis. Edited by Konrad Gröter. Translated from the Russian by Klaus Fiedler. Sixth edition. Mathematische Lehrbücher und Monographien, I. Abteilung: Mathematische Lehrbücher [Mathematical Textbooks and Monographs, Part I: Mathematical Textbooks], 8. Akademie-Verlag, Berlin, 1979, viii + 375 pp. (Editors) **80a:46001** 46-01 (47-01)
- Soboleva, T. S. Boundary value problems for a second-order elliptic equation in unbounded domains. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 5, 1184-1195, 1216. (P. A. Milnaevskii) **80i:35069** 35J25
- Sobolevskii, E. P. An averaging principle and stability of differential equations with a small parameter. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 8, 1444-1449, 1533-1534. (D. Bainov) **80j:34001** 34G20 (34C29, 34D10)
- Sobolevskii, P. E. (with Hoang Van Lai) Algorithms of optimal type for the approximate solution of parabolic equations. (Russian) *Vyčisl. Sistemy* No. 72 (1977), 79-91, 138-139. (E. S. Čičkin) **80c:65084** 65L05 (34G10)
- (with Vasil'ev, V. V.) An  $\epsilon$ -approximation of Navier-Stokes equations. (Russian) *Čisl. Metody Meh. Splošn. Sredy* 9 (1978), no. 5 *Matematičeskoe Modelirovanie*, 115-139. (L. Cattabriga) **80m:35063** 35Q10
- (with Štel'vil', Ę. A.) An approach to the solution of ill-posed problems. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 5, 900-904, 958. (J. Kačur) **80h:35128** 35R25

- (with Čebotareva, L. M.) The method of lines for the approximate solution of mixed problems for a one-dimensional hyperbolic equation. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 3(190), 61–75. (From the text) **80a:65200** 65M20
- (with Polička, A. E.) Correct solvability of parabolic difference equations in Bochner spaces. (Russian) *Trudy Moskov. Mat. Obšč.* 36 (1978), 29–57, 294. (V. V. Kovrizhin) **80g:34063** 34G10 (35K99)
- Sobolevskii, P. I.** Composite formulas for the approximate computation of continual integrals generated by linear processes of Poisson type. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 22 (1978), no. 11, 971–974, 1051–1052. (J. Kofroň) **80a:65050** 65D30
- Sobolew, W. I.** See **Sobolev, V. I.**
- Sobotka, Zdeněk.** Free vibrations of viscoelastic orthotropic rectangular plates. *Acta Tech. ČSAV* 23 (1978), no. 6, 678–705. (From the summary) **80b:73039** 73K10
- Socă, D.** On approximate integration of first-order differential equations by spline functions. (Romanian. German summary) *Bul. Univ. Braşov Ser. C* 19 (1977), 89–94 (1978). (Author's summary) **80g:34009** 34A45 (65D32)
- Socha, Lesław.** (with Klamka, Jerzy) Stochastic controllability of dynamical systems. (Polish. English and Russian summaries) *Podstawy Sterowania* 8 (1978), no. 2, 191–200. (Josef Kalka) **80a:93206** 93E20
- (with Klamka, Jerzy) Stochastic control of nonlinear dynamical systems. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 29 (1979), 111–118. (Authors' summary) **80g:93138** 93E20
- Stability of multivariate stochastic systems. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 29 (1979), 173–181. (Author's summary) **80g:93129** 93E15
- de Socio, Luciano.** (with Renno, Pasquale) On the boundary layer function in M.H.D. flows over a flat plate. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 3-4, 253–257 (1978). (Giulio Mattei) **80d:76103** 76W05
- Sod, Gary A.** A numerical study of cylindrical implosion. *Lectures on combustion theory* (Cowan Inst., New York Univ., New York, 1977), pp. 173–189, New York Univ., New York, 1978. (Maurice Bouix) **80d:76074** 76N15 (65P05)
- See also *Lectures: Combustion theory*, **80b:76001**
- Sodin, G.** (with Cesarini, F.; Pinzani, R.; Sprugnoli, R.) A bottom-up approach to binary trees paging. *Les arbres en algèbre et en programmation* (4ème Colloq. Lille, Lille, 1979), pp. 44–55, Univ. Lille 1, Lille, 1979. (Authors' summary) **80m:68028** 68B20 (68E10)
- Sodano, P.** (with Martellini, M.; Vitiello, G.) Vacuum structure for a quantum field theory in curved space-time. (Italian and Russian summaries) *Nuovo Cimento A* (11) 48 (1978), no. 3, 341–358. (J. G. Taylor) **80a:81087** 81E15 (58E30, 83C45)
- Söderström, T.** (with Stoica, Petre) Convergence properties of "A method for the identification of linear systems using the generalized least squares principle" (IEEE Trans. Automat. Control AC-22 (1977), no. 4, 631–634). *IEEE Trans. Automat. Control* 24 (1979), no. 1, 138–139. (Authors' summary) **80c:93130** 93E12
- Sodini, C.** (with Gallo, G.) Adjacent extreme flows and application to min concave cost flow problems. *Networks* 9 (1979), no. 2, 95–121. (Authors' summary) **80h:90145** 90C35 (90B10)
- Sooda, Takashi.** (with Sawaragi, Yoshikazu; Omatu, Sigeru) ★ Modeling, estimation, and their applications for distributed parameter systems. *Lecture Notes in Control and Information Sciences*, 11. Springer-Verlag, Berlin-New York, 1978. vi + 269 pp. ISBN 3-540-09142-4 (Vladimir Katkovnik) **80f:93100** 93E20 (60G35)
- (with Omatu, Sigeru) Estimation problems for a linear stochastic differential equation in Hilbert space. *Proceedings of the International Symposium on Stochastic Differential Equations* (Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976), pp. 341–365, Wiley, New York, 1978. (Authors' summary) **80f:93098** 93E20 (60G35)
- (with Sakai, Hideaki; Tokumaru, Hidekatsu) Optimal linear coding schemes for feedback communication with noisy side information. *IEEE Trans. Inform. Theory* 24 (1978), no. 3, 381–384. (Michele Elia) **80a:94021** 94A24
- (with Omatu, Sigeru) Optimal estimation problems for a linear distributed parameter system. *Internat. J. Systems Sci.* 9 (1978), no. 7, 753–771. (M. Shridhar) **80b:93140** 93E10
- (with Sakai, Hideaki; Tokumaru, Hidekatsu) On the relation between fitting autoregression and periodogram with applications. *Ann. Statist.* 7 (1979), no. 1, 96–107. (E. J. Hannan) **80b:62106** 62M10
- (with Omatu, Sigeru; Ohe, Syunichiro) Fixed-lag smoothing estimator for a linear distributed parameter system. *Inform. and Control* 44 (1980), no. 1, 1–15. (Authors' summary) **80k:93051** 93E10
- (with Yoshimura, Toshio; Konishi, K.; Kiyozumi, R.) Identification of unknown parameters in linear discrete-time systems by a modified extended Kalman filter. *Internat. J. Systems Sci.* 11 (1980), no. 1, 97–105. (Authors' summary) **80j:93127** 93E12
- Soff, G. O.** (with Ahmad, M.) Charmed hadrons and Gel'fand techniques. *Proceedings of the Conference on Mathematical Analysis and its Applications* (Inst. Engrs., Mysore, 1977), pp. M171–M181, *Matscience Rep.*, 91, Inst. Math. Sci., Madras, 1978. (Authors' summary) **80a:81099** 81G40 (22E70)
- Sofieva, Ju. N.** (with Boehme, B.; Cirlin, A. M.) Steady-state characteristic of certain types of dynamic plants. *Automat. i Telemekh.* 1979, no. 2, 5–11 (Russian); translated as *Automat. Remote Control* 40 (1979), no. 2, part 1, 157–162. (Authors' summary) **80d:93013** 93A10
- Sofonea, Liviu.** (with Onicescu, Octav) Un modèle géométrique à connexions non symétriques et quelques interprétations physiques. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 10, 1451–1465. (Carl Brans) **80m:83043** 83E10 (53B15)
- Soga, Hideo.** Mixed problems for the wave equation in a quarter space with a first order boundary condition. *Osaka J. Math.* 16 (1979), no. 1, 271–288. (G. P. Bava) **80c:35057** 35L05
- Sogo, Kiyoshi.** (with Suzuki, Masuo; Matsuba, Ikuro; Ikeda, Hiroshi; Chikama, Terumi; Takano, Hiroshi) Real-space renormalization group approach to critical dynamics. Migdal approximation and other new methods. *Progr. Theoret. Phys.* 61 (1979), no. 3, 864–880. (Authors' summary) **80e:82022** 82A25
- Soh, M.** See **Schoch, Manfred**
- Sohndke, G. A.** (with Šatašvili, A. D.) The equivalence of Gaussian measures under nonlinear transformation in a Hilbert space. (Russian) *Dokl. Akad. Nauk SSSR* 240 (1978), no. 4, 790–793. (G. N. Sytaja) **80a:60056** 60G30
- Sohi, Nirmal Singh.** A class of  $p$ -valent analytic functions. *Indian J. Pure Appl. Math.* 11 (1979), no. 7, 826–834. (S. K. Bajpai) **80i:30026** 30C45
- Sohr, Hermann.** Störungskriterien im reflexiven Banachraum. *Math. Ann.* 233 (1978), no. 1, 75–87. (S. T. Kuroda) **80j:47046** 47B44 (47A55, 47D05)
- Über die Selbstadjungiertheit von Schrödinger-Operatoren. *Math. Z.* 160 (1978), no. 3, 255–261. (Christian G. Simader) **80d:35040** 35J10 (47F05)
- Über die Existenz von Wellenoperatoren für zeitabhängige Störungen. (English summary) *Monatsh. Math.* 86 (1978/79), no. 1, 63–81. (Boris Pavlov) **80d:47012** 47A40 (35J10)
- Sohrabpour, Said.** (with Ahmadi, Goodarz) Elasto-viscoplastic-viscous theories of granular and porous media. (French and German summaries) *Internat. J. Non-Linear Mech.* 14 (1979), no. 2, 133–142. (R. Muki) **80g:73036** 73F99
- Sohrwardy, Munir.** (with Lee, Gordon; Jordan, David) A pole assignment algorithm for multivariable control systems. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 357–362. (V. Gaurishankar) **80g:93049a** 93C35 (93C99)
- See also **Porter, B.**, **80g:93049b**
- Soifer, A. Ju.** Large direct summands of abelian groups. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 2(200), 188. (L. Fuchs) **80b:20068** 20K25
- Soisalon-Soininen, Elias.** On the covering problem for left-recursive grammars. *Theoret. Comput. Sci.* 8 (1979), no. 1, 1–11. (P. Deussen) **80b:68064** 68F05
- Sokabe, M.** (with Kawato, M.; Suzuki, R.) Synergism and antagonism of neurons caused by an electrical synapse. *Biol. Cybernet.* 34 (1979), no. 2, 81–89. (From the summary) **80g:92010** 92A09
- Sokačev, E. S.** (with Ogievckii, V. I.) The supercurrent. *Jadernaja Fiz.* 28 (1978), no. 3, 825–836 (Russian); translated as *Soviet J. Nuclear Phys.* 28 (1978), no. 3, 423–428. (H. Rund) **80g:83017** 83C45 (81M05)
- (with Ogievckii, V. I.) Structure of supergravity group. Symposium on Mathematical Methods in the Theory of Elementary Particles (Liblice, 1978). *Czechoslovak J. Phys. B* 29 (1979), no. 1, 68–72. (Authors' summary) **80m:83011** 83C40 (22E70)
- Sokalski, K.** Instantons in anisotropic ferromagnets. *Acta Phys. Polon. A* 56 (1979), no. 4, 571–574. (Authors' summary) **80m:82048** 82A55
- Sokolomol, I.** (with Pyhteev, G. N.) A property of a singular Cauchy-type integral of special type and its use in obtaining a priori estimates of moduli of the derivatives of the required solution of a singular integro-differential equation. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* 21 (1978), no. 11, 12–16. (K. Seitz) **80g:45014** 45J05
- Approximate computation of iterated integrals that contain a Cauchy type integral or a singular integral of special type. (Russian. Tajiki summary) *Izv. Akad. Nauk Tadžik. SSR Otdel. Fiz.-Mat. i Geol.-Him. Nauk* 1978, no. 2(68), 8–15. (Walter Gautschi) **80a:65059** 65D32
- Sokatchev, E.** See **Sokačev, E. S.**
- Sokin, Ju. I.** (with Janenko, N. N.; Okuncov, V. V.; Zaharov, Ju. N.; Paničkin, A. V.) Two iteration schemes for the solution of a stationary system of Navier-Stokes equations. (Russian) *Complex analysis and its applications* (Russian), pp. 638–652, 672, "Nauka", Moscow, 1978. (Murti M. Gupta) **80j:65038** 65P05 (76D05)
- On the analysis of properties of difference schemes by the differential approximation method. (Russian) *Numerical methods in mathematical physics, geophysics and optimal control* (Sympos., Novosibirsk, 1976) (Russian), pp. 138–145, 235, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (Author's summary) **80g:65108** 65N20
- (with Janenko, N. N.; Urusov, A. I.) Difference schemes in an arbitrary curvilinear coordinate system. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 3, 552–555. (E. G. Djakonov) **80a:65203** 65N05
- Sokolik, G. A.** Geometrical description of fields. (Italian and Russian summaries) *Nuovo Cimento A* (11) 51 (1979), no. 3, 339–344. (J.-P. Antoine) **80g:81036** 81D25 (22E70, 81E05)
- Sokolinski, V. Z.** (with Kniznerman, L. A.) Some estimates for rational trigonometric sums and sums of Legendre symbols. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 3(207), 199–200. (S. A. Stepanov) **80j:10045** 10G10 (14G13)
- Sokolnicki, Krzysztof.** (with Obdulowicz, Adam) On the algebraic theory of Boolean algebras. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 6, 483–487. (Gavin Wraith) **80a:18002a** 18C10 (06E05)
- A characterization of the category of Boolean algebras via Lawvere's characterization of algebraic categories. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 6, 489–493. (Gavin Wraith) **80a:18002b** 18C10
- Sokolov, A. V.** The minimax property of optimal equivariant decisions in Hilbert space. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* 1979, no. 1, 42–45, 70. (A. L. Rukhin) **80k:62014** 62C20 (62A05)
- Sokolov, B. N.** (with Albul, A. V.; Cernous'ko, F. L.) A method for calculating control in conflict situations. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1096–1102, 1354. (A. I. Subbotin) **80b:90161** 90D25
- Sokolov, D. D.** Convex surfaces with indefinite metric. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 4(202), 227–228. (V. G. Kopp) **80j:53061** 53C50 (53C45)
- Convex surfaces with bounded total curvature in a pseudo-Euclidean space. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 3(207), 213–214. (A. V. Pogorelov) **80k:53095** 53C45
- Sokolov, I. A.** Joint distribution of the waiting time on the part of orders of different priorities. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 2, 104–110, 221 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 2, 81–87 (1979). (N. U. Prabhu) **80b:60126** 60K25
- Sokolov, L. L.** (with Antonov, V. A.; Sažin, A. I.; Holševnikov, K. V.) On the instability of Hamiltonian systems. *Astronom. Ž.* 55 (1978), no. 4, 906–908 (Russian); translated as *Soviet Astronom.* 22 (1978), no. 4, 516–517. (J. S. Joel) **80d:58022** 58F05 (34D30)
- Sokolov, M.** (with Langholz, G.) Carathéodory controllability criterion for nonlinear dynamical systems. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* 100 (1978), no. 3, 209–213. (Authors' summary) **80a:93036** 93B05 (49B05)
- Sokolov, N. I.** (with Lipatov, A. V.) Some sufficient conditions for stability and instability of continuous linear stationary systems. *Automat. i Telemekh.* 1978, no. 9, 30–37 (Russian); translated as *Automat. Remote Control* 39 (1978), no. 9, part 1, 1285–1291



- (1979). (Authors' introduction) **80j:93104** 93D99
- Sokolov, S. N. Relativistic addition of direct interactions in the point form of dynamics. (Russian. English summary) *Teoret. Mat. Fiz.* **36** (1978), no. 2, 193–207. (V. V. Sokolov) **80d:1021** 81C10 (22E70, 47B15)
- (with Šatnil, A. N.) Physical equivalence of three forms of relativistic dynamics and addition of interactions in the front and instant forms. (Russian. English summary) *Teoret. Mat. Fiz.* **37** (1978), no. 3, 291–304. (V. D. Kolmanenko) **80e:81115** 81M05 (47A40)
- Classical analogues of the Moeller operators, of the Pearson example and of the Birman-Kato invariance principle. (Italian and Russian summaries) *Nuovo Cimento A* (11) **52** (1979), no. 1, 1–22. (Lawrence E. Thomas) **80i:70016** 70F35 (81F05)
- Sokolov, V. A. (with Rublev, V. S.; Bondarenko, V. A.) Simultaneous ordering of input data structures and of output data generation. (Russian) *Heuristic optimization algorithms* (Russian), pp. 114–143, Yaroslavl Gos. Univ., Yaroslavl, 1976. (L. Hizder (RZMat 1977:9 V771)) **80f:68025** 68B15 (68H05, 90C50)
- Sokolov, V. I. Conditions for absolute stability of dynamical systems. *Automat. i Telemekh.* **1978**, no. 8, 187–189 (Russian); translated as *Automat. Remote Control* **39** (1978), no. 8, part 2, 1257–1259 (1979). (Author's summary) **80j:93107** 93D99
- Sokolovskii, A. I. (with Četlin, M. Ju.) On the theory of Brownian motion in the reduced description method. II. (Russian. English summary) *Teoret. Mat. Fiz.* **39** (1979), no. 2, 252–267. (Authors' summary) **80h:82010** 82A05
- Sokolovskii, V. V. See *Obituary: Sokolovskii, V. V.*, **80j:01038**
- Sokolowska, Malgorzata See *Dictionary: German-Polish*, **80m:00007**
- Sokolowski, L. M. (with Mazur, P.) Second-order phase transitions in black-hole thermodynamics. *J. Phys. A* **13** (1980), no. 3, 1113–1120. (Authors' summary) **80m:83035** 83C99 (80A99, 82A25)
- Sokolowski, S. (with Stecki, J.) Statistical mechanics of adsorption: virial expansions in a three-dimensional model of adsorption. *Acta Phys. Polon. A* **55** (1979), no. 5, 611–625. (S. V. Temko) **80h:82011** 82A05
- Sokolowski, Stefan (with Jackowski, Bogusław L.; Kubiak, Ryszard) Complexity of sorting by distributive partitioning. *Inform. Process. Lett.* **9** (1979), no. 2, 100. (Editors) **80i:68032** 68C25 (68E05)
- Sokol'skii, A. G. See *Giaccaglia, Giorgio E. O.*, **80h:34002**
- Sokur, L. P. (with Salugub, V. A.) The group properties of some Galilei-invariant systems of differential equations. (Russian. English summary) *Group theoretic methods in mathematical physics* (Russian), pp. 125–133, 192, 200, *Inst. Mat., Akad. Nauk Ukrain. SSR*, Kiev, 1978. (J. S. Joel) **80i:35005** 35A30 (81C05)
- (with Salogub, V. A.) The group properties of a system of first-order Poincaré-invariant differential equations. (Russian. English summary) *Group theoretic methods in mathematical physics* (Russian), pp. 134–138, 192, 200, *Inst. Mat., Akad. Nauk Ukrain. SSR*, Kiev, 1978. (J. S. Joel) **80h:35002** 35A30 (81M05)
- (with Onufričuk, S. P.) Additional symmetry of the generalized Bargmann-Wigner equation with proper time. (Russian. English summary) *Group theoretic methods in mathematical physics* (Russian), pp. 146–151, 193, 201, *Inst. Mat., Akad. Nauk Ukrain. SSR*, Kiev, 1978. (A. M. Gavrilik) **80g:81076** 81G20 (35A30, 58G35, 81D25)
- Solov'ev, A. V. (with Buhstaber, V. M.) The Landweber-Novikov algebra and formal vector fields on the line. (Russian) *Funkcional. Anal. i Prilozhen.* **12** (1978), no. 3, 1–11, 96. (P. S. Landweber) **80i:55017** 55N22 (57R90, 58H10)
- Solov'ev, V. V. Smoothness of a general anticanonical divisor on a Fano variety. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* **43** (1979), no. 2, 430–441. (Werner Kleinert) **80h:14020** 14J30
- Solov'ev, Vladimir See *Samoilenko, A. M.; et al.*, **80k:65075**
- de Sola Pool, Ichiel (with Kochen, Manfred) Contacts and influence. *Social Networks* **1** (1978/79), no. 1, 5–51. (K. Vijayan) **80d:92039** 92A20
- Soldati, R. (with Cognola, G.; Vanzo, L.; Zerbini, S.) Classical nonabelian gauge theories in the space of reference frames. *J. Math. Phys.* **20** (1979), no. 12, 2613–2618. (M. Carmeli) **80k:81088** 81E10
- Soldater, A. P. On the Noether theory of operators. (Russian) *Dokl. Akad. Nauk SSSR* **238** (1978), no. 2, 281–284. (Robert S. Doran) **80g:46044** 46H05 (46M99, 47A53)
- A duality category in the theory of Noetherian operators. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 2, 303–309, 381. (S. N. Kračkovskii) **80g:47015** 47A53 (46M15)
- On the theory of singular integral operators of classical type. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 3, 529–544, 574. (R. V. Dudučava) **80j:45008** 45E05
- miracle-Solé, S. See *Miracle-Solé, S.*
- Soler, F.  $r$ -vector fields on metric manifolds. *Ann. Mat. Pura Appl.* (4) **119** (1979), 1–8. (T. Nagano) **80m:53029** 53C05
- Soley A., Javier The discrete Fourier transform as an approximation of the continuous Fourier transform. (Spanish. English summary) *Cienc. Tecn.* **2** (1978), no. 2, 131–148. (L. Arteaga) **80m:42017** 42A38
- Sollant, Giulio (with Leo, Mario; Leo, Rosario Antonio) Soliton-like solutions for a dispersive nonlinear wave equation. *Progr. Theoret. Phys.* **60** (1978), no. 1, 100–111. (David J. Kaup) **80k:76008** 76B25 (65P05)
- (with Leo, Mario; Leo, Rosario Antonio) Analysis of a modified Korteweg-de Vries equation. *Progr. Theoret. Phys.* **62** (1979), no. 6, 1475–1486. (Authors' summary) **80k:76024** 76B25 (35Q20)
- Soliev, Ju. Interpolational cubature formulas that contain derivative densities for certain singular integrals. (Russian. Tajik summary) *Izv. Akad. Nauk Tadžik. SSR Otdel. Fiz.-Mat. i Geol.-Him. Nauk* **1978**, no. 1(67), 3–10. (A. Cojbu) **80b:65027** 65D30
- Some cubature formulas for singular integrals. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 51 (1978), 146–150, 230–231. (Gh. Adam) **80h:65017** 65D32
- Sollman, H. M. (with Darwish, M.; Fantin, J.) Decentralized stabilization of large-scale dynamical systems. *IEEE Trans. Systems Man Cybernet.* **9** (1979), no. 11, 717–720. (Authors' summary) **80j:93100** 93D99 (93A15)
- Sollman, M. A. (with Ray, W. H.) Nonlinear filtering for distributed parameter system having a small parameter. *Internat. J. Control* **30** (1979), no. 5, 757–772. (Authors' summary) **80j:93120** 93E11
- Sollman, M. O. (with Baker, A. J.) Utility of a finite element solution algorithm for initial-value problems. *J. Comput. Phys.* **32** (1979), no. 3, 289–324. (Authors' summary) **80i:65114** 65N30
- Solomon, Donald C. A note on  $k$ -plane integral transforms. *J. Math. Anal. Appl.* **71** (1979), no. 2, 351–358. (L. Arteaga) **80m:44010** 44A15
- von Solms, S. H. (with Rozenberg, Grzegorz) Priorities on context conditions in rewriting systems. *Inform. Sci.* **14** (1978), no. 1, 15–50. (Authors' summary) **80e:68036** 68F10
- (with Rozenberg, Grzegorz) Rewriting systems with a clocking mechanism. *Inform. Sci.* **14** (1978), no. 3, 221–280. (Authors' summary) **80e:68037** 68F10
- Solodov, V. V. A geometric proof of a theorem of Mather. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 1(205), 243–244. (B. Cenik) **80h:57037** 57R30 (58D05)
- Solodovnikov, I. E. The Frankl' problem for a particular case of the equation  $k(y)u_{xx} + u_{yy} = 0$ . (Russian) *Differentsial'nye Uravneniya (Ryazan)* No. 12 (1978), 124–126. (Author's summary) **80i:35087** 35M05
- Solodovnikov, V. I. The extension of the Strassen estimate to the solution of arbitrary systems of linear equations. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **19** (1979), no. 3, 581–593, 796. (Author's summary) **80e:68121** 68C25
- Solodovnikov, V. N. Calculation of the gradients of some functionals and their application to optimization problems. (Russian) *Dinamika Splošn. Sredy No. 33 Nekotorye Problemy Mat. i Meh.* (1978), 102–113, 172. (Author's summary) **80a:49063** 49D07 (73L05)
- Solodovnikov, V. V. The principle of complexity in automatic control theory. (Russian) *Automat. Upravl. i Vychisl. Tekhnika* No. 12 (1978), 20–66, 293. (Author's summary) **80m:93012** 93A99
- (with Kakičev, L. G.; Fedotov, A. I.) Current state of the theory and a method of mathematical description of a class of logical-dynamical systems. (Russian) *Automat. Upravl. i Vychisl. Tekhnika* No. 12 (1978), 127–146, 294. (Authors' summary) **80m:93004** 93A10 (94C99)
- Solov'ev, V. S. (with Kosolapov, Ju. F.) Du Bois-Reymond's works on the theory of partial differential equations. (Ukrainian. Russian summary) *Narisi Istov. Prirodosv. i Tehn.* No. 24 (1978), 3–11, 118. (J. S. Joel) **80a:01019** 01A55 (35–03)
- Solov'ev, V. F. Stability of extremal problems in locally convex spaces. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 1(188), 123–133. (O. V. Vasil'ev) **80a:49023** 49D99 (65K10)
- Solomennikov, A. V. (with Malozemov, V. N.) The rate of convergence of the method of equalization of maxima. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **18** (1978), no. 5, 1309–1312, 1359. (Ulrich Eckhardt) **80a:65129** 65K05 (90D99)
- Solom'ev, M. A. (with Gol'dštejn, Ju. B.) Determination of the optimal form of rods and shells with the aid of a variational principle. (Russian) *Prikl. Meh.* **14** (1978), no. 12, 75–80, 142. (Editors) **80b:73045** 73L99 (49B99)
- Solomin, J. E. (with Schaposnik, F. A.) Gauge field singularities and noninteger topological charge. *J. Math. Phys.* **20** (1979), no. 10, 2110–2114. (Authors' summary) **80h:81059** 81E15 (57R20)
- Solomjak, M. Z. (with Birman, M. Š.) Application of interpolational methods to estimates of the spectrum of integral operators. (Russian) *Operator theory in function spaces (Proc. School, Novosibirsk, 1975)* (Russian), pp. 42–70, 341, "Nauka" Sibirsk. Otdel., Novosibirsk, 1977. (H. Triebel) **80b:47063** 47G05 (46E35)
- (with Birman, M. Š.; Veršik, A. M.) The product of commuting spectral measures may fail to be countably additive. (Russian) *Funkcional. Anal. i Prilozhen.* **13** (1979), no. 1, 61–62. (R. G. Bartle) **80h:28010** 28B05 (46G10, 47B15)
- (with Birman, M. Š.) Asymptotic behavior of the spectrum of variational problems on solutions of elliptic equations. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 1, 3–22, 204. (Authors' summary) **80c:35077** 35P20
- (with Birman, M. Š.) ★Quantitative analysis in Sobolev imbedding theorems and applications to spectral theory. Translated from the Russian by F. A. Cezus. American Mathematical Society Translations, Series 2, 114. *American Mathematical Society, Providence, R.I.*, 1980. viii + 132 pp. ISBN 0-8218-3064-3 (Editors) **80m:46026** 46E35 (35P20)
- Solomon, Herbert (with Brown, Mark) On combining pseudorandom number generators. *Proceedings of the Twenty-Fourth Conference on the Design of Experiments (Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1978)*, pp. 133–142, ARO Rep. 79, 2, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Authors' summary) **80m:65007** 65C10
- (with Brown, Mark) On combining pseudorandom number generators. *Ann. Statist.* **7** (1979), no. 3, 691–695. (Artieno De Matteis) **80f:65009** 65C10
- (with Stephens, M. A.) Approximations to densities in geometric probability. *J. Appl. Probab.* **17** (1980), no. 1, 145–153. (Adrian Baddeley) **80k:60021** 60D05 (52A22)
- Solomon, Louis Partially ordered sets with colors. *Relations between combinatorics and other parts of mathematics (Proc. Sympos. Pure Math., Ohio State Univ., Columbus, Ohio, 1978)*, pp. 309–329, *Proc. Sympos. Pure Math., XXXIV, Amer. Math. Soc., Providence, R.I.*, 1979. (Richard T. Bumby) **80c:05011** 05A15 (06A10, 12A70)
- Solomon, Martin K. Some results on measure independent Gödel speed-ups. *J. Symbolic Logic* **43** (1978), no. 4, 667–672. (R. A. Di Paola) **80h:03091** 03F20
- Solomon, Marvin (with Finkel, Raphael A.) A note on enumerating binary trees. *J. Assoc. Comput. Mach.* **27** (1980), no. 1, 3–5. (Authors' summary) **80i:68055** 68E10 (68C25)
- Solomon, Ronald (with Timmesfeld, Franz) A note on tightly embedded subgroups. *Arch. Math. (Basel)* **31** (1978/79), no. 3, 217–223. (Bernad Baumann) **80b:20017** 20D05 (20D25)
- (with Griess, Robert L., Jr.) Finite groups with unbalancing 2-components of  $(\mathbb{Z}_3, 4)$ , He-type. *J. Algebra* **60** (1979), no. 1, 96–125. (A. A. Kondrat'ev) **80k:20013** 20D05
- Solomonov, L. A. Informational properties of functionals of complexity for systems of subfinite Boolean functions. (Russian) *Problemy Kibernet.* No. 34 (1978), 133–150, 272. (Author's summary) **80b:94010** 94A15 (94C10)
- Solomonov, V. A. (with Pileckas, K. I.) Some spaces of solenoidal vectors, and the solvability of a boundary value problem for a system of Navier-Stokes equations in domains with noncompact boundaries. (Russian. English summary) Investigations on linear operators and the theory of functions, VIII. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **73** (1977), 136–151, 233 (1978). (Authors' summary) **80f:35109** 35Q10
- Solvability of the problem of the plane motion of a heavy viscous incompressible capillary fluid that partially fills a certain vessel. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* **43** (1979), no. 1, 203–236, 239. (Vladimir Kerchman) **80f:76013** 76D99 (35Q10)

- Solotareff, Marc Convergence vers zéro de l'erreur de comportement dans un algorithme de commande adaptative. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 17, A859-A862. (Author's summary) **80c:93067** 93C30
- Solovay, Robert M. A  $\Delta_1^1$  coding of the subsets of  $\omega_1$ . *Cabal Seminar 76-77 (Proc. Caltech-UCLA Logic Sem., 1976-77)*, pp. 133-150, *Lecture Notes in Math.*, 689, Springer, Berlin, 1978. (John P. Burgess) **80c:03054** 03E60 (03E15)
- The independence of DC from AD. *Cabal Seminar 76-77 (Proc. Caltech-UCLA Logic Sem., 1976-77)*, pp. 171-183, *Lecture Notes in Math.*, 689, Springer, Berlin, 1978. (J. M. Henle) **80c:03065** 03E60 (03E35)
- (with Reinhardt, William N.; Kanamori, Akihiro) Strong axioms of infinity and elementary embeddings. *Ann. Math. Logic* **13** (1978), no. 1, 73-116. (Douglas Cenzer) **80c:03072** 03E55
- (with Guaspari, D.) Rosser sentences. *Ann. Math. Logic* **16** (1979), no. 1, 81-99. (Richard Statman) **80c:03083** 03F30 (03B30)
- Solov'ev, A. A. Estimates in  $L^p$  of the integral operators that are connected with spaces of analytic and harmonic functions. (Russian) *Dokl. Akad. Nauk SSSR* **240** (1978), no. 6, 1301-1304. (D. Sarason) **80c:46025** 46E15 (47B38)
- Continuity in  $L^p$  of the integral operator with a Bergman kernel. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* **1978**, vyp. 4, 77-80, 151. (Author's summary) **80c:47045** 47G05 (32H10, 45H05)
- Solov'ev, E. A. (with Komarov, I. V.) Quasi-intersections of terms in the problem of two Coulomb centers with strongly differentiated charges. (Russian. English summary) *Teoret. Mat. Fiz.* **40** (1979), no. 1, 130-136. (Authors' summary) **80c:81114** 81G35
- Solov'ev, Ju. I. (with Aleksandrov, A. Ja.) ★Пространственные задачи теории упругости. (Russian) [Three-dimensional problems of the theory of elasticity] "Nauka", Moscow, 1978. 462 pp. (Vadim Komkov) **80c:73001** 73-02 (30G20)
- Solov'ev, Ju. P. (with Mil'kenko, A. S.) A classifying space for Hermitian K-theory. (Russian) *Trudy Sem. Vektor. Tenzor. Anal.* **18** (1978), 140-168. (A. A. Ranicki) **80c:57051** 57R67 (18F25, 57R65)
- Solov'ev, L. S. (with Gerlach, N. I.; Zueva, N. M.) The development of convective instability in a uniform magnetic field. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 102* (1979), 24 pp. (Authors' summary) **80c:85005** 85A30 (76E15)
- (with Gerlach, N. I.; Zueva, N. M.) Development of MHD-instability in a Z-pinch. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 83* (1979), 20 pp. (Authors' summary) **80c:82040** 82A45
- Solov'ev, M. A. (with Fainberg, V. Ja.) How can local properties be described in field theories without strict locality? *Ann. Physics* **113** (1978), no. 2, 421-447. (Jean-Pierre Eckmann) **80c:81057** 81E05 (32C40)
- Solov'ev, N. A. ★Тесты (теория, построение, применение). (Russian) [Tests (theory, structure, application)] Edited by H. A. Madatjan. "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. 189 pp. (Author's summary) **80c:68114** 68G20 (94C99)
- Solov'ev, V. G. (with Djokos, R. V.; Molina, H. L.) Effect of the Pauli principle on properties of two-phonon states. (Russian. English summary) *Teoret. Mat. Fiz.* **40** (1979), no. 2, 245-250. (Authors' summary) **80c:81070** 81G35
- Solov'ev, M. A. See Solov'ev, M. A.
- Solpo, I. A. Application of coalition-free games in the normal form for justifying arbitrage schemes. (Russian) *Mathematical models of behavior*, No. 3 (Russian), pp. 67-83, 87, Saratov. Gos. Univ., Saratov, 1978. (M. Mahas) **80c:90105** 90D05
- Solutions of arbitration schemes as equilibrium points of coalitionless games in normal form. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 5, 13-19, 219 (Russian); translated as *Engrg. Cybernetics* **16** (1978), no. 5, 8-14. (M. S. Štil'man) **80c:90117** 90D05
- A class of two-person hierarchical games. (Russian) *Vestnik Moskov. Univ. Ser. XV Vychisl. Mat. Kibernet.* **1978**, no. 4, 58-62. (Irinel Dragan) **80c:90136** 90D10
- Soltan, P. S. (with Boltjanskii, V. G.) ★Комбинаторная геометрия различных классов выпуклых множеств. (Russian) [Combinatorial geometry of various classes of convex sets] "Štiinca", Kishinev, 1978. 279 pp. (W. J. Firey) **80c:52001** 52-01
- (with Boltjanskii, V. G.) Helly's theorem on convex surfaces. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1978**, no. 2, 123-129. (N. Polakova) **80c:52012** 52A35
- (with Soltan, V. P.) d-convex functions. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 3, 555-558. (H. W. Guggenheimer) **80c:52001** 52A01 (46A99)
- Soltan, V. P. d-convex sets in finite metric spaces. (Russian) *Bul. Akad. Štiinca RSS Moldoven.* **1978**, no. 2, 29-33, 94. (Ju. A. Šalkin) **80c:52013** 52A05
- (with Soltan, P. S.) d-convex functions. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 3, 555-558. (H. W. Guggenheimer) **80c:52001** 52A01 (46A99)
- Bodies of constant width in finite-dimensional normed spaces. (Russian) *Mat. Zametki* **25** (1979), no. 2, 283-291, 319. (W. J. Firey) **80c:52004** 52A07
- Soltanov, K. N. The solvability of certain nonlinear problems in nonreflexive Banach spaces. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1978**, no. 2, 37-42. (Author's summary) **80c:35042** 35G30 (35K60)
- Sölter, G.-U. (with Müller, A. M. K.; Gerlich, Gerhard) Ein Variationsprinzip zur Einschachtelung von Eigenwerten. (English summary) *J. Phys. A* **12** (1979), no. 3, 325-328. (C. S. Sharma) **80c:49034** 49G05
- Šoltes, Pavel (with Šoltes, V.) Asymptotic properties of the solutions of nonlinear differential equations of higher order. (Slovak. English and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* **33** (1977), 63-73 (1978). (Authors' summary) **80c:34020** 34C11
- Oscillation of solutions of a non-linear delay differential equation of the fourth order. *Arch. Math. (Brno)* **14** (1978), no. 3, 175-180. (A. Halanay) **80c:34078** 34K15
- Šoltes, V. (with Šoltes, Pavel) Asymptotic properties of the solutions of nonlinear differential equations of higher order. (Slovak. English and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* **33** (1977), 63-73 (1978). (Authors' summary) **80c:34020** 34C11
- Soltyśkiak, Andrzej On Banach algebras with closed set of algebraic elements. *Comment. Math. Prace Mat.* **20** (1977/78), no. 2, 479-484. (Eggert Briem) **80c:46064** 46J35
- Som, B. K. (with Gupta, M. R.; Dasgupta, Brahmaanda) Reduction of the Boussinesq type of equation to modified Hirota equation. *J. Phys. Soc. Japan* **47** (1979), no. 4, 1296-1298. (A. Degasperis) **80m:35070** 35Q20
- Som, M. M. (with Santos, N. O.) Long-range scalar field in conformally flat space-time. *Internat. J. Theoret. Phys.* **17** (1978), no. 8, 631-634. (From the text) **80c:83017** 83C05
- (with da Silva, W. M.) The singularity in axially symmetric fields. *J. Phys. A* **12** (1979), no. 7, 1029-1035. (R. Behari) **80c:83025** 83C50 (53B50)
- Somavico, Marco (with Guida, Giovanni; Mandrioli, Dino) An integrated model of problem solver. *Inform. Sci.* **13** (1977), no. 1, 11-33. (Authors' summary) **80c:68234** 68G20
- Somasundaram, D. Inclusion theorems for the sequence spaces of Allen. *Indian J. Pure Appl. Math.* **7** (1976), no. 9, 969-976. (Author's introduction) **80c:40002** 40D25
- (with Choudhary, B.) A note on FK-spaces containing  $\Gamma$ . *Proceedings of the Conference on Mathematical Analysis and its Applications (Inst. Engrs., Mysore, 1977)*, pp. M100-M106, *Matscience Rep.*, 91, Inst. Math. Sci., Madras, 1978. (From the text) **80m:46063** 46P05
- Inclusion theorems on matrix transformations of some sequence spaces over non-Archimedean fields. III. *Acta Cienc. Indica* **4** (1978), no. 1, 90-93. (George Bachman) **80c:40004** 40D25 (46P05)
- Somayajulu, B. S. K. R. The sequence  $\alpha(n)/\varphi(n)$ . *Math. Student* **45** (1977), no. 1, 52-54 (1978). (H. L. Abbott) **80c:10008** 10A20
- Somer, Josef Lineare invariante Gebilde in äquiformen Bewegungen der Räume endlicher Dimension. (Czech summary) *Apl. Mat.* **24** (1979), no. 1, 56-66. (J. Hoschek) **80c:53009** 53A17 (70B99)
- Geschlossene äquiforme Bewegungen der Räume endlicher Dimension. (Czech summary) *Apl. Mat.* **24** (1979), no. 4, 304-314. (Helmut Stachel) **80c:53004** 53A17
- Somer, Lawrence Which second-order linear integral recurrences have almost all primes as divisors? *Fibonacci Quart.* **17** (1979), no. 2, 111-116. (Péter Kiss) **80c:10021** 10A35
- Šomesova, V. K. (with Dem'janov, V. F.) Conditional subdifferentials of convex functions. (Russian) *Dokl. Akad. Nauk SSSR* **242** (1978), no. 4, 753-756. (A. A. Fonarev) **80c:49070** 49E05
- Sommelier, B. P. (with van der Houwen, P. J.; Verwer, J. G.) Comparing time integrals for parabolic equations in two space dimensions with a mixed derivative. *J. Comput. Appl. Math.* **5** (1979), no. 2, 73-83. (Authors' summary) **80c:65185** 65M99 (65L05)
- Sommer, C. J. (with Lagakos, S. W.; Zelen, M.) Semi-Markov models for partially censored data. *Biometrika* **65** (1978), no. 2, 311-317. (Rashid Ahmad) **80c:62052** 62G05
- Sommer, Harald See Nikiforovskii, V. A.; et al. **80c:01012**
- Sommer, Manfred (with Nürnberger, Günther) Weak Chebyshev subspaces and continuous selections for the metric projection. *Trans. Amer. Math. Soc.* **238** (1978), 129-138. (P. D. Morris) **80c:41027** 41A50 (41A65)
- Continuous selections of the metric projection for 1-Chebyshev spaces. *J. Approx. Theory* **26** (1979), no. 1, 46-53. (D. E. Wulbert) **80c:41018** 41A65
- Sommerhager, R. The endomorphism monoid of a non-cyclic automaton. (Russian summary) *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* **7** (1978), no. 2, 83-87. (Jiří Adámek) **80c:68047** 68D30 (20M35)
- Sommers, P. D. See Complex manifold techniques in theoretical physics. **80m:81004**
- Sommers, Paul M. (with Conlisk, John) Eigenvalue immobility measures for Markov chains. *J. Math. Sociol.* **6** (1978/79), no. 2, 253-276. (A. Rapoport) **80c:92024** 92A20
- Sommese, Andrew John On the rationality of the period mapping. *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* **5** (1978), no. 4, 683-717. (C. A. M. Peters) **80c:14006** 14C30 (14D20, 32G20)
- (with Carrell, James B.)  $C^*$ -actions. *Math. Scand.* **43** (1978/79), no. 1, 49-59. (Philip Wagreich) **80c:32053** 32M05 (32C10, 32G05)
- Nonsmoothable varieties. *Comment. Math. Helv.* **54** (1979), no. 1, 140-146. (Alan T. Huckleberry) **80c:32027** 32G13
- (with Carrell, James B.) Some topological aspects of  $C^*$  actions on compact Kaehler manifolds. *Comment. Math. Helv.* **54** (1979), no. 4, 567-582. (D. N. Ahiezer) **80c:32032** 32M05 (32C10)
- Somogyi, A. (with Mogyoródi, J.) A convergence theorem and a strong law of large numbers for martingales. *Math. Nachr.* **84** (1978), 311-318. (Adhir K. Basu) **80c:60060** 60F15 (60E15, 60G42)
- Somolinos, Alfredo S. Stability of Lur'e-type non-linear equations. *Ann. Mat. Pura Appl. (4)* **116** (1978), 1-15. (Stefan Mirică) **80c:93127** 93D20 (34D20)
- Somorjai, G. Müntz-type theorems. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 763-770, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (Manfred v. Golitschek) **80c:41003** 41A10 (41A30)
- On a saturation problem. *Acta Math. Acad. Sci. Hungar.* **32** (1978), no. 3-4, 377-381. (Jean Tzimbalario) **80c:41023** 41A40
- Somov, P. O. See Ledzîova, L. D. **80c:01012**
- Soms, Andrew P. Simplified point and interval estimation for removal trapping. *Proceedings of the Twenty-Fourth Conference on the Design of Experiments (Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1978)*, pp. 143-159, *ARO Rep.* **79**, 2, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Author's summary) **80c:62032** 62F10 (62P10)
- hoang hong Son See Hoang Hong Son
- le hung Son See Le Hung Son
- Sonavane, K. R. (with Bhonsle, B. R.) Some operation transform formulae for distributional one sided Laplace transformation. *Indian J. Pure Appl. Math.* **8** (1977), no. 11, 1308-1314. (Hans-Jürgen Gläseke) **80c:44002** 44A10
- Sonderman, David Comparing multi-server queues with finite waiting rooms. I: Same number of servers. *Adv. in Appl. Probab.* **11** (1979), no. 2, 439-447. (B. M. Kirstein) **80c:60090a** 60K25
- Comparing multi-server queues with finite waiting rooms. II: Different numbers of servers. *Adv. in Appl. Probab.* **11** (1979), no. 2, 448-455. (B. M. Kirstein) **80c:60090b** 60K25
- Šondin, Ju. G. Fourier expansion, connected with the Lorentz group, in the function space with support outside the light cone. (Russian. English summary) *Teoret. Mat. Fiz.* **36** (1978), no. 3, 303-312. (S. G. Mamaev) **80c:81040** 81C40 (22E70)



- Asymptotic expansion of the Heisenberg field commutator over finite-dimensional irreducible representations of the Lorentz group. (Russian. English summary) *Theor. Mat. Fiz.* 37 (1978), no. 1, 58–65. (Tetz Yoshimura) **80a:81037** 81C40 (22E43)
- Sone, Satoru (with Utanomiya, Toshio; Imada, Toshiaki) Memory machine that has some functions of the human brain. *Systems-Comput.-Controls* 8 (1977), no. 4, 1–9 (1979). (From the summary) **80g:68123** 68H05
- Sonechkin, D. M. On bifurcations inducing a strange attractor in the system of A. M. Oboukhov. *J. Statist. Phys.* 21 (1979), no. 1, 51–54. (D. L. Rod) **80f:58030** 58F13 (76F99)
- Sonenberg, E. A. On the elementary theory of inductive order. *Arch. Math. Logik Grundlag.* 19 (1978/79), no. 1–2, 13–22. (A. B. Slomson) **80a:03076** 03C10 (03C65, 06A10)
- Nonstandard models of ordinal arithmetics. *Z. Math. Logik Grundlag. Math.* 25 (1979), no. 1, 5–27. (B. Weglorz) **80h:03051** 03C65 (03E10)
- Song, Chang Ho A mathematical approach to FEM for boundary value problems of two-dimensional elastostatics. (Korean. English summary) *Cho-sŏn In-min Kong-hwa-kuk Kwa-hak-wŏn T'ong-bo* 27 (1979), no. 1, 4–6. (From the summary) **80c:65122** 65N30
- Soul, B. (with Eisenfeld, Jerome) System identification of models exhibiting exponential, harmonic and resonant modes. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 555–568. Academic Press, New York, 1979. (From the introduction) **80h:93026** 93B30
- Soul, B. R. (with Gupta, D. P.) On magnetoelastostatic waves in asymmetric elastic medium. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 2, 125–130. (Peter J. Chen) **80i:73031** 73R05 (73D15)
- Soni, Raminder Singh Entropy and information of comparison under generalized additivity and nonadditivity. *Indian J. Pure Appl. Math.* 10 (1979), no. 7, 867–877. (B. D. Sharma) **80j:94012** 94A17
- Sonin, I. M. (with Presman, È. L.) The “two-armed bandit” problem in continuous time. (Russian) *Probability processes and control (Russian)*, pp. 154–204. “Nauka”, Moscow, 1978. (R. Theodoresco) **80g:62058** 62L05 (62L15, 90C40, 90D40)
- Sosa, Jack (with Fein, Burton; Schacher, Murray) Brauer groups of rational function fields. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 5, 766–768. (Lindsay N. Childs) **80f:12019** 12F20 (12A80, 13A20)
- Soussine, Hugo (with Barberá, Salvador) Preference aggregation with randomized social orderings. *J. Econom. Theory* 18 (1978), no. 2, 244–254. (Andrew Schotter) **80c:90006** 90A06
- (with Novshek, William) Cournot and Walras equilibrium. *J. Econom. Theory* 19 (1978), no. 2, 223–266. (Gerhard Hieber) **80i:90032** 90A14
- Soussine, J. On  $\delta$ -analytic functions and the numerical solution of the Dirichlet problem. *Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978)*. *Z. Angew. Math. Mech.* 59 (1979), no. 3, T82–T83. (Editors) **80i:65032** 65E05 (65N99)
- Sonntag, Yves Sur l'approximation des solutions d'une classe d'inéquations. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 12, A551–A554. (Author's summary) **80a:65136** 65K05 (65J05)
- Sosoe, Osamu A note on R-S lemma. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 8 (1979), no. 1, 10–15. (H. A. Priestley) **80f:06016** 06D99
- Sosa, Linda R. Zeros of functions with slow growth in the unit disc. *Math. Japon.* 24 (1979/80), no. 3, 271–282. (Genko Hiromi) **80j:30040** 30D35
- Gap series and normal functions. *Math. Z.* 166 (1979), no. 1, 93–101. (P. Lappan) **80d:30032** 30D45
- Growth and gap structure of functions in the unit disc. *Rocky Mountain J. Math.* 9 (1979), no. 3, 533–541. (V. P. Petrenko) **80h:30026** 30D35
- Sontag, Eduardo D. (with Dicks, Warren) Sylvester domains. *J. Pure Appl. Algebra* 13 (1978), no. 3, 243–275. (V. N. Latyshev) **80i:16014** 16A39
- Realization theory of discrete-time nonlinear systems. I. The bounded case. *IEEE Trans. Circuits and Systems* 26 (1979), no. 5, 342–356. (Author's summary) **80b:93041** 93B15 (93C10)
- On finitary linear systems. *Kybernetika (Prague)* 15 (1979), no. 5, 349–358. (Author's summary) **80j:93009** 93A10 (93B07, 93C55)
- On the observability of polynomial systems. I. Finite-time problems. *SIAM J. Control Optim.* 17 (1979), no. 1, 139–151. (V. M. Marčenko) **80b:93037** 93B07
- On the length of inputs necessary in order to identify a deterministic linear system. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 120–121. (Author's summary) **80m:93026** 93B30
- Soravice, Violeta (with Kshirsagar, A. M.) A test associated with discriminant functions between  $\pi_1$  and  $\pi_2$  and between  $\pi_1$  and  $\pi_2$ . *J. Indian Statist. Assoc.* 15 (1977), 11–22. (Peter A. Lachenbruch) **80g:62040** 62H30
- Sosa, Chiu Loong Waiting-time in general batch size arrivals queues. *Nanta Math.* 11 (1978), no. 1, 63–70. (Brian Conolly) **80b:60127** 60K25
- Song, T. T. (with Chuang, Shui Nan) Mathematical analysis of cancer chemotherapy: the effects of chemotherapeutic agents on the cell cycle traverse. *Bull. Math. Biol.* 40 (1978), no. 4, 499–512. (Authors' summary) **80a:92023** 92A07
- Sos, Eugen Axiomatics and conservation laws in the theory of models of Cosserat type. (Romanian. English summary) *Stud. Cerc. Mat.* 30 (1978), no. 4, 447–463. (Author's summary) **80a:73007** 73B25 (00A89)
- Söpl, G. See Schopf, G.
- Sopov, Pet'ar Sur la distribution de la mesure dans la théorie métrique des fractions continues. *Serdica* 4 (1978), no. 2–3, 99–104. (F. Schweiger) **80j:10061** 10K10
- Soppa, M. S. The existence of a multicomponent thermal boundary layer in the case of a general matrix of diffusion. (Russian) *Dinamika Splošn. Sredy No. 35 Dinamicheskie Zadachi Mehaniki Splošnykh Sred* (1978), 99–121, 175. (From the text) **80i:80007** 80A20 (35K99, 76R05)
- Uniqueness of a multicomponent thermal boundary layer in the case of a general diffusion matrix. (Russian) *Dinamika Splošn. Sredy No. 36 Dinamika Židkosti so Slobodnymi Granicami* (1978), 120–129, 162. (Author's summary) **80d:35071** 35K05 (80A20)
- Boundary value problems for equations of a multicomponent boundary layer with a general diffusion matrix. (Russian) *Dinamika Splošn. Sredy No. 37 Nestacionarnye Problemy Mehaniki* (1978), 113–123, 151. (Author's summary) **80e:76036** 76N05 (35K99, 80A30)
- Šor, E. I. See Šor, O. I.
- Šor, E. Ja. (with Čebanuk, V. F.) Optimal stopping of a process of multiprocessing. (Russian) *Information processes in complex systems (Russian)*, pp. 8–17, 162. “Ština”, Kishinev, 1978. (Authors' summary) **80g:68031** 68B20 (93E20)
- Šor, L. A. (with Zjuz'ko, M. P.) Nonblocking nonordinary switching circuits. (Russian) *Information networks and their analysis (Russian)*, pp. 129–132, 218. “Nauka”, Moscow, 1978. (Authors' summary) **80j:94044** 94C10
- Nondivided nonordinary one-way switching circuits. (Russian) *Information networks and their analysis (Russian)*, pp. 132–134, 218. “Nauka”, Moscow, 1978. (Author's summary) **80i:94022** 94C10
- Šor, N. Z. ★Методы минимизации недифференцируемых функций и их приложения. (Russian) [Minimization methods for nondifferentiable functions and their applications]. “Naukova Dumka”, Kiev, 1979. 199 pp. (Vadim Komkov) **80f:49024** 49D07 (65K10)
- Šor, O. I. (with Andreev, M. V.) Equivalence conditions for multi-step and single-step optimization for control object with memory. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 4, 93–97. (K. Zimmermann) **80b:93120** 93D15 (49B99, 90D99)
- Sorace, E. (with Barducci, A.; Lusanna, L.) Relativistic action at a distance through singular Lagrangians with multiplicative potentials and its relation to the nonrelativistic two-body problem. (Italian and Russian summaries) *Nuovo Cimento B* (11) 46 (1978), no. 2, 287–314. (John Madore) **80c:83036** 83C40 (22E70)
- Soraggi, Roberto L. Bounded sets in spaces of holomorphic germs. *Advances in holomorphy (Proc. Sem. Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 745–766. North-Holland Math. Studies, 34, North-Holland, Amsterdam, 1979. (Martin Schottenloher) **80i:46038** 46G20 (32B99)
- Sorba, P. (with Meyers, C.; de Roo, M.) On embeddings of gauge groups in Yang-Mills theory. *Nuclear Phys. B* 140 (1978), no. 3, 533–546. (James D. Fabrey) **80f:81070** 81E10 (22E70)
- (with Oakes, R. J.) Chiral  $SU_4 \times SU_4$  breaking, axial vector current divergences and kaon PCAC. (Italian and Russian summaries) *Nuovo Cimento A* (11) 50 (1979), no. 2, 291–302. (Authors' summary) **80c:81044** 81D20
- (with Meyers, C.; de Roo, M.) Group-theoretical aspects of instantons. (Italian and Russian summaries) *Nuovo Cimento A* (11) 52 (1979), no. 4, 519–530. (Don Weingarten) **80m:81100** 81G20 (53C05)
- Sörbom, Dag An alternative to the methodology for analysis of covariance. *Psychometrika* 43 (1978), no. 3, 381–396. (C. W. Chen) **80a:62112** 62J10
- Sörleide, T. H. (with Bergan, P. G.; Holand, I.) Use of the current stiffness parameter in solution of nonlinear problems. *Energy methods in finite element analysis*, pp. 265–282. Wiley, Chichester, 1979. (Hwa-Shan Ho) **80c:73049** 73K25 (65N30)
- Sorensen, Danny C. (with Bunch, James R.; Nielsen, Christopher P.) Rank-one modification of the symmetric eigenproblem. *Numer. Math.* 31 (1978/79), no. 1, 31–48. (C. G. Cullen) **80g:65038** 65F15
- (with Moré, Jorge J.) On the use of directions of negative curvature in a modified Newton method. *Math. Programming* 16 (1979), no. 1, 1–20. (Jochem Zowe) **80b:90119** 90C30
- Sorensen, Jan P. (with Stewart, Warren E.) Structural analysis of multicomponent reaction models. I. Systematic editing of kinetic and thermodynamic values. *AIChE J.* 26 (1980), no. 1, 98–104. (Authors' summary) **80k:80011** 80A30
- (with Stewart, Warren E.) Structural analysis of multicomponent reaction models. II. Formulation of mass balances and thermodynamic constraints. *AIChE J.* 26 (1980), no. 1, 104–111. (Authors' summary) **80m:80015** 80A30
- Sorg, M. (with Kaplan, James L.; Yorke, James A.) Solutions of  $x'(t) = f(x(t), x(t-L))$  have limits when  $f$  is an order relation. *Nonlinear Anal.* 3 (1979), no. 1, 53–58 (1978). (S. G. Deo) **80c:34068** 34K15
- Sörjén, S. Ja. A non-classical estimate of the rate of convergence in the multidimensional central limit theorem which takes into account large deviations. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 3, 692–697. (S. A. Book) **80c:60044** 60F05
- Sorli, N. N. (with Sebakh, O. A.) Optimization of linear multivariable systems with prespecified closed-loop eigenvalues. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 355–357. (Authors' summary) **80c:93110** 93D99 (49G05)
- Sorin, A. S. (with Ivanov, E. A.) Supergroup  $OSP(1,4)$  and classical solutions of the Weiss-Zumino model. (Russian. English summary) *Theor. Mat. Fiz.* 39 (1979), no. 2, 172–179. (G. Lassner) **80j:83017** 83C45 (22E70)
- Sorina, A. A. Application of a “sliding control” algorithm in the resolution of ill-posed dimension problems. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* 94 (1979), no. 3, 569–572. (Author's summary) **80m:93059** 93C99
- Sorine, M. (with Bamberger, A.; Yvon, J. P.) Analyse et contrôle d'un réseau de transport de gaz. *Computing methods in applied sciences and engineering (Proc. Third Internat. Sympos., Versailles, 1977)*, II, pp. 347–359. *Lecture Notes in Phys.*, 91, Springer, Berlin, 1979. (Authors' introduction) **80b:82039** 82A70 (93C99)
- Sorjonen, Pekka On linear relations in an indefinite inner product space. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 1, 169–192. (Björn Textorius) **80g:47043** 47B50 (46D05)
- Sorkin, A. (with Berry, D. M.) Time required for garbage collection in retention block-structured languages. *Internat. J. Comput. Inform. Sci.* 7 (1978), no. 4, 361–404. (A. N. Maslov) **80c:68043** 68B15
- Sorkin, Rafael The trivality of continuous multipliers for the real line. *Internat. J. Theoret. Phys.* 17 (1978), no. 5, 369–376. (J. F. Cornwell) **80e:22011** 22D12 (22E65)
- The quantum electromagnetic field in multiply connected space. *J. Phys. A* 12 (1979), no. 3, 403–421. (Author's summary) **80i:81132** 81L05 (58A12)
- Sorokin, S. B. (with Kuznetsov, Ju. A.) The method of two-sided approximations in eigenvalue problems. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 5, 914–920, 958. (Roman Andrushkiw) **80m:65062** 65L15 (34B25)
- Sorokina, A. V. The existence of continuous functions with a given set of  $GV$ -singularities. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 3(190), 76–80. (V. Mičič) **80g:30020** 30D40
- Soroko, E. L. (with Zuev, G. M.) A mathematical description of interregional migration and an analysis of its influence on age-sex structure dynamics. (Russian) *Ekonom. i*

- Mat. Metody* 15 (1979), no. 2, 333-344. **80b:92044** 92A15
- Sorvali, Tuomas See Complex analysis Joensuu 1978, **80b:30002**
- Sós, Vera T. (with Simonovits, Miklós) Intersection theorems for graphs. II. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 1017-1030, Colloq. Math. Soc. János Bolyai, 18, North-Holland, Amsterdam, 1978. (Mikhail Deza) **80i:05062b** 05C38 (05C35)
- (with Simonovits, Miklós) Intersection theorems for graphs. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 389-391, Colloques Internat. CNRS, 260, CNRS, Paris, 1978. (Mikhail Deza) **80i:05062a** 05C38 (05C35)
- See also Combinatorics, **80a:05002a** and Combinatorics, **80a:05002b**
- Sosnicki, S. P. A sufficient criterion for the instability of autonomous systems. (Russian) *Prikl. Meh.* 14 (1978), no. 8, 123-125. (Q. K. Ghori) **80b:70034** 70K20
- Sosnovikii, Ju. V. Commutator structure of symplectic groups. (Russian) *Mat. Zametki* 24 (1978), no. 5, 641-648, 734. (E. Vinberg) **80b:20057** 20G30
- Sosnowski, Andrzej M. Optimal control of infinite-dimensional linear systems—a survey of recent results. (Polish, Russian and English summaries) *Arch. Automat. Telemekh.* 23 (1978), no. 3, 243-254. (Author's summary) **80a:93093** 93C25
- Šostak, T. L. (with Monastyrnyi, P. I.) On the question of the modification of Newton's method in the case of ill-posed systems of nonlinear equations. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* 1978, no. 1, 14-18. (From the introduction) **80a:65102** 65H10
- Sotnicko, M. A. (with Feischenko, S. F.) Asymptotic solution for an infinite system of differential equations. (Russian) *Dynamics and stability of controllable systems (Russian)*, pp. 188-193, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev, 1977*. (Authors' summary) **80b:34066** 34E05 (34G99)
- Simplification of the turning point problem for a system of linear differential equations. (Russian, English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 5, 409-412. (Author's summary) **80a:34084** 34E20
- (with Domnică, V. M.) The construction of asymptotic solutions of a system of linear differential equations with deviating argument. (Russian, English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 38 (1979), 62-70, 164. (István Györi) **80j:34101** 34K25
- Sotnikov, V. S. (with Fradlin, B. N.) The axiomatic foundations of classical mechanics. (Ukrainian, Russian summary) *Narisi Ist. Prirod. i Tehn. No. 24* (1978), 15-20, 118. (Editors) **80i:01011** 01A55
- Soto Andrade, Jorge. Représentations de certains groupes symplectiques finis. *Bull. Soc. Math. France Mém.* No. 55-56 (1978), 5-334. (Karin Erdmann) **80g:20054** 20G05
- Sotomayor, J. Singularities of differentiable mappings. (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. I (Portuguese), pp. 13-32, *Inst. Mat. Pura Apl., Rio de Janeiro, 1978*. (J. S. Joel) **80a:58024** 58C27 (57R45)
- Sotres, David A. (with Ghosh, Malay) Strong convergence of linear rank statistics for mixing processes. *Sankhyā Ser. B* 39 (1977), no. 1, 1-11. (P. K. Sen) **80j:60040** 60F15 (62G99)
- Sotteau, D. (with Heydemann, M. C.) Line-graphs of hypergraphs. II. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. I, pp. 567-582, Colloq. Math. Soc. János Bolyai, 18, North-Holland, Amsterdam, 1978. (R. L. Hemminger) **80g:05052** 05C65
- (with Bermond, Jean-Claude; Germa, A.; Heydemann, M. C.) Hypergraphes hamiltoniens. (English summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 39-43, Colloques Internat. CNRS, 260, CNRS, Paris, 1978. (Authors' summary) **80j:05093** 05C65 (05C45)
- (with Bermond, Jean-Claude; Huang, Charlotte) Balanced cycle and circuit designs: even cases. *Ars Combin.* 5 (1978), 293-318. (A. Rosa) **80c:05050** 05B30 (05C38)
- (with Bermond, Jean-Claude; Germa, A.) Resolvable decomposition of  $K_n^2$ . *J. Combin. Theory Ser. A* 26 (1979), no. 2, 179-185. (F. Harary) **80a:05083** 05C99
- Soutek, J. (with Hrubý, J.) Superspace as a fibre space. *Rep. Math. Phys.* 14 (1978), no. 1, 15-18. (Authors' summary) **80a:83038** 83C45 (55R10)
- (with Giaquinta, Mariano; Modica, Giuseppe) Functionals with linear growth in the calculus of variations. I, II. *Comment. Math. Univ. Carolin.* 20 (1979), no. 1, 143-156, 157-172. (Authors' summary) **80b:35047** 35J20 (49A34)
- Quaternions quantum mechanics as the description of tachyons and quarks.
- Symposium on Mathematical Models in the Theory of Elementary Particles (Liblice, 1978), II. *Czechoslovak J. Phys. B* 29 (1979), no. 3, 315-318. (Author's summary) **80d:81101** 81E99 (22E70)
- Soudack, A. C. (with Barkham, P. G. D.) Limit-cycle phenomena in non-linear time-delay systems. *Internat. J. Control* 27 (1978), no. 3, 407-420. (Authors' summary) **80a:34094** 34K10 (93C10)
- (with Brearley, J. R.) The application of equivalent linearization and correction factor techniques to selected predator-prey equations. *Math. Biosci.* 47 (1979), no. 1-2, 115-138. (Authors' summary) **80g:92016** 92A15
- Sonillard, B. (with Iagolnitzer, Daniel) Lee-Yang theory and normal fluctuations. *Phys. Rev. B* (3) 19 (1979), no. 3, 1515-1518. (Authors' summary) **80d:81075** 81E10
- Soukup, Václav On identical response of initially excited and relaxed linear discrete-time system. *Kybernetika (Prague)* 15 (1979), no. 1, 65-71. (Author's summary) **80m:93053** 93C55
- Soule, Stephen The implementation of a Go board. *Inform. Sci.* 16 (1978), no. 1, 31-40. (Author's summary) **80d:68117** 68G05 (68D27, 90D05)
- Soules, George W. An inequality in the Grassmann algebra. *Houston J. Math.* 5 (1979), no. 2, 269-275. (J. A. Dias da Silva) **80k:15042** 15A75
- Soundararajan, N. Axiomatic proofs of total correctness of programs. *Inform. Process. Lett.* 8 (1979), no. 5, 274-278. (From the introduction) **80g:68020** 68B10
- Sourlas, Jean-Marie Thermodynamique et géométrie. *Differential geometrical methods in mathematical physics, II (Proc. Conf., Univ. Bonn, Bonn, 1977)*, pp. 369-397, *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (A. Crumeyrolle) **80d:82042** 82A30 (58F05)
- Sourour, A. R. The isometries of  $L^p(Q, X)$ . *J. Funct. Anal.* 30 (1978), no. 2, 276-285. (F. J. Murray) **80c:46048** 46E40 (47B38)
- (with Fong, Che Kao) Renorming, similarity and numerical ranges. *J. London Math. Soc.* (2) 18 (1978), no. 3, 511-518. (J. W. M. Ford) **80i:46040** 46H05 (47A12)
- (with Fong, Che Kao) On the operator identity  $\sum A_k X B_k \equiv 0$ . *Canad. J. Math.* 31 (1979), no. 4, 845-857. (J. P. Williams) **80b:47020** 47A62
- A short proof of Radjavi's theorem on self-commutators. *Math. Ann.* 239 (1979), no. 2, 137-139. (Chandler Davis) **80b:47046** 47B47
- Pseudo-integral operators. *Trans. Amer. Math. Soc.* 253 (1979), 339-363. (Mary R. Embry-Wardrop) **80a:47056** 47G05 (47B38)
- Southern, B. W. (with Burkhardt, Theodore W.) Optimal truncation procedures in renormalization-group calculations. *J. Statist. Phys.* 20 (1979), no. 3, 247-257. (From the summary) **80b:82021** 82A25
- Sova, Miroslav Inhomogeneous linear differential equations in Banach spaces. (Czech and Russian summaries) *Časopis Pěst. Mat.* 103 (1978), no. 2, 112-135, 202. (M. Tvrđý) **80a:34087** 34G10
- Abstract Cauchy problem. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977)*, pp. 384-396, *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (J. Calvert) **80j:34053** 34Gxx (35R20)
- The Laplace transform of analytic vector-valued functions (real conditions). (Czech summary) *Časopis Pěst. Mat.* 104 (1979), no. 2, 188-199. (E. J. Scott) **80a:44003** 44A10
- The Laplace transform of analytic vector-valued functions (complex conditions). (Czech summary) With a loose Russian summary. *Časopis Pěst. Mat.* 104 (1979), no. 3, 267-280, 311. (R. P. Boas, Jr.) **80a:44002** 44A10 (30D10)
- Laplace transform of exponentially Lipschitzian vector-valued functions. (Czech summary) *Časopis Pěst. Mat.* 104 (1979), no. 4, 370-381, 412. (M. Z. Nashed) **80m:44006** 44A10
- Soverchi, N. L. An error estimate for the approximate solution of boundary value problems for elementary equations of mathematical physics. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 65-81, 314, *Irkutsk. Gos. Univ., Irkutsk, 1976*. (Author's summary) **80b:65094** 65N30
- Šovkopljak, V. N. (with Perestuk, M. O.) Periodic solutions of nonlinear differential equations with an impulse influence. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 5, 517-524, 619. (V. G. Zadorozhnyi) **80j:34042** 34C25
- Sowey, E. R. See Sahal, Hardeo, **80i:65008**
- Soyster, A. L. Inexact linear programming with generalized resource sets. *European J. Oper. Res.* 3 (1979), no. 4, 316-321. (Markku Kallio) **80i:90062** 90C05
- (with Murphy, F. H.) Multiproduct lot-size scheduling with proportional product demands. *Naval Res. Logist. Quart.* 26 (1979), no. 1, 97-108. (John C. Gittins) **80b:90088** 90B35
- Sozanska-Bleis, Zofia (with Suh, I. H.) Proportional minus delay controller. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 370-372. (Authors' summary) **80c:93033** 93B05
- Sozou, C. (with Pickering, W. M.) The round laminar jet in a spherical envelope. *J. Fluid Mech.* 94 (1979), no. 1, 1-12. (Authors' summary) **80a:76035** 76D25
- Sozutov, A. I. Groups with Frobenius pairs of conjugate elements. (Russian) *Algebra i Logika* 16 (1977), no. 2, 204-212, 250. (M. Greendlinger) **80d:20031** 20E32 (20D05)
- (with Šunkov, V. P.) Infinite groups saturated by Frobenius subgroups. (Russian) *Algebra i Logika* 16 (1977), no. 6, 711-735, 742. (B. Hartley) **80a:20041** 20F50
- Spackman, Kenneth W. Simultaneous solutions to diagonal equations over finite fields. *J. Number Theory* 11 (1979), no. 1, 100-115. (R. J. Cook) **80i:10017** 10B15 (14G13)
- Spagnolo, Sergio (with Colombini, Ferruccio) On the convergence of solutions of hyperbolic equations. *Comm. Partial Differential Equations* 3 (1978), no. 1, 77-103. (F. Cardoso) **80a:35069** 35L10
- Convergence of solutions d'équations d'évolution. *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis (Rome, 1978)*, pp. 311-327, *Pitagora, Bologna, 1979*. (P. C. Fife) **80k:35001** 35-02 (35B40, 35K10, 35L10)
- Špakauskas, V. V. (with Kaniauskas, J.; Rudzikas, Z. B.) Genealogical coefficients that are reduced in a quasispin space, and submatrix elements of tensorial operators. (Russian, Lithuanian and English summaries) *Lietosk. Fiz. Šb.* 18 (1978), no. 3, 293-315, 412. (J. Niederle) **80c:22017** 22E70 (17B10, 81G40)
- Spal, Jindřich Generalization of the method of D-decomposition. *Kybernetika (Prague)* 15 (1979), no. 6, 429-445. (Author's summary) **80m:93086** 93A15
- brink-Spalink, J. See Brink-Spalink, J.
- Spallucci, E. (with Denardo, G.) Observer-dependent effects in a uniform electrovacuum space-time. *Lett. Nuovo Cimento* (2) 23 (1978), no. 6, 223-226. (From the text) **80a:83041** 83C50 (58D30)
- Spalt, Detlef D. See Lakatos, Imre, **80k:00018**
- Spangher, Walter (with Mezzetti, Emilia) Polynomial rings over  $C_2FD$  and  $C_3FD$  domains. (Italian, English summary) *Rend. Istit. Mat. Univ. Trieste* 9 (1977), no. 1-2, 103-112 (1978). (Manfred Herrmann) **80a:13019** 13F15 (13G05)
- (with Mezzetti, Emilia) Some generalizations of a known theorem of M. Nagata. (Italian, English summary) *Rend. Istit. Mat. Univ. Trieste* 9 (1977), no. 1-2, 113-121 (1978). (Manfred Herrmann) **80a:13018** 13F15 (13H10)
- (with Mezzetti, Emilia) Some criteria for extending arithmetic properties under the operation of projective closure. (Italian, English summary) *Rend. Istit. Mat. Univ. Trieste* 10 (1978), no. 1-2, 101-122 (1979). (Paolo Maroscia) **80b:13002** 13A15 (14A25)
- Spanier, E. H. Tautness for Alexander-Spanier cohomology. *Pacific J. Math.* 75 (1978), no. 2, 561-563. (S. Zdravkovska) **80a:55008** 55N35
- Spanier, J. (with Oldham, K. B.) Fractional calculus and its applications. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 24(28) (1978), no. 3-4, 29-34. (Bertram Ross) **80b:26007** 26A33
- Spaniol, O. Modelling of local computer networks. *Comput. Networks* 3 (1979), no. 5, 315-326. (Author's summary) **80b:68003** 68A05 (68J10)
- Spano, P. (with Pala, M. M.) A cubic spine technique for a parabolic equation of higher than the second order. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 3, 560-570. (G. F. Raggett) **80a:65194** 65M05
- Spanos, P.-T. D. Stochastic analysis of oscillators with nonlinear damping. (French and German summaries) *Internat. J. Non-Linear Mech.* 13 (1978), no. 4, 249-260. (J. D. Atkinson) **80j:70014** 70L05 (60H10)
- ugrin-Sparac, D. See Ugrin-Sparac, D.
- Sparer, Gerson H. (with Shapiro, Harold N.) Correction to: "Power quadratic



- Diophantine equations and descent" (Comm. Pure Appl. Math. 31(1978), no. 2, 185-203). *Comm. Pure Appl. Math.* 32 (1979), no. 2, 277-279. (R. Steiner) **80b:10025** 10B15
- Sparling, H.-D. Analytische Operatoren vektorieller Veränderlicher in komplexen und reellen Banach-Räumen. I. *Wiss. Z. Tech. Hochsch. Ilmenau* 24 (1978), no. 4, 27-46. (J. Siciak) **80d:46083** 46G20 (32A30, 47H99)
- Sparinskii, I. E. Distribution of nonresidues and primitive roots in recurrent sequences. (Russian) *Mat. Zametki* 24 (1978), no. 5, 603-613, 733. (S. A. Stepanov) **80b:10066** 10H35  
(with Levin, M. B.) Uniform distribution of fractional parts of recurrent sequences. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 3(207), 203-204. (F. Schweiger) **80b:10046** 10K05
- Sparn, Gunnar Interpolation of weighted  $L_p$ -spaces. *Studia Math.* 62 (1978), no. 3, 229-271. (H. Triebel) **80d:46055** 46E30 (46M35)
- Sparzani, Antonio (with Gallone, Franco) Segal quantization of dynamical systems. *J. Math. Phys.* 20 (1979), no. 7, 1375-1384. (J. Sniatycki) **80m:58020** 58F06 (81C99)
- Meyer-Spasche, Rita See Meyer-Spasche, Rita
- Spasov, N. S. Reduction of a system of differential equations to normal form. (Bulgarian. Russian and French summaries) *Godišnik Viss. Učebn. Zaved. Pribl. Mat.* 13 (1977), no. 4, 63-70 (1978). (Author's summary) **80j:34034** 34C20  
Existence of invariant tori and cylinders. (Bulgarian. Russian and French summaries) *Godišnik Viss. Učebn. Zaved. Pribl. Mat.* 13 (1977), no. 4, 71-76 (1978). (Author's summary) **80j:34054** 34D05
- Spătaru, Aurel Stochastic independence of the digits of an  $f$ -expansion. (Romanian. English summary) *Stud. Cerc. Mat.* 30 (1978), no. 1, 75-117. (F. Schweiger) **80b:10061** 10K10 (60G30)  
Dichotomies for probability measures induced by  $(f_1, f_2, \dots)$ -expansions. *Z. Wahrsch. Verw. Gebiete* 45 (1978), no. 4, 337-352. (F. Schweiger) **80b:10075** 10K10
- Spatschek, K. H. (with Laedke, E. W.) On the applicability of the variation of action method to some one-field solitons. *J. Math. Phys.* 20 (1979), no. 9, 1838-1841. (Authors' summary) **80i:81021** 81C99 (35Q20)  
(with Laedke, E. W.) Liapunov stability of generalized Langmuir solitons. *Phys. Fluids* 23 (1980), no. 1, 44-51. (Authors' summary) **80m:76027** 76B25 (76E99)
- Specht, Johann (with Duske, Jürgen; Parchmann, Rainer) A homomorphism characterization of indexed languages. (Russian and German summaries) *Elektron. Informationsverarb. Kybernet.* 15 (1979), no. 4, 187-195. (Kenneth B. Salomon) **80j:68058** 68F05  
(with Duske, Jürgen; Parchmann, Rainer) Szilard languages of IO-grammars. *Inform. and Control* 40 (1979), no. 3, 319-331. (Authors' summary) **80g:68094** 68F05
- Spector, Scott J. (with Gurtin, Morton E.) On stability and uniqueness in finite elasticity. *Arch. Rational Mech. Anal.* 70 (1979), no. 2, 153-165. (Hilmi Demiryaz) **80j:73022** 73G05 (35Q99)  
(with Gurtin, Morton E.; Reynolds, David W.) On uniqueness and bifurcation in nonlinear viscoelasticity. *Arch. Rational Mech. Anal.* 72 (1979/80), no. 4, 303-313. (R. R. Huilgol) **80k:73038** 73F99 (35B32)
- Spedicato, E. On a conjecture of Dixon and other topics in variable metric methods. *Math. Programming* 15 (1978), no. 2, 123-129. (Jon W. Tolles) **80b:65088** 65K10
- Speer, E. R. (with Lowenstein, J. H.) Existence of conserved currents in the perturbative sine-Gordon and massive Thirring models. *Comm. Math. Phys.* 63 (1978), no. 2, 97-112. (Piero de Mottoni) **80b:81055** 81D25 (35Q20)
- Speth, Birgit Degenerate series representations of the universal covering group of  $SU(2, 2)$ . *J. Funct. Anal.* 33 (1979), no. 1, 95-118. (A. U. Klimyk) **80j:22017** 22E46 (22E70)
- Spehler, D. (with Leite Lopes, J.) The limit of massive electrodynamics and the two-component photon field theory. *Lett. Nuovo Cimento* (2) 25 (1979), no. 4, 101-107. (P. Roman) **80f:81055** 81D25 (81L05)
- Spencer, Robert Extending meromorphic functions on  $\mathbb{P}^n \times \mathbb{P}^n$ . *J. Reine Angew. Math.* 305 (1979), 126-133. (Martin Lindner) **80b:14021** 14E25  
Formal meromorphic functions and cohomology on an algebraic variety. *Nagoya Math. J.* 77 (1980), 125-135. (Gerd Faltings) **80m:14004** 14B20
- Spellucci, P. A descent method for finding second order Kuhn-Tucker points of linearly constrained nonconvex optimization problems. *Third Symposium on Operations Research (Unio. Mannheim, Mannheim, 1978)*, Section I, pp. 597-612. *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (Author's summary) **80g:90102** 90C30
- Spence, Alastair Error bounds and estimates for eigenvalues of integral equations. II. *Numer. Math.* 32 (1979), no. 2, 139-146. (Author's summary) **80b:65254** 65R20
- Spence, Lawrence E. (with Friedberg, Stephen H.; Insel, Arnold J.)  $\star$ Linear algebra. Prentice-Hall, Inc., Englewood Cliffs, N.J., 1979. xiv+514 pp. ISBN 0-13-570191-9 (F. J. Papp) **80i:15001** 15-01
- Spencer, A. J. M. (with Parker, D. F.; Berry, D. S.; England, A. H.; Faulkner, T. R.; Green, W. A.; Holden, J. T.; Middleton, D.; Rogers, T. G.)  $\star$ Engineering mathematics. Vol. 2. Van Nostrand Reinhold Co. Ltd., New York-Toronto, Ont.-London, 1977. 400 pp. ISBN 0-442-30206-1 (Vadim Komkov) **80g:00003** 00A06  
On the stress intensity factor for a crack in a highly anisotropic plate. *Quart. J. Mech. Appl. Math.* 32 (1979), no. 4, 437-444. (Author's summary) **80k:73065** 73M05
- Spencer, Donald D.  $\star$ The illustrated computer dictionary. Charles E. Merrill Publishing Co. [A Bell & Howell Co.], Columbus, Ohio, 1980. x+187 pp. ISBN 0-675-08149-1 (Editors) **80m:68001** 68-XX (00A20)
- Spencer, Joel H. Nonconstructive methods in discrete mathematics. *Studies in combinatorics*, pp. 142-178, *MAA Studies in Math.*, 17, Math. Assoc. America, Washington, D.C., 1978. (P. Erdős) **80i:05001** 05-02 (94Bxx)  
(with Sauer, Norbert) Edge disjoint placement of graphs. *J. Combin. Theory Ser. B* 25 (1978), no. 3, 295-302. (E. C. Milner) **80m:05098** 05C99  
(with Erdős, Paul) Evolution of the  $n$ -cube. *Comput. Math. Appl.* 5 (1979), no. 1, 33-39. (Paul A. Catlin) **80g:05054** 05C99 (60C05)  
(with Graham, R. L.) A general Ramsey product theorem. *Proc. Amer. Math. Soc.* 73 (1979), no. 1, 137-139. (Fan R. K. Chung) **80i:05062** 05C55  
Ramsey's theorem for spaces. *Trans. Amer. Math. Soc.* 249 (1979), no. 2, 363-371. (R. L. Graham) **80d:05008** 05A99 (05C55)
- Spera, Antonino Giorgio Radical of a Hestenes ring. (Italian) *Atti Accad. Sci. Lett. Atti*
- Palermo Parte I (4) 35 (1975/76), 283-296 (1978). (I. M. H. Etherington) **80b:17006** 17A40 (16A45)
- Speranskii, D. V. See Discrete systems, formal languages and complexity of algorithms, **80d:68003**
- Speranza, Francesco Sur les colorations des graphes orientés. (Italian summary) *Boll. Un. Mat. Ital. A (5)* 16 (1979), no. 3, 517-522. (Jean-Claude Bermond) **80b:05059** 05C15 (05C20)
- Sperb, René (with Payne, L. E.; Stakgold, Ivar) On Hopf type maximum principles for convex domains. *Nonlinear Anal.* 1 (1976/77), no. 5, 547-559. (V. A. Kondrat'ev) **80m:35026** 35J20  
(with Stakgold, Ivar) Estimates for membranes of varying density. *Applicable Anal.* 8 (1978/79), no. 4, 301-318. (Vadim Komkov) **80c:49035** 49G05 (35P15, 49A22)
- Sperling, Lutz Über die Untersuchung diskreter, nichtlinearer, durch weisses Rauschen erregter Systeme mit Hilfe bestimmter linearer Quasimomentengleichungen. VII. Internationale Konferenz über nichtlineare Schwingungen (Berlin, 1975), Band II, 2, pp. 391-401, Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech., 1977, 6, Akademie-Verlag, Berlin, 1978. (Author's summary) **80d:93064** 93E03 (82A05)  
Analyse stochastisch erregter nichtlinearer Systeme mittels linearer Differentialgleichungen für verallgemeinerte Quasimomentenfunktionen. (English and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 4, 169-176. (Author's summary) **80g:93091** 93E20
- Speisvöhl, V. Quasiconnections and pseudoconnections in a differentiable bundle. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 10(197), 105-107. (J. Vilms) **80c:53011** 53B15 (53C05)  
A generalized connection in a vector bundle. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 5, 685-689, 718. (D. I. Papuc) **80c:53034** 53C05  
Lifting of tensor fields and connections to the space of  $r$ -jets. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 2, 76-79. (I. Kolář) **80b:53032** 53C05 (58A20)
- Spiegel, Eugene (with Trojan, Allan) The Schur subgroup of a  $p$ -adic field. *Canad. J. Math.* 31 (1979), no. 2, 300-303. (Jürgen Ritter) **80c:20007** 20C11 (12B17)
- Spiegelman, Clifford On estimating the slope of a straight line when both variables are subject to error. *Ann. Statist.* 7 (1979), no. 1, 201-206. (Colin L. Mallows) **80b:62041** 62F10
- Spielberg, Kurt (with Guignard, Monique) A direct dual method for the mixed plant location problem with some side constraints. *Math. Programming* 17 (1979), no. 2, 198-228. (Authors' summary) **80g:90117** 90C50 (90C11)
- Spielman, Stephen Statistical dogma and the logic of significance testing. *Philos. Sci.* 45 (1978), no. 1, 120-135. (D. R. Truax) **80b:62010** 62A99
- Spiga, G. Spectral analysis of a time dependent particles transport problem by an integral approach. *Transport Theory Statist. Phys.* 6 (1977), no. 4, 201-211. (C. V. Pao) **80f:82057** 82A70 (45K05)  
(with Cole, R. J.) On projection and variational methods in kinetic theory. *Quart. J. Mech. Appl. Math.* 32 (1979), no. 3, 233-251. (Authors' summary) **80f:82032** 82A40 (49B10, 65R20)
- Spiegelman, E. S. The existence of regular solutions of a plane quadratic system. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 10, 1835-1839, 1918. (M. Bertolino) **80k:34042** 34C05
- Spilker, M. N. Error bounds in the numerical solution of initial value problems. *Proceedings, Bicentennial Congress Wiskundig Genootschap (Vrije Univ., Amsterdam, 1978)*, Part II, pp. 345-358, *Math. Centre Tracts*, 101, Math. Centrum, Amsterdam, 1979. (From the introduction) **80f:65085** 65L05 (65R99)
- Spikes, Paul W. On the integrability of solutions of perturbed nonlinear differential equations. *Proc. Roy. Soc. Edinburgh Sect. A* 77 (1977), no. 3-4, 309-318. (S. J. Lee) **80b:34058** 34C99  
(with Graef, John R.; Rankin, Samuel M.) Oscillation theorems for perturbed nonlinear differential equations. *J. Math. Anal. Appl.* 65 (1978), no. 2, 375-390. (J. S. W. Wong) **80a:34031** 34C10  
(with Graef, John R.; Kitamura, Yuichi; Kusano, Takashi; Onose, Hiroshi) On the nonoscillation of perturbed functional differential equations. *Pacific J. Math.* 83 (1979), no. 2, 365-373. (Yiannis Sficas) **80m:34069** 34K15  
Criteria of limit circle type for nonlinear differential equations. *SIAM J. Math. Anal.* 10 (1979), no. 3, 456-462. (M. S. P. Eastham) **80d:34039** 34C11 (34A34)
- Spilervakis, E. Interpolation, filtering, extrapolation and classification of partially observed autoregressive processes and of a moving average. (Russian. Lithuanian and English summaries) *Trudy Akad. Nauk Litov. SSR Ser. B* 1977, no. 6(103), 105-116. (O. A. Glonti) **80d:60059** 60G35 (62M20)  
Interpolation, filtration, extrapolation and classification of multivariate partially observed autoregressive processes with moving average residuals. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 201-205, Reidel, Dordrecht, 1978. (K. S. Miller) **80m:62094** 62M10
- Spilker, Jürgen A simple proof of an analogue of Wiener's 1/f theorem. *Arch. Math. (Basel)* 32 (1979), no. 3, 265-266. (Thomas McCoy) **80k:30004** 30B10
- Spillman, Bonnie (with Bezdek, James C.; Spillman, Richard) A fuzzy relation space for group decision theory. *Fuzzy Sets and Systems* 1 (1978), no. 4, 255-268. (Dennis J. Packard) **80c:94026** 94D05 (03E72, 90A06)
- Spillman, Richard (with Bezdek, James C.; Spillman, Bonnie) A fuzzy relation space for group decision theory. *Fuzzy Sets and Systems* 1 (1978), no. 4, 255-268. (Dennis J. Packard) **80c:94026** 94D05 (03E72, 90A06)
- Spindel, Ph. Quantization of fields on a curved background. *Differential geometrical methods in mathematical physics, II (Proc. Conf., Univ. Bonn, Bonn, 1977)*, pp. 567-572, *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (John Madore) **80c:81139** 81M05 (83C20)  
(with McLennaghan, R. G.) Quantum numbers for Dirac spinor fields on a curved space-time. *Phys. Rev. D* (3) 20 (1979), no. 2, 409-413. (M. Carmeli) **80c:81114** 81M05 (53B50)  
(with Brout, R.; Englert, F.) Cosmological origin of the grand-unification mass scale. *Phys. Rev. Lett.* 43 (1979), no. 6, 417-420. (Authors' summary) **80c:83053** 83F05
- Spindelböck, Klaus Die M-P-Inverse des Produktes zweier in Jordanscher Normalform

- gegebener Matrizen. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 3, 449-463. (Cs. J. Hegedűs) **80a:15003** 15A09 (15A24)
- Spinedi, Carlo Die thermodynamischen Grundlagen der Kontinuumsmechanik (Vergleich zwischen verschiedenen Zugängen). (English summary) *Z. Angew. Math. Phys.* 29 (1978), no. 6, 884-933. (Author's summary) **80c:80004** 80A10 (58E05, 73B05)
- Spinedi, Giancarlo Minimal prescription for matter terms in the gravitational theory. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 1-2, 71-78 (1978). (Author's summary) **80d:83038** 83C40
- First-order Lagrangian field theories of gravitation without gauge invariance. (Italian and Russian summaries) *Nuovo Cimento B* (11) 51 (1979), no. 1, 15-28. (Andrzej Trautman) **80c:83046** 83D05 (53B50)
- The second cardinal equation of dynamics for continua in special relativity. (Italian and Russian summaries) *Nuovo Cimento B* (11) 54 (1979), no. 1, 145-152. (Author's summary) **80a:83003** 83A05 (73B99)
- Spingarn, J. E. (with Rockafellar, R. Tyrrell) The generic nature of optimality conditions in nonlinear programming. *Math. Oper. Res.* 4 (1979), no. 4, 425-430. (J. Parida) **80j:90099** 90C30
- Spingarn, K. (with Kalaba, Robert E.) A criterion for the convergence of the Gauss-Seidel method. *Appl. Math. Comput.* 4 (1978), no. 4, 359-367. (Authors' summary) **80a:65067** 65F10
- (with Kalaba, Robert E.) Numerical approaches to the eigenvalues of Saaty's matrices for fuzzy sets. *Comput. Math. Appl.* 4 (1978), no. 4, 369-375. (Authors' summary) **80a:65077** 65F15 (03E72)
- (with Chu, A. T. W.; Kalaba, Robert E.) A comparison of two methods for determining the weights of belonging to fuzzy sets. *J. Optim. Theory Appl.* 27 (1979), no. 4, 531-538. (From the summary) **80i:33062** 03E72 (65D10, 90A99)
- Spirlig, F. Algebraic aspects of perturbation theories. *Celestial Mech.* 20 (1979), no. 4, 343-354. (Ju. E. Glikli) **80m:58033** 58F30 (70H99)
- Spirn, Jeffrey R. Queuing networks with random selection for service. *IEEE Trans. Software Engrg.* 5 (1979), no. 3, 287-289. (Author's summary) **80c:68090** 68C15 (90B22)
- Spitzberg-Spiridonov, H. See Zidenberg-Spiridonov, H.
- Spitkovskii, I. M. The block structure of  $J$ -unitary operators. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 30 (1978), 129-138, v. (Author's summary) **80a:47056** 47B50
- The block structure of  $J$ -unitary operators. II. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 31 (1979), 150-157, 169. (Author's summary) **80a:47046** 47B50
- Spirak, M. A. (with Ryscov, I. K.) Study of irredundant sequences of sets. (Russian) *Mathematical theory in computer design (Russian)*, pp. 13-27, *Inst. Kibernet. Akad. Nauk Ukrain. SSR, Kiev*, 1978. (A. N. Maslov) **80m:68055** 68D50
- Spirak, V. A. (with Polterovii, V. M.) Budget paradox in a model of economic equilibrium. (Russian) *Ekonom. i Mat. Metody* 15 (1979), no. 1, 115-127. (Editors) **80c:90022** 90A14
- Spitz, G. B. (with Litvinov, G. L.) Primary decompositions of finite-dimensional representations of Lie algebras and Lie groups. (Russian) *Trudy Sem. Vektor. Tenzor. Anal.* No. 19 (1979), 250-262. (J. Niederle) **80a:17004** 17B10
- Spletstiesner, W. (with Butzer, P. L.) Sampling principle for duration-limited signals and dyadic Walsh analysis. *Inform. Sci.* 14 (1978), no. 2, 93-106. (G. Robert Redinbo) **80i:94001** 94A05 (42C10)
- Spoar, G. A least upper bound for the number of singular points on normal arcs and curves of cyclic order four. *Geom. Dedicata* 7 (1978), no. 1, 37-43. (P. Scherk) **80c:53078** 53C75
- Spohn, Herbert (with Davies, E. Brian) Open quantum systems with time-dependent Hamiltonians and their linear response. *J. Statist. Phys.* 19 (1978), no. 5, 511-523. (Porter W. Johnson) **80a:81023** 81C10 (47B99)
- (with Lebowitz, Joel L.) Transport properties of the Lorentz gas: Fourier's law. *J. Statist. Phys.* 19 (1978), no. 6, 633-654. (G. Gibbs) **80g:82031** 82A40
- (with Ochs, Wilhelm) A characterization of the Segal entropy. *Rep. Math. Phys.* 14 (1978), no. 1, 75-87. (Mary Beth Rusaki) **80a:46039** 46L10
- Boltzmann equation on a lattice: existence and uniqueness of solutions. *J. Statist. Phys.* 20 (1979), no. 4, 463-470. (Hans-Otto Georgii) **80f:82052** 82A67
- (with Aizenman, Michael) Probabilistic methods for stationary problems of linear transport theory. *J. Statist. Phys.* 21 (1979), no. 1, 23-32. (M. Drăganu) **80i:82031** 82A70 (82A05)
- Spohn, U. (with Bachmann, G.) Über Inversionen an beliebigen Hyperflächen 2. Ordnung. *Vorträge von der Tagung Geometrie und Anwendungen (Gaußsig, 1977)*, pp. 4-13, *Weiterbildungszentrum Math. Kybernet. Rechenrech.*, 28, *Tech. Univ. Dresden, Dresden*, 1978. (K. Zimmermann) **80a:52012** 52A40 (90C30)
- Spohn, Wolfgang ★ Grundlagen der Entscheidungstheorie. Monographien Wissenschaftstheorie und Grundlagenforschung, 8. *Scriptor Verlag, Kronberg/Ts.*, 1978. x+216 pp. ISBN 3-589-20609-8 (Tomáš Havránek) **80c:90007** 90A05
- Spoletini Cherubini, Alessandra (with Varisco, A.) Some properties of  $E$ - $m$  semigroups. *Semigroup Forum* 17 (1979), no. 2, 153-161. (J. E. Kuczowski) **80c:20087** 20M10
- Špotjak, G. A. (with Malboroda, I. N.) A method for two-sided approximation of the solutions of operator equations. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* 1978, no. 3(190), 116-119. (From the text) **80a:47097** 47H15 (65J05)
- Sposito, V. A. (with Alders, C. D.) Necessary optimality conditions for programming problems over cone domains. *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 4, 515-521. (Authors' summary) **80c:90122** 90C25 (90C30)
- (with Alders, C. D.) A note on "Real and complex Fritz John theorems" (J. Math. Anal. Appl. 44 (1973), 773-778) by B. D. Craven and B. Mond. *J. Math. Anal. Appl.* 67 (1979), no. 1, 92-93. (Kailash C. Kapur) **80c:90089** 90C05
- Sprague, Alan P. Incidence structures with specified planes. *Relations between combinatorics and other parts of mathematics (Proc. Sympos. Pure Math., Ohio State Univ., Columbus, Ohio, 1978)*, pp. 331-344, *Proc. Sympos. Pure Math., XXXIV, Amer. Math. Soc., Providence, R.I.*, 1979. (Francis Buekenhout) **80a:51001** 51A05 (05B25)
- Sprekels, Jürgen Finite-dimensional cone iteration techniques for superlinear Hammerstein equations. *Numer. Funct. Anal. Optim.* 1 (1979), no. 3, 289-314. (Christopher T. H. Baker) **80j:45012** 45G10 (65R20)
- (with Voss, Heinrich) Pointwise inclusions of fixed points by finite-dimensional iteration schemes. *Numer. Math.* 32 (1979), no. 4, 381-392. (J. Sprekels) **80f:65009** 65J15 (65R20)
- Spremann, K. (with Muth, Eginhard J.) A class of stationary EOQ problems and learning effects. *Optimization and operations research (Proc. Workshop, Univ. Bonn, Bonn, 1977)*, pp. 209-221, *Lecture Notes in Econom. and Math. Systems*, 157, *Springer, Berlin*, 1978. (N. U. Prabhu) **80a:90052** 90B05
- Sprengelmeier, Claus Derivationen und Automorphismen von Algebren, in denen die Gleichung  $X^2 = 0$  nur trivial lösbar ist. (English summary) *Manuscripta Math.* 28 (1979), no. 4, 431-436. (Aleksij Gainov) **80g:17001** 17A45
- Sprevak, D. (with Newmann, M. M.) Comments on: "Bootstrap estimation of parameters and states of linear multivariable systems" [IEEE Trans. Automat. Control 24 (1979), no. 2, 340-343; MR 80d:93072] by H. El-Sherief and N. K. Sinha. With a reply by El-Sherief and Sinha. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 138-139. (Edition) **80d:93072b** 93E11
- gonzalez-Springer, Gerardo See Gonzalez-Springer, Gerardo
- Sprindžuk, Vladimir G. (with Vičinskii, V. T.) Diophantine approximations on random varieties. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 22 (1978), no. 12, 1065-1066, 1147. (B. Volkman) **80i:10069** 10K05 (10K15)
- ★ Metric theory of Diophantine approximations. Translated from the Russian and edited by Richard A. Silverman. With a foreword by Donald J. Newman. *Scripta Series in Mathematics*, V. H. Winston & Sons, Washington, D.C.; A Halsted Press Book, John Wiley & Sons, New York-Toronto, Ont.-London, 1979. xiii+156 pp. ISBN 0-470-26706-2 (Editors) **80i:10048** 10K15 (10-02, 10Fxx)
- Spring, David (with Bourgeois, Gérald) Groupes d'homotopie de l'espace des plongements propres d'une  $m$ -variété ouverte dans une  $m$ -variété ouverte. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 18, A771-A773. (Authors' summary) **80b:58021** 58D10 (57R40)
- Springer, Melvin D. ★ The algebra of random variables. *Wiley Series in Probability and Mathematical Statistics*, John Wiley & Sons, New York-Chichester-Brisbane, 1979. xix+470 pp. ISBN 0-471-01406-0 (A. M. Mathai) **80b:60029** 60E10 (33A35, 62E15)
- Springer, T. A. Reductive groups. *Automorphic forms, representations and  $L$ -functions (Proc. Sympos. Pure Math., Oregon State Univ., Corvallis, Ore., 1977)*, Part 1, pp. 3-27, *Proc. Sympos. Pure Math., XXXIII, Amer. Math. Soc., Providence, R.I.*, 1979. (From the text) **80b:20062** 20G15 (22E15)
- Sprössig, Wolfgang Analoga zu funktionentheoretischen Sätzen im  $\mathbb{R}^n$ —Anwendungen auf mehrdimensionale singuläre Integralgleichungen. *Beiträge Anal.* No. 12 (1978), 113-126. (M. Dostal) **80f:30038** 30G30 (45E05)
- Räumliches Analogon zum komplexen  $T$ -Operator. *Beiträge Anal.* No. 12 (1978), 127-137. (Wolfgang Tutschke) **80c:30037** 30G20
- Sprott, D. A. See Efron, Bradley; et al. **80g:62021**
- Spruck, Joel (with Kinderlehrer, David; Nirenberg, Louis) Régularité dans les problèmes elliptiques à frontière libre. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 24, A1187-A1190. (Authors' summary) **80a:35050** 35J65 (53A10)
- (with Gulliver, Robert) Correction to: "On embedded minimal surfaces" [Ann. of Math. (2) 103 (1976), no. 2, 331-347; MR 53 #9011]. *Ann. of Math. (2)* 109 (1979), no. 2, 407-412. (From the text) **80j:53013** 53A10
- Sprungnoll, R. (with Cesarini, F.; Pinzani, R.; Soda, G.) A bottom-up approach to binary trees paging. *Les arbres en algèbre et en programmation (4ème Colloq. Lille, Lille, 1979)*, pp. 44-55, *Univ. Lille I, Lille*, 1979. (Authors' summary) **80m:68028** 68B20 (68E10)
- Spulber, Dorian TP-rings. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 4, 611-615. (M. B. Boisen, Jr.) **80a:13006** 13B30 (13F05)
- Spyratos, N. (with Banchillon, François) Name independence and database abstraction in the relational model. *Mathematical foundations of computer science, 1978 (Proc. Seventh Sympos., Zakopane, 1978)*, pp. 497-505, *Lecture Notes in Comput. Sci.*, 64, *Springer, Berlin*, 1978. (W. W. Armstrong) **80f:68026** 68B15
- Spyrou, N. Tensor-virial equations for post-Newtonian relativistic stellar dynamics. *Gen. Relativity Gravitation* 8 (1977), no. 7, 463-489. (P. S. Florides) **80d:83065a** 83C99
- On the energy in relativistic stellar dynamics. *Gen. Relativity Gravitation* 8 (1977), no. 7, 491-495. (P. S. Florides) **80d:83065b** 83C99 (85A05)
- Lie derivatives, Killing's equations, Gegenbauer polynomials: a combined use for the evaluation of some useful integrals. *Bull. Soc. Math. Grèce (N.S.)* 19 (1978), no. 2, 198-216. (R. A. Askey) **80c:33007** 33A50 (26A33)
- Relativistic effects in many-body systems of finite size, internal structure, and internal motions. I. "Self-acceleration" of astrophysical systems. *Gen. Relativity Gravitation* 10 (1979), no. 7, 581-598. (P. C. Vaidya) **80a:70011** 70F10 (34Cxx, 83C10)
- Squires, W. A. (with Rubel, Lee A.; Taylor, B. A.) Irreducibility of certain entire functions with applications to harmonic analysis. *Ann. of Math. (2)* 108 (1978), no. 3, 553-567. (Carlos A. Berenstein) **80d:32003** 32A15 (30D30)
- Sra, K. S. The combined generalized measure approach to the study of some steady laminar flows of viscoelastic fluids that exhibit pseudoplasticity. *Indian J. Pure Appl. Math.* 8 (1977), no. 12, 1445-1455. (R. K. Gupta) **80j:76002** 76A05
- Šragin, I. V. Carathéodory conditions. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 3(207), 219-220. (O. Costinescu) **80c:28009** 28A20
- Štrajner, E. G. Generalized Stiefel manifolds and unitary linear representations of groups of motions of quasi-elliptic spaces. (Russian) *Modern geometry (Russian)*, pp. 140-146, *Leningrad. Gos. Ped. Inst., Leningrad*, 1978. (Rolf Sulanke) **80j:22013** 22E45 (53C30)
- Srebrny, Marian Singular cardinals and analytic games. *Higher set theory (Proc. Conf. Math. Forschungsinst., Oberwolfach, 1977)*, pp. 391-422, *Lecture Notes in Math.*, 669, *Springer, Berlin*, 1978. (Keith Devlin) **80j:03072** 03E15
- Sreedharan, V. P. (with Owens, R. W.) Algorithms for solving overdetermined systems of linear equations in the  $\ell_p$ -metric,  $0 < p < 1$ . *J. Approx. Theory* 24 (1978), no. 1, 1-17. (Authors' summary) **80c:65053** 65F20
- Sreehari, M. (with Shanbhag, D. N.) An extension of Goldie's result and further results in infinite divisibility. *Z. Wahrsch. Verw. Gebiete* 47 (1979), no. 1, 19-25. (Charles M. Goldie) **80c:60023** 60E07
- Sree Hari Rao, V. On boundedness of impulsively perturbed systems. *Bull. Austral. Math. Soc.* 18 (1978), no. 2, 237-242. (O. I. Nwokah) **80d:34057** 34C35
- Note on asymptotic equivalence for measure differential equations. *Bull. Austral. Math. Soc.* 18 (1978), no. 3, 455-460. (V. Lakshmikantham) **80a:34063a** 34D05



- Corrigendum: "Note on asymptotic equivalence for measure differential equations" (Bull. Austral. Math. Soc. 18 (1978), no. 3, 455-460). Bull. Austral. Math. Soc. 19 (1978), no. 2, 319. (Editors) **80a:34063b** 34D05
- (with Kuppaswamy Rao, K.) On a nonlinear differential-integral equation for ecological problems. Bull. Austral. Math. Soc. 19 (1978), no. 3, 363-369. (John M. Bownds) **80b:45015** 45J05 (92A17)
- Asymptotically self-invariant sets and stability of measure differential equations. Nonlinear Anal. 2 (1978), no. 4, 483-489. (S. Leela) **80a:34068** 34D10
- Sreekanth, A. K. (with Dutt, H. N. V.) Optimum two-dimensional wings in supersonic flows. J. Astronaut. Sci. 26 (1978), no. 3, 279-287. (Authors' summary) **80d:76051** 76J99
- Sreenivasulu, V. Some classes of entire functions. J. Indian Math. Soc. (N.S.) 41 (1977), no. 3-4, 255-260 (1978). (R. S. L. Srivastava) **80a:30025** 30D15
- Sridharan, M. R. Note on an asymptotic formula for a class of digraphs. Canad. Math. Bull. 21 (1978), no. 3, 377-381. (R. C. Read) **80b:05037** 05C30 (05C20)
- On an extremal problem concerning pancyclic graphs. J. Math. Phys. Sci. 12 (1978), no. 4, 297-306. (J. A. Bondy) **80c:05072** 05C35 (05C38)
- Srithari, Sargur N. (with Ohanesian, Michael K.) An efficient algorithm for determining Hadamard frequency vectors. IEEE Trans. Comput. 28 (1979), no. 3, 243-244. (G. Robert Redinbo) **80g:94113** 94C30 (42C10)
- Srikanth, P. N. (with Joshi, Mohan C.) On a class of nonlinear integral equations. Proc. Indian Acad. Sci. Sect. A 87 (1978), no. 9, 169-175. (C. P. Gupta) **80m:47060** 47H15 (45N05)
- Srinathkumar, S. Minimal order observers for linear functions of the state vector. Electron. Lett. 14 (1978), no. 9, 275-277. (Author's summary) **80b:93047** 93B30
- Srinivas, M. D. Conditional probabilities and statistical independence in quantum theory. J. Math. Phys. 19 (1978), no. 8, 1705-1710. (Robin Hudson) **80b:82010** 82A05
- Quantum generalization of Kolmogorov entropy. J. Math. Phys. 19 (1978), no. 9, 1952-1961. (Gérard G. Emch) **80a:81030** 81C20 (46N05)
- Successive observations in relativistic quantum theory. J. Math. Phys. 20 (1979), no. 7, 1593-1611. (From the summary) **80i:81068** 81M05 (83C99)
- Srinivasan, A. (with Husain, Taqdir) Numerical range theory for pseudo-Banach algebras. Kyungpook Math. J. 19 (1979), no. 1, 75-84. (Mohammed Akkar) **80m:46047** 46H05
- Srinivasan, B. (with Rajaraman, V.) On the normalization of relational databases. Inform. Process. Lett. 9 (1979), no. 2, 88-92. (Authors' introduction) **80i:68018** 68B15
- Srinivasan, Mandyam V. (with Snyder, Allan W.) Human psychophysics: functional interpretation for contrast sensitivity versus spatial frequency curve. Biol. Cybernet. 32 (1979), no. 1, 9-17. (Authors' summary) **80e:92012** 92A09
- Srinivasan, R. On some results of Takács in ballot problems. Discrete Math. 28 (1979), no. 2, 213-218. (S. G. Mohanty) **80i:60012** 60C05 (60J15)
- Srinivasan, S. K. Stochastic integrals. Solid Mech. Arch. 3 (1978), no. 4, 325-379. (Georges A. Bécus) **80c:60073** 60H05
- General analysis of s-s inventory systems with random lead times and unit demands. J. Math. Phys. Sci. 13 (1979), no. 2, 107-129. (N. U. Prabhu) **80c:90050** 90B05
- (with Udayaskaran, S.) Canonical extension of a problem in parametric frequency up-conversion with stochastic pumping. (German summary) Optica Acta 26 (1979), no. 12, 1535-1540. (Authors' summary) **80m:81126** 81K05
- Srinivasan, Seshadri On two-dimensional Hammett's sequences. J. Number Theory 10 (1978), no. 4, 421-429. (Harald Niederreiter) **80f:10065** 10K30
- Srinivasan, Sundarajan (with Sastry, Sundaram M. A.) A sufficient condition for a subspace to be proximal. J. Madurai Kamaraj Univ. 8 (1979), no. 1, 109-110. (O. P. Kapoor) **80i:46017** 46B20
- Srinivasan, T. N. (with Ponnasari, J.-P.) Selection of time independent technologies under an uncertain planning horizon. Operations 15 (1978), no. 2-3, 95-105. (B. W. Stuck) **80a:90041** 90A16
- (with Rao, Ganti Prasada) Analysis and synthesis of dynamic systems containing time delays via block-pulse functions. Proc. Inst. Electr. Engrs. 125 (1978), no. 10, 1064-1068. (Authors' summary) **80d:93018** 93A99
- Srinivasan, V. (with Gupta, Rajendra K.; Yu, P. L.) Optimal state-dependent pricing policies for a class of stochastic multiunit service systems. Naval Res. Logist. Quart. 26 (1979), no. 2, 257-283. (B. W. Stuck) **80c:90066** 90B22
- Srinivasan, V. K. Laguerre polynomials. Internat. J. Math. Ed. Sci. Tech. 10 (1979), no. 2, 283-284. (T. S. Chihara) **80b:33022** 33A65
- Srivastava, A. N. (with Singh, S. N.) A note on generalized Laguerre polynomials. Kyungpook Math. J. 18 (1978), no. 2, 207-209. (W. A. Al-Salam) **80c:33010** 33A70 (33A65)
- (with Singh, S. N.) On a new generalized function. (Hindi. English summary) Vijnana Parishad Anusandhan Patrika 21 (1978), no. 4, 383-386. (S. L. Kalla) **80b:33025** 33A70
- (with Singh, S. D.; Singh, S. N.) On a function defined by generalized Rodrigues' formula. Indian J. Pure Appl. Math. 10 (1979), no. 1, 124-127. (H. L. Manocha) **80c:33010** 33A65
- (with Singh, S. D.; Singh, S. N.) Operational derivation of generating functions of a generalized function. Indian J. Pure Appl. Math. 10 (1979), no. 3, 326-329. (J. N. Pandey) **80j:33029** 33A70 (44A40)
- (with Hussain, M. A.; Singh, S. N.) Bilinear generating functions for orthogonal polynomials related to ultraspherical polynomials. Indian J. Pure Appl. Math. 10 (1979), no. 3, 330-333. (H. L. Manocha) **80j:33017** 33A65
- (with Singh, S. N.) On the Konhauser polynomials  $Y_n^*(x; k)$ . Indian J. Pure Appl. Math. 10 (1979), no. 9, 1121-1126. (H. M. Srivastava) **80b:33017** 33A65 (42C05)
- Srivastava, Anand Prakash (with Mishra, Babban Prasad) Strong and absolute summabilities of functions based on  $(D, \alpha)$  summability methods. Math. Proc. Cambridge Philos. Soc. 86 (1979), no. 2, 279-286. (N. Kishore) **80f:40003** 40F05 (40D25)
- Srivastava, Archana (with Srivastava, M. K.) Comments on the angle Glauber approximation. Indian J. Pure Appl. Phys. 15 (1977), no. 1, 44-47. (Authors' summary) **80j:81075** 81F30
- Srivastava, Aruna (with Srivastava, Hari M.) A new class of orthogonal expansions for the H-function of several complex variables. Comment. Math. Univ. St. Paul. 27 (1978/79), no. 1, 59-69. (V. L. Deshpande) **80b:33003** 33A35
- Srivastava, B. N. (with Werle, M. J.; Davis, R. T.) A finite difference technique involving discontinuous derivatives. Comput. & Fluids 7 (1979), no. 1, 69-74. (F. Milinazzo) **80c:65092** 65N05 (76N15)
- Srivastava, Girja S. (with Vaish, Satendra K.) Logarithmic proximate orders of entire functions represented by Dirichlet series. Acta Cienc. Indica 5 (1979), no. 3, 108-112. (A. V. Brašičev) **80b:30008** 30B50 (30D15)
- (with Vaish, Satendra K.) On the logarithmic proximate orders of entire functions represented by Dirichlet series. (French summary) Rend. Mat. (6) 12 (1979), no. 1, 135-142. (M. E. Noble) **80i:30008** 30B50
- Srivastava, H. M. See Srivastava, Hari M.
- Srivastava, H. S. P. Integrals involving generalized Legendre functions and a generalized function of two variables. (Hindi. English summary) Vijnana Parishad Anusandhan Patrika 21 (1978), no. 1, 27-33. (H. M. Srivastava) **80j:33009** 33A35 (44A20)
- Some identities for the H-function of two variables. (Hindi. English summary) Vijnana Parishad Anusandhan Patrika 21 (1978), no. 4, 315-319. (Brij Mohan) **80c:33006** 33A35
- Srivastava, Hari M. A Watsonian theorem for multiple series. Rend. Sem. Mat. Univ. Padova 58 (1977), 241-245 (1978). (C. K. Sharma) **80b:33009** 33A30
- (with Srivastava, Aruna) A new class of orthogonal expansions for the H-function of several complex variables. Comment. Math. Univ. St. Paul. 27 (1978/79), no. 1, 59-69. (V. L. Deshpande) **80b:33003** 33A35
- (with Srivastava, Rekha) A certain class of dual equations involving series of Jacobi and Laguerre polynomials. Nederl. Akad. Wetensch. Indag. Math. 40 (1978), no. 4, 502-514. (Brij Mohan) **80c:45009** 45F10 (33A65)
- An operational representation for the Laguerre polynomials. Nordisk Mat. Tidsskr. 25/26 (1978), no. 3-4, 137-138. **80m:33022** 33A65
- A note on certain summation theorems for multiple hypergeometric series. Simon Stevin 52 (1978), no. 3, 97-109. (M. Nassif) **80b:33011** 33A35
- (with Panda, Rekha) A note on certain results involving a general class of polynomials. (Italian summary) Boll. Un. Mat. Ital. A (5) 16 (1979), no. 3, 467-474. (James M. Horner) **80b:33018** 33A65
- (with Exton, Harold) A generalization of the Weber-Schafheitlin integral. J. Reine Angew. Math. 309 (1979), 1-6. (V. L. Deshpande) **80b:33011** 33A30
- A note on certain identities involving generalized hypergeometric series. Nederl. Akad. Wetensch. Indag. Math. 41 (1979), no. 2, 191-201. (U. C. Jain) **80b:33010** 33A30
- (with Srivastava, Rekha) Some multiple integral transformations involving the H-function of several variables. Nederl. Akad. Wetensch. Indag. Math. 41 (1979), no. 3, 353-362. (R. G. Buschman) **80j:33008** 33A35
- Srivastava, J. N. A review of some recent work on discrete optimal factorial designs for statisticians and experimenters. Developments in statistics, Vol. 1, pp. 267-329, Academic Press, New York, 1978. (D. V. Chopra) **80a:62122** 62K15 (62K05)
- (with Caprihan, A.) Some new properties of Srivastava codes. J. Combin. Inform. System Sci. 3 (1978), no. 1, 11-20. (Hermann J. Helgert) **80g:94052** 94B05 (94B20)
- (with Gupta, Bisham Chand) Main effect plan for  $2^m$  factorials which allow search and estimation of one unknown effect. J. Statist. Plann. Inference 3 (1979), no. 3, 259-265. (U. B. Paik) **80b:62062** 62K15
- Srivastava, J. P. (with Mishra, R. S.; Rai, S. P.) Para f-structure in tangent bundle. Indian J. Pure Appl. Math. 9 (1978), no. 12, 1275-1281. (K. Yano) **80g:53028** 53C15
- (with Rai, S. P.; Yadav, S. L.) On almost product and almost decomposable manifolds. Publ. Inst. Math. (Beograd) (N.S.) 25(39) (1979), 183-196. (E. Pavlov) **80b:53058** 53C15
- Srivastava, Jagvind Kumar Semigroups of classes of univalent functions. Math. Balkanica 6 (1976), 237-244 (1978). (T. Kubo) **80g:30012** 30C55
- Srivastava, K. B. (with Saxena, R. B.) On interpolation operators. I. A proof of Jackson's theorem for differentiable functions. Anal. Numer. Theor. Approx. 7 (1978), no. 2, 211-223. (R. K. Beaton) **80f:41003** 41A05
- Srivastava, K. K. Near-rings whose generator is a Lie ideal. Studia Sci. Math. Hungar. 10 (1975), no. 3-4, 273-276 (1978). (Günter Pitz) **80a:16052** 16A76
- (with Singh, Punyatma) Variational solution of heat convection in the channel flow with the help of GPDF. Acta Phys. Acad. Sci. Hungar. 45 (1978), no. 3, 201-211 (1979). (Authors' summary) **80c:80008** 80A20 (49B22, 76C05)
- Srivastava, K. N. (with Palaiya, R. M.; Choudhary, Arati) Solution of certain simultaneous multiple integral equations involving inverse Mellin transforms. J. Indian Inst. Sci. 60 (1978), no. 10, 199-206. (R. S. Dahiya) **80b:45004** 45F10 (73M99)
- (with Choudhary, Arati; Palaiya, R. M.) Mellin transform technique for solving Griffith crack problem at the interface of two bonded dissimilar wedges. Indian J. Pure Appl. Math. 10 (1979), no. 2, 147-157. (K. S. Parihar) **80d:73112** 73M05
- Srivastava, M. K. (with Srivastava, Archana) Comments on the angle Glauber approximation. Indian J. Pure Appl. Phys. 15 (1977), no. 1, 44-47. (Authors' summary) **80j:81075** 81F30
- Srivastava, M. S. (with Khatri, C. G.) Asymptotic expansions for distributions of characteristic roots of covariance matrices. South African Statist. J. 12 (1978), no. 2, 161-186. (Yasuko Chikuse) **80b:62071** 62H10
- Srivastava, O. S. (with Barnwal, S. P.) Three-dimensional shock waves in a gaseous medium containing dust particles. Defence Sci. J. 28 (1978), no. 3, 103-108. (Authors' summary) **80c:76055** 76T05
- Srivastava, P. D. (with Juneja, Om Prakash) On the space of entire functions of  $(p, q)$  order  $p$ . Comment. Math. Univ. St. Paul. 27 (1978/79), no. 1, 71-79. (Michael von Renteln) **80b:30020** 30D15 (46E10)
- On the space of certain class of analytic functions. Indian J. Pure Appl. Math. 10 (1979), no. 1, 84-93. (A. Bailliet) **80g:30032** 30H05 (30D60, 46E10)
- Srivastava, Pramila (with Prakash, Anand) Somewhat continuity and some other generalisations of continuity. Math. Slovaca 27 (1977), no. 3, 243-248. (Hughes B. Hoyle, III) **80b:54019** 54C08
- (with Prakash, Anand) Relations between convergence, almost convergence and r-convergence. Riv. Mat. Univ. Parma (4) 4 (1978), 37-39 (1979). (O. Wyler) **80c:54003** 54A20

- Srivastava, R. C.** (with Foutz, Robert V.) Statistical inference for Markov processes when the model is incorrect. *Adv. in Appl. Probab.* 11 (1979), no. 4, 737-749. (Sidney J. Yakowitz) **80k:62043** 62F10
- Srivastava, R. J.** (with Singh, U. P.) On induced theory of semi-symmetric and quarter-symmetric linear connections. *Indian J. Pure Appl. Math.* 10 (1979), no. 4, 479-485. (A. Svec) **80e:53013** 53B15
- Srivastava, R. S. L.** (with Gupta, J. S.) On the growth of integral functions and their derivatives defined by Dirichlet series. *Rev. Mat. Hisp.-Amer.* (4) 38 (1978), no. 1, 50-60. (M. E. Noble) **80k:30002** 30B50 (30D10)
- (with Nandan, Krishna; Doherey, Ram Prakash) Proximate order of an entire function with index pair  $(p, q)$ . *Indian J. Pure Appl. Math.* 11 (1980), no. 1, 33-39. (S. K. Bajpai) **80k:30023** 30D15
- Srivastava, Ramesh Chandra** (with Singh, K. D.) On  $p$ -analytic vectors. *Rev. Mat. Hisp.-Amer.* (4) 38 (1978), no. 2-3, 116-130. (Yoshio Matsuyama) **80e:53023** 53B35
- Srivastava, Ravindra Kumar** (with Prasad, Chandra Mani) On concircular Bianchi and Veblen identities. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 1-2, 27-32. (A. B. Sinha) **80f:53018** 53B20
- (with Prasad, Chandra Mani) Decomposition of neo-recurrent curvature tensor field of the second order. *Indian J. Pure Appl. Math.* 10 (1979), no. 8, 920-927. (R. Behari) **80k:53048** 53B40
- (with Prasad, Chandra Mani) Decomposition of neo-recurrent curvature tensor field of the first order. *Indian J. Pure Appl. Math.* 10 (1979), no. 9, 1175-1182. (R. Behari) **80k:53047** 53B40
- Srivastava, Rekha** A note on certain results involving the polynomials  $L_n^{(\alpha, \beta)}(x)$ . (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 3, 324-327. (W. A. Al-Salam) **80k:33022** 33A70
- (with Srivastava, Hari M.) A certain class of dual equations involving series of Jacobi and Laguerre polynomials. *Nederl. Akad. Wetensch. Indag. Math.* 40 (1978), no. 4, 502-514. (Brij Mohan) **80k:45009** 45F10 (33A65)
- (with Srivastava, Hari M.) Some multiple integral transformations involving the  $H$ -function of several variables. *Nederl. Akad. Wetensch. Indag. Math.* 41 (1979), no. 3, 353-362. (R. G. Buschman) **80j:33008** 33A35
- Srivastava, S. M.** Selection theorems for  $G_\delta$ -valued multifunctions. *Trans. Amer. Math. Soc.* 254 (1979), 283-293. (Richard D. Mauldin) **80g:54027** 54C65
- Srivastava, Triloki Nath** Some integrals involving generalized  $H$ -function of Fox. *Acta Mexicana Cienc. Tecn.* 9/10 (1977/78), no. 31-34, 42-52. (K. C. Gupta) **80m:33015** 33A35
- (with Izumi, Hideo) On  $R_3$ -like Finaler spaces. *Tensor (N.S.)* 32 (1978), no. 3, 339-349. (H. Rund) **80a:53030** 53B40
- Srivastava, Virender Kumar** (with Upadhyaya, Sushama) Properties of Stein-like estimators in the regression model when disturbances are small. *J. Statist. Res.* 11 (1977), no. 1-2, 5-21. (Authors' summary) **80j:62068** 62J07
- (with Dwivedi, T. D.) On the minimum mean squared error estimators in a regression model. *Comm. Statist. A—Theory Methods* 7 (1978), no. 5, 487-494. (Lubomir Kubáček) **80k:62077** 62J05 (62J07)
- (with Tiwari, Ramji) Efficiency of two-stage and three-stage least squares estimators. *Econometrica* 46 (1978), no. 6, 1495-1498. (H. Neudecker) **80h:62050** 62J05 (62P20)
- (with Raj, Baldev) The existence of the mean of the estimator in seemingly unrelated regressions. *Comm. Statist. A—Theory Methods* 8 (1979), no. 7, 713-717. (Jerry A. Hausman) **80k:62088** 62J05 (62P20)
- Srivatekaramana, T.** Change of origin and scale in ratio and difference methods of estimation in sampling. (French summary) *Canad. J. Statist.* 6 (1978), no. 1, 79-86. (Mankal N. Murthy) **80g:62004** 62D05
- (with Tracy, Derrick S.) On ratio and product methods of estimation in sampling. *Statist. Neerlandica* 33 (1979), no. 1, 37-49. (Mankal N. Murthy) **80k:62022** 62D05
- Sročka, V. A.** A technique for obtaining necessary optimality conditions in continuous control problems with a free right end. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 145-156, 317. *Irkutsk. Gos. Univ., Irkutsk*, 1976. (Author's summary) **80j:49018** 49B10 (93C15)
- Śrōdka, T.** See **Handbook: Mathematics**, **80f:00007**
- Sroka, S.** (with Fabes, E. B.; Widman, K.-O.) Littlewood-Paley a priori estimates for parabolic equations with sub-Dini continuous coefficients. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) 6 (1979), no. 2, 305-334. (Todor G. Genčev) **80h:35072** 35K30 (35B45)
- Srumova, F. V.** Asymptotic behavior of the energy emitted into space by an almost periodic source of electromagnetic waves. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* 21 (1978), no. 5, 18-20. (Editors) **80a:78020** 78A40 (35B40)
- Stants, Preston W.** (with Sethi, Suresh P.) Optimal control of some simple deterministic epidemic models. *J. Oper. Res. Soc.* 29 (1978), no. 2, 129-136. (R. Fischler) **80f:92022** 92A15
- Stacey, P. J.** Choquet simplices with prescribed extreme and Šilov boundaries. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 120, 469-482. (S. Kutateladze) **80m:46011** 46A55
- Stachel, Hellmuth** Strahlflächen im quasielliptischen Raum. *Ber. Math.-Statist. Sect. Forsch. Graz* No. 120 (1979), i+40 pp. (Vladislav Goldberg) **80k:53020** 53A35
- Über zweiparametrische ebene Bewegungsvorgänge. (English summary) *Monatsh. Math. 88* (1979), no. 1, 45-54. (J. Hoschek) **80m:53008** 53A17
- Stachel, John J.** (with Papapetrou, Achille) A new Lagrangian for the vacuum Einstein equations and its tetrad form. *Gen. Relativity Gravitation* 9 (1978), no. 12, 1075-1087. (J. W. Auer) **80k:83004** 83C05 (53B05)
- (with d'Inverno, R. A.) Conformal two-structure as the gravitational degrees of freedom in general relativity. *J. Math. Phys.* 19 (1978), no. 12, 2447-2460. (M. Sachs) **80e:83018** 83C30 (53A30, 58H15)
- The genesis of general relativity. *Einstein Symposium, Berlin* (1979), pp. 428-442. *Lecture Notes in Phys.*, 100, Springer, Berlin, 1979. (Lawrence Sklar) **80m:83004** 83C05 (01A60, 83-03)
- See also **Rosenfeld, Léon**, **80k:01068**
- Stachniak, Zbigniew** Some notes on characteristic consequence operations. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 7 (1978), no. 4, 159-166. (Luiz Paulo de Alcantara) **80j:03041** 03B99
- Stachó, L. L.** On curvature measures. *Acta Sci. Math. (Szeged)* 41 (1979), no. 1-2, 191-207. (G. Freilich) **80j:53065** 53C65 (49G05, 52A22)
- Stachow, E.-W.** (with Mittelstaedt, Peter) The principle of excluded middle in quantum logic. *J. Philos. Logic* 7 (1978), no. 2, 181-208. (Philip L. Quinn) **80a:03076** 03G12 (81B10)
- Quantum logical calculi and lattice structures. *J. Philos. Logic* 7 (1978), no. 3, 347-386. (S. Gudder) **80i:01004** 81B10 (03G12, 06C15)
- Completeness of quantum logic. *Physical theory as logico-operational structure*, pp. 203-243, *Univ. Western Ontario Series in Philos. Sci.*, 7, Reidel, Dordrecht, 1979. (M. J. Mączyski) **80i:03073** 03G12 (81B10)
- Quantum logical calculi and lattice structures. *Physical theory as logico-operational structure*, pp. 245-284, *Univ. Western Ontario Series in Philos. Sci.*, 7, Reidel, Dordrecht, 1979. (M. J. Mączyski) **80h:03093** 03G12 (81B10)
- Stadelmaier, M. W.** (with Meyer, C. D., Jr.) Singular  $M$ -matrices and inverse positivity. *Linear Algebra Appl.* 22 (1978), 139-156. (R. J. Plemmons) **80k:15008** 15A09
- Stadje, Wolfgang** Eine Bemerkung zum Zusammenhang von stochastischer und schwacher Konvergenz. *Operations Research Verfahren*, 30, pp. 163-165, Hain, Meisenheim, 1979. (David Pollard) **80j:60009** 60B10
- Goal-programming- und Nutzenmodelle für Entscheidungssituationen mit mehreren Zielen und stochastischen Informationen. *Operations Research Verfahren*, 30, pp. 166-183, Hain, Meisenheim, 1979. (G. Tintner) **80i:90072** 90C15 (90C50)
- Nutzen- und Goal-Programming-Modelle für das Vektormaximumproblem und stochastische Verallgemeinerungen. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 4, pp. 289-299, *Operations Research Verfahren*, 34, Hain, Meisenheim, 1979. (Klaus Tammer) **80k:90133** 90C30
- On the relationship of goal programming and utility functions. (German summary) *Z. Oper. Res. Ser. A-B* 23 (1979), no. 1, A61-A69. (Wayne Winston) **80k:90125** 90C31
- Stadler, H.** Über eine optimale Feedback-Kontrolle unter der Verwendung von ARMA-Modellen. (English summary) *Z. Oper. Res. Ser. A-B* 23 (1979), no. 3, 107-115. (Author's summary) **80e:93090** 93C99
- Stadler, W.** A survey of multicriteria optimization or the vector maximum problem. I. 1776-1960. *J. Optim. Theory Appl.* 29 (1979), no. 1, 1-52. (Jacques Dubois) **80k:01028** 01A50 (90C31)
- Stadtmiiller, U.** On the zeros of power series with logarithmic coefficients. *Canad. Math. Bull.* 22 (1979), no. 2, 221-233. (Wolfgang Gawronski) **80i:30005** 30B10 (30C15)
- Staffans, Olof J.** An asymptotic problem for a positive definite operator-valued Volterra kernel. *SIAM J. Math. Anal.* 9 (1978), no. 5, 855-866. (R. K. Miller) **80k:45003** 45D05 (45M05, 47H15)
- On the asymptotic behavior of finite energy solutions of an abstract integral equation. *SIAM J. Math. Anal.* 9 (1978), no. 5, 867-875. (R. K. Miller) **80k:45004** 45D05 (45M05, 47H15)
- Some energy estimates for a nondifferentiated Volterra equation. *J. Differential Equations* 32 (1979), no. 2, 285-293. (R. C. MacCamy) **80f:45007** 45D05 (45M10)
- On the asymptotic spectrum of a convolution. *SIAM J. Math. Anal.* 10 (1979), no. 6, 1138-1143. (N. K. Karapetjan) **80k:45025** 45N05 (45E10, 47B35)
- See also **Volterra equations**, **80i:45002**
- Staffeldt, R. E.** Reduction theory and  $K_2$  of the Gaussian integers. *Duke Math. J.* 46 (1979), no. 4, 773-798. (Avner Ash) **80m:22014** 22E40 (10E20, 18F25)
- Stafford, E. M.** (with Dowrick, G.) Applications of extended operators to diffusive systems. *Control of distributed parameter systems (Proc. Second IFAC Sympos., Coventry, 1977)*, pp. 527-537, IFAC, Düsseldorf, 1978. (Authors' summary) **80e:93070** 93C20
- Stafford, J. T.** (with Krause, Günter; Lenagan, T. H.) Ideal invariance and Artinian quotient rings. *J. Algebra* 55 (1978), no. 1, 145-154. (Robert Gordon) **80f:16007** 16A08 (16A33, 16A55)
- Module structure of Weyl algebras. *J. London Math. Soc.* (2) 18 (1978), no. 3, 429-442. (Philippe Revoy) **80i:16040** 16A64
- $K$ -theory of Noetherian group rings. *Ring theory (Proc. Conf., Univ. Waterloo, Waterloo, 1978)*, pp. 302-322, *Lecture Notes in Math.*, 734, Springer, Berlin, 1979. (Donald S. Passman) **80k:16018** 16A27 (13D15)
- Morita equivalence of simple Noetherian rings. *Proc. Amer. Math. Soc.* 74 (1979), no. 2, 212-214. (Toyonori Kato) **80f:16011** 16A19
- Stafford, Richard M.** A characterization of Janko's simple group  $J_4$  by centralizers of elements of order 3. *J. Algebra* 57 (1979), no. 2, 555-566. (W. J. Wong) **80h:20029** 20D08
- Stafney, James D.** On uniqueness for certain parabolic partial differential equations. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 1, 237-242. (R. N. Pedersen) **80a:35058** 35K10
- Stagnaro, Ezio** On the maximum number of isolated double points of an algebraic surface of  $P^3$ . (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* 59 (1978), 179-198 (1979). (D. Gallarati) **80i:14010** 14J17 (14N10)
- Stahl, Gerold** Le dominateur et ses problèmes. *Logique et Anal. (N.S.)* 22 (1979), no. 85-86, 121-131. (Marcel Guillaume) **80j:03033** 03B45 (01A20, 03A05)
- Stahl, Henry** (with Dietrich, Günter) ★ Matrizen und Determinanten und ihre Anwendung in Technik und Ökonomie. Fifth revised edition. *Mathematik für Ingenieure. VEB Fachbuchverlag, Leipzig*, 1977. 391 pp. (Editors) **80d:15001** 15-01
- Stahl, Saul** The embedding of a graph—a survey. *J. Graph Theory* 2 (1978), no. 4, 275-298. (A. T. White) **80a:05085** 05C10
- Reductions of  $n$ -fold covers. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 422-424. (László Lovász) **80a:05007** 05A05 (05B40, 05C15)
- Fractional edge colorings. *Cahiers Centre Études Rech. Opér.* 21 (1979), no. 2, 127-131. (Tadashi Nakamura) **80i:90091** 90C35
- Stähle, H.** (with Körner, O.) Remarks on Hua's estimate of complete trigonometrical sums. *Acta Arith.* 35 (1979), no. 4, 353-359. (W. Schwarz) **80k:10034** 10G10
- Stahn, Heinz** (with Petersohn, Uwe) Discrete polyoptimization. (Russian summary) *Systems Sci.* 4 (1978), no. 2, 101-109. (Authors' summary) **80a:90159** 90C99
- (with Petersohn, Uwe) Näherungsverfahren zur polyoptimalen Lösung des Maschinenbelegungsproblems. *Wiss. Z. Tech. Univ. Dresden* 28 (1979), no. 1, 119-124. (Authors' summ. ry) **80k:90020** 90B35 (68C15)
- Stahnke, Wayne** On the toggle register polynomial. *Inform. and Control* 39 (1978), no. 2,



- 149-157. (Author's summary) **80a:94023** 94C10 (94B99)
- Staiger, Ludwig (with Lindner, Rolf) Zur Theorie der sequentiellen Codierungen. *Vorträge aus dem Problemseminar Codierungstheorie und Theorie der Suchalgorithmen* (Weissig, 1977), pp. 31-36, Weiterbildungszentrum Math. Kybernet. Rechenz. Informationsverarbeitung, 30, Tech. Univ. Dresden, Dresden, 1978. (From the text) **80m:94052** 94B05
- (with Wagner, Klaus) Rekursive Folgenmengen. I. *Z. Math. Logik Grundlag. Math.* **24** (1978), no. 6, 523-538. (G. Asser) **80f:03044** 03D25 (03D10, 03D55, 68C40)
- Stakos, V. A. (with Philos, Christos G.) Nonoscillatory phenomena and damped oscillations. *Nonlinear Anal.* **2** (1978), no. 2, 197-210. (M. I. Kamenskii) **80g:34080** 34K15
- (with Grammatikopoulos, M. K.; Sfikas, Ioannis G.) Oscillatory properties of strongly superlinear differential equations with deviating arguments. *J. Math. Anal. Appl.* **67** (1979), no. 1, 171-187. (Bhagat Singh) **80c:34072** 34K15
- Stakgold, Ivar (with Payne, L. E.; Sperry, René) On Hopf type maximum principles for convex domains. *Nonlinear Anal.* **1** (1976/77), no. 5, 547-559. (V. A. Kondrat'ev) **80m:35026** 35J20
- (with Sperry, René) Estimates for membranes of varying density. *Applicable Anal.* **8** (1978/79), no. 4, 301-318. (Vadim Komkov) **80c:49035** 49G05 (35P15, 49A22)
- ★Green's functions and boundary value problems. A Wiley-Interscience Publication. Pure and Applied Mathematics. John Wiley & Sons, New York-Chichester-Brisbane, 1979. xv+638 pp. ISBN 0-471-81967-0 (R. C. MacCamy) **80k:35002** 35-02 (00A69, 46-01, 47-01)
- Stakum, A. A. Questions of expansibility in eigenfunctions of a second-order differential operator. (Russian) *Questions of applied mathematics and mechanics*, No. 5 (Russian), pp. 125-133, 209, Čučas. Gos. Univ., Chelboksary, 1977. (J. B. Butler, Jr.) **80b:34026** 34B25
- Stallbom, Volker (with Hetzer, Georg) Global behavior of bifurcation branches and the essential spectrum. *Math. Nachr.* **86** (1978), 347-360. (B. V. Loginov) **80g:47076** 47H15 (47A55, 58E07)
- (with Reinermann, Jochen; Seifert, G. H.) Two further applications of the Edelstein fixed point theorem to initial value problems of functional equations. *Numer. Funct. Anal. Optim.* **1** (1979), no. 3, 233-254. (Seppo Heikkilä) **80g:47067** 47H10 (34K05)
- Stallings, John R. Constructions of fibred knots and links. *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 2, pp. 55-60, Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I., 1978. (Kenneth A. Perko, Jr.) **80e:57004** 57M25
- Stam, A. J. Heavy traffic limit theorems in fluctuation theory. *Adv. in Appl. Probab.* **10** (1978), no. 4, 852-866. (N. H. Bingham) **80g:60094** 60J15 (60K25)
- Stamatis, Evangelos S. ★Reprints. *Evangelos S. Stamatis, Athens*, 1978. 93 pp. (J. L. Berggren) **80m:01007** 01A20
- See also Apollonius, **80g:01036a**; Apollonius, **80g:01036b**; Apollonius, **80g:01036c** and Apollonius, **80g:01036d**
- Stammer, Ludwig (with Böhm, J.; Börner, W.; Hertel, E.; Krötenheerdt, Otto; Mögling, W.) ★Geometrie. II. Analytische Darstellung der euklidischen Geometrie, Abbildungen als Ordnungsprinzip in der Geometrie, geometrische Konstruktionen. Second edition. Studienbücherei. Mathematik für Lehrer, 7. VEB Deutscher Verlag der Wissenschaften, Berlin, 1978. 218 pp. (H. Brauner) **80h:51001** 51-01 (20B25)
- See also Beiträge: Algebra und Geometrie, **80a:00003**
- Stampacchia, Guido (with Brezis, Haïm; Kinderlehrer, David) Sur une nouvelle formulation du problème de l'écoulement à travers une digue. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 9, A711-A714. (Authors' summary) **80b:35131** 35Q99 (76S05)
- See also Magenes, Enrico; et al., **80c:01016**
- Stamper, Ronald Aspects of data semantics: names, species and complex physical objects. *Information systems methodology* (Proc. Second Conf. European Cooperation Inform., Venice, 1978), pp. 291-306, *Lecture Notes in Comput. Sci.*, 65, Springer, Berlin, 1978. (Author's summary) **80g:68028** 68B15
- Stampfli, Joseph G. On a question of Deddens. *Hilbert space operators* (Proc. Conf., Calif. State Univ., Long Beach, Calif., 1977), pp. 169-173, *Lecture Notes in Math.*, 693, Springer, Berlin, 1978. (Richard M. Crownover) **80f:47034** 47D25
- Stan, Costică (with Popa, Valeriu; Puiu, Gabriel) Erratum: "Sur le point fixe commun des plusieurs applications dans des espaces Hausdorff" (Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.) **21**(69) (1977), no. 3-4, 405-409). *Bull. Math. Soc. Sci. Math. R. S. Roumanie* (N.S.) **22**(70) (1978), no. 2, 224. (Editors) **80a:54087** 54H25
- Stănişilă, O. On the dualizing complex. *Romanian-Finnish Seminar on Complex Analysis* (Proc. Bucharest, 1976), pp. 475-482, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (V. D. Golovin) **80m:32012** 32C35 (32C37)
- Stanisl, D. F. (with Magó, Gyula A.) Minimizing maximum flows in linear graphs. *Networks* **9** (1979), no. 4, 333-361. (Authors' summary) **80m:90050** 90B10 (68C25)
- Stancu, D. D. Approximation of bivariate functions by means of some Bernstein-type operators. *Multivariate approximation* (Sympos. Univ. Durham, Durham, 1977), pp. 189-208, Academic Press, London, 1978. (Helmut Brass) **80f:41015** 41A36 (41A63)
- Stancu-Minasian, I. M. On the transportation problem with multiple objective functions. *Bull. Math. Soc. Sci. Math. R. S. Roumanie* (N.S.) **22**(70) (1978), no. 3, 315-328. (Michael Minkoff) **80a:90139** 90C35
- The stochastic Čebyšev problem. The distribution function of the optimum. (Romanian. English summary) *Stud. Cerc. Mat.* **30** (1978), no. 5, 567-577. (From the summary) **80f:90150** 90C99
- Stanczak, Romuald A contact problem in the theory of elasticity. *Demonstratio Math.* **11** (1978), no. 3, 839-849. (A. Radu) **80e:73066** 73T05 (35Q99)
- Stanczak, Wiesław (with Kacprzyk, Janusz) Partitioning a computer network into subnetworks and allocation of distributed data bases. *Optimization techniques* (Proc. 8th IFIP Conf., Würzburg, 1977), Part 2, pp. 464-472, *Lecture Notes in Control and Information Sci.*, 7, Springer, Berlin, 1978. (Authors' summary) **80a:90064** 90B10 (68A05, 68B15, 94C15)
- Stanek, Svatoslav On an algebraic structure of a group of phases. (Russian summary) *Math. Slovaca* **27** (1977), no. 4, 423-430. (Author's summary) **80c:34022** 34C20
- On a comparison theorem. *J. Differential Equations* **30** (1978), no. 3, 287-295. (A. D. Ziebur) **80a:34038** 34C11
- A note on the oscillation of solutions of the differential equation  $y'' = \lambda q(t)y$  with a periodic coefficient. *Czechoslovak Math. J.* **29**(104) (1979), no. 2, 318-323. (Uri Elias) **80c:34032** 34C10
- Stanek, Werner Lösung eines speziellen Reihenfolgeproblems auf dem Gebiet der Fertigungssteuerung. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* **28** (1978), no. 4, 489-497. (From the summary) **80b:90062** 90B10
- Staney, H. I. A boundary value problem for the telegraph equation in discrete formulation. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zased. Priložna Mat.* **12** (1976), no. 2, 109-118 (1978). (Author's summary) **80c:65237** 65P05
- (with Bončev, E. K.) A class of analytic formulas described by solution of boundary value problems for the Poisson equation. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zased. Priložna Mat.* **12** (1976), no. 2, 119-128 (1978). (Authors' summary) **80c:65217** 65N99
- Stanford, David P. Stability for a multi-rate sampled-data system. *SIAM J. Control Optim.* **17** (1979), no. 3, 390-399. (Author's summary) **80a:93051** 93D99
- Stanford, Robert E. Reneging phenomena in single channel queues. *Math. Oper. Res.* **4** (1979), no. 2, 162-178. (Ralph L. Disney) **80m:60100** 60K25
- Stanilov, G. Generalized characteristics of some almost Hermitian manifolds. *C. R. Acad. Bulgare Sci.* **31** (1978), no. 1, 11-14. (Y. Tashiro) **80b:53017** 53B35
- Stanisz, Tadeusz A new method for the study of the independence of  $n$  discrete random variables of jump type. (Polish. Russian and English summaries) *Przeglad Statyst.* **25** (1978), no. 1, 75-86. (Author's summary) **80a:62082** 62H20
- Criteria for the separability of functions of several variables. (Polish. Russian and English summaries) *Przeglad Statyst.* **25** (1978), no. 3, 347-360 (1979). (Author's summary) **80d:90081** 90C39
- Stankiewicz, Ewa (with Żakowski, Wojciech) Some basic properties of the  $(Z, Q)$ -systems. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* **26** (1978), no. 6, 557-561. (Authors' summary) **80f:68070** 68D35
- (with Żakowski, Wojciech) The  $(Z, Q)$ -systems. *Demonstratio Math.* **11** (1978), no. 2, 557-565. (M. Tetrusavičius) **80f:68071** 68D35 (03D05, 68C30)
- Stankiewicz, Roman (with Mika, Janusz) Asymptotic equivalence of the  $P_1$  and diffusion equations. *Transport Theory Statist. Phys.* **7** (1978), no. 3, 81-101. (A. Bellini-Morante) **80c:82051** 82A75 (35B40)
- (with Borysiewicz, M.) Weak solution and approximate methods for the transport equation. *J. Math. Anal. Appl.* **68** (1979), no. 1, 191-210. (A. Bellini-Morante) **80c:82049** 82A75 (45K05)
- (with Borysiewicz, M.) Variational formulation and projectional methods for the second-order transport equation. *J. Math. Anal. Appl.* **71** (1979), no. 1, 210-231. (A. Bellini-Morante) **80c:82032** 82A70 (45K05, 49H05)
- Štan'ko, M. A. Some unsolved problems of the topology of manifolds of small dimension. (Russian) *Dokl. Akad. Nauk SSSR* **242** (1978), no. 3, 294-297. (I. Ivancić) **80c:57009** 57N15
- Nonexistence of locally flat approximation in codimension two. (Russian. English summary) *Studies in topology*, III, *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **83** (1979), 93-100, 104. (I. Ivancić) **80c:57009** 57N45
- Stanković, B. Linear differential equation with coefficients in a ring of Mikusiński operators. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* **1** (1978), 283-292. (R. A. Struble) **80a:34006** 34A25 (34G99, 44A40)
- Linear differential equations with coefficients in a field. I. *Publ. Inst. Math. (Beograd) (N.S.)* **25**(39) (1979), 197-209. (John S. Lew) **80a:44006** 44A40 (35R10, 45K05)
- Stanley, Richard P. (with Odlyzko, Andrew M.) Enumeration of power sums modulo a prime. *J. Number Theory* **10** (1978), no. 2, 263-272. (Graham Lord) **80c:10006** 10A20
- Combinatorics and invariant theory. *Relations between combinatorics and other parts of mathematics* (Proc. Sympos. Pure Math., Ohio State Univ., Columbus, Ohio, 1978), pp. 345-355, Proc. Sympos. Pure Math., XXXIV, Amer. Math. Soc., Providence, R.I., 1979. (V. L. Popov) **80e:15020** 15A72 (14L30, 14M15, 16A64, 22E45)
- See also Foata, Dominique, **80c:05011**
- Stanojević, Č. V. (with Garrett, J. W.; Rees, C. S.) On  $L^1$  convergence of Fourier series with quasi-monotone coefficients. *Proc. Amer. Math. Soc.* **72** (1978), no. 3, 535-538. (Masako Izumi) **80c:42005** 42A20
- Stanoz, Barbara Some comments on the problem of logical form. *Studia Logica* **37** (1978), no. 1, 79-88. (Alex Blum) **80m:03020** 03A05
- Stanton, Nancy K. Holomorphic  $R$ -torsion for fiber bundles. *Amer. J. Math.* **100** (1978), no. 3, 547-578. (József Dodziuk) **80c:58024** 58G10
- The fundamental solution of the heat equation associated with the  $\delta$ -Neumann problem. *J. Analyse Math.* **34** (1978), 265-274 (1979). (József Dodziuk) **80g:58062** 58G05 (35N15)
- (with Christ, Norman H.; Weinberg, Erick J.) General self-dual Yang-Mills solutions. *Phys. Rev. D* (3) **18** (1978), no. 6, 2013-2025. (L. O'Riartaigh) **80c:81033** 81E10 (53C05, 58E20)
- Integral representations and the complex Monge-Ampère equation in strictly convex domains. *Proc. Amer. Math. Soc.* **75** (1979), no. 2, 276-278. (B. A. Taylor) **80a:32010** 32A25
- Stanton, R. J. See History of analysis, **80a:01001**
- Stanton, Ralph G. The Doehert-Klee problem. *Combinatorial mathematics* (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977), pp. 89-100, *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (K. Vijayan) **80c:05026** 05A99
- (with Goulden, I. P.) Some combinatorial polynomials arising from numerical analysis. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing* (Univ. Manitoba, Winnipeg, Man., 1977), pp. 149-160, Congress. Numer., XX, Utilitas Math., Winnipeg, Man., 1978. (J. R. Griggs) **80g:05006** 05A10
- (with Kocay, W. L.) Computational bounds for a combinatorial sum. *Ars Combin.* **5** (1978), 101-119. (Morton Abramson) **80f:10006** 10A20 (05A15)
- (with McKay, Brendan D.) Isomorphism of two large designs. *Ars Combin.* **6** (1978), 87-90. (H. Hanani) **80c:05030** 05B05

- On a construction for  $(r, \lambda)$  systems. *Ars Combin.* 6 (1978), 209–213. (R. W. Quackenbush) 80f:05011 05B05
- (with Mullin, Ronald C.) A covering problem in binary spaces of finite dimension. *Graph theory and related topics (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 315–327, Academic Press, New York, 1979. (R. A. Melter) 80g:05018 05B20 (05B25, 15A33)
- A note on a family of polynomials. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1978)*, pp. 453–459, Congress. Numer., XXII, Utilitas Math., Winnipeg, Man., 1979. (N. K. Govil) 80h:26012 26C10 (65D15)
- See also Proceedings: Southeastern Conference on Combinatorics, Graph Theory and Computing. 80a:05004
- Stanton, Robert J. (with Tomas, Peter A.) Pointwise inversion of the spherical transform on  $L^p(G/K)$ ,  $1 < p < 2$ . *Proc. Amer. Math. Soc.* 73 (1979), no. 3, 398–404. (Kenneth Johnson) 80e:43011 43A85 (22E30)
- Stanton, Robert O. Almost-affine abelian groups. *J. Pure Appl. Algebra* 15 (1979), no. 1, 41–52. (P. L. Sperry) 80f:20029 20K25
- Stapleton, R. C. (with Subrahmanyam, M. G.) A multiperiod equilibrium asset pricing model. *Econometrica* 46 (1978), no. 5, 1077–1096. (J. A. Rickard) 80c:90024 90A14
- Stapp, Henry P. Whiteheadian approach to quantum theory and the generalized Bell's theorem. *Found. Phys.* 9 (1979), no. 1–2, 1–25. (S. Gudder) 80b:81012 81B10 (03G12)
- Starnas, A. L. Asymptotic integration of certain weakly nonlinear partial differential systems. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* 1978, no. 2, 27–34. (Alexander Doktor) 80f:35015 35C20
- Starbird, Michael Flexible regular neighborhoods for complexes in  $E^3$ . Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977), II. *Topology Proc.* 2 (1977), no. 2, 593–619 (1978). (Robert Connelly) 80a:57046 57Q99 (51M15)
- (with Bing, R. H.) A decomposition of  $S^3$  with a null sequence of cellular arcs. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 3–21, Academic Press, New York, 1979. (B. L. Brechner) 80f:57008 57N10
- (with Woodruff, Edythe P.) Decompositions of  $E^3$  with countably many nondegenerate elements. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 239–252, Academic Press, New York, 1979. (Patrick H. Doyle) 80f:57005 57N10
- Cell-like 0-dimensional decompositions of  $E^3$ . *Trans. Amer. Math. Soc.* 249 (1979), no. 1, 203–215. (Leonard R. Rubin) 80b:57016 57N12
- Stark, E. L. The measure of approximation in  $L^2_{\mathbb{R}}$ . *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 422–430, "Nauka", Moscow, 1977. (A. Lupas) 80f:41027 41A25
- Another way to sum  $\sum (1/k^2)$ . *Math. Gaz.* 63 (1979), no. 423, 47. (Stanley J. Benkoski) 80b:10006 10A20 (10H05)
- Stark, Harold M. ★ An introduction to number theory. MIT Press, Cambridge, Mass.-London, 1978. x + 347 pp. ISBN 0-262-69060-8 (Editors) 80a:10001 10-01
- Stark, Robert M. (with Lohr, D. J.) On elementary functions of Pareto variables. *Metrika* 25 (1978), no. 1, 59–63. (Lennart Bondesson) 80c:62020 62E15
- (with Rothkopf, Michael H.) Competitive bidding: a comprehensive bibliography. *Oper. Res.* 27 (1979), no. 2, 364–390. (Authors' summary) 80c:90039 90A16 (90D35)
- Starkand, Yair Explicit formulas for matrix-valued Padé approximants. *J. Comput. Appl. Math.* 5 (1979), no. 1, 63–66. (Editors) 80b:65018 65D15
- Starkov, A. S. (with Molotov, I. A.) Local degeneration of waves in a thin waveguide. (Russian. English summary) *Mathematical questions in the theory of wave propagation, 9: Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 78 (1978), 138–148, 249. (Authors' summary) 80g:78018 78A50 (35P99)
- Starkov, V. V. Certain properties of functions of the Bazilevič class. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 3, 148–149, 160. (L. A. Akse'tev) 80d:30006 30C45 (30C70)
- A variational formula in the class of Bazilevič functions. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 4, 81–88, 151. (L. A. Akse'tev) 80d:30009 30C45 (30C70)
- Starling, A. Gregory (with Klerlein, Joseph B.) Hamiltonian cycles in Cayley color graphs of semidirect products. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 411–435, Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978. (William T. Trotter, Jr.) 80j:05005 05C45
- Starobinec, S. M. A method of control of networks of channel switching in the presence of recurrent input flow. (Russian) *Principles of the construction of information disseminating devices (Russian)*, pp. 10–30, 161, "Nauka", Moscow, 1978. (Author's summary) 80f:94039 94C10 (93A10)
- Starosel'skii, L. A. Equations describing the oscillations of curvilinear elastic rods. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 1, 63–67. (From the text) 80j:73016 73D30
- Starostenko, V. I. ★ Устойчивые численные методы в задачах гравиметрии. (Russian) [Stable numerical methods in gravimetry problems] "Naukova Dumka", Kiev, 1978. 227 pp. (R. S. Andersen) 80c:65007 86A30 (65-02)
- Starowiecki, Marcel (with Titren, Yvon) Modelling of a system by local models with topological methods. (Russian summary) *Systems Sci.* 4 (1978), no. 2, 111–128. (B. L. Ovsievich) 80a:93157 93E10 (90D40)
- Starr, Norman Linear estimation of the probability of discovering a new species. *Ann. Statist.* 7 (1979), no. 3, 644–652. (Z. W. Birnbaum) 80b:62024 62F10 (92A05)
- (with Rasmussen, Shelley L.) Optimal and adaptive stopping in the search for new species. *J. Amer. Statist. Assoc.* 74 (1979), no. 367, 661–667. (R. A. Wijsman) 80m:62078 62L15 (62L12)
- Starr, Ross M. (with Heller, Walter Perrin) Unemployment equilibrium with myopic complete information. *Rev. Econom. Stud.* 46 (1979), no. 2, 339–359. (Andrew Postlewaite) 80h:90029 90A14
- Staritsyn, A. I. (with Igolkin, V. N.; Kovrigin, A. B.; Hohlov, V. A.) ★ Статистическая классификация, основанная на выборочных распределениях. (Russian) [Statistical classification based on sample distributions] Leningrad. Univ., Leningrad, 1978. 104 pp. (László Györfi) 80j:62059 62H30
- (with Igolkin, V. N.; Kovrigin, A. B.; Hohlov, V. A.) The problem of statistical classification based on sample distributions. (Russian) *Control of dynamical systems (Russian)*, pp. 105–118, 315, Leningrad. Univ., Leningrad, 1978. (Authors' summary) 80b:62085 62H30
- Staruhina, E. N. (with Muhin, Ju. N.) Two conditions for discreteness in topological groups. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 9 (196), 76–83. (I. Salzman) 80m:22004 22D05
- Staritskiĭ, V. M. See Schmidt, Günter, 80d:70042
- Starzyk, Janusz The determination of complete trees by the modified structural matrix method. (Polish. Russian and English summaries) *Arch. Elektrotech. (Warsaw)* 27 (1978), no. 4, 843–851. (Author's summary) 80g:94106 94C15 (68E10)
- Stanheff, James Rational homotopy-obstruction and perturbation theory. *Algebraic topology (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 7–31, *Lecture Notes in Math.*, 673, Springer, Berlin, 1978. (S. Zdravkovska) 80d:55015 55P62
- (with Shulman, Herbert) de Rham theory for BT. *Differential topology, Joliet and Gelfand-Fuks cohomology (Proc. Sympos., Pontificia Univ. Católica, Rio de Janeiro, 1976)*, pp. 62–74, *Lecture Notes in Math.*, 652, Springer, Berlin, 1978. (D. B. Fuku) 80d:57016 57R32
- (with Halperin, Stephen) Obstructions to homotopy equivalences. *Adv. in Math.* 31 (1979), no. 3, 233–279. (Jean-Michel Lemaire) 80f:55016 55P62 (55P15, 55S36)
- Stanica, J. A transversality property weaker than the Whitney  $a$ -regularity. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat. No. 21* (1979), 81–83. (D. J. A. Trotman) 80i:32029 32B20 (58A35, 58C27)
- Stassinopoulos, G. I. (with Vinter, R. B.) Conditions for convergence of solutions in the computation of optimal controls. *J. Inst. Math. Appl.* 22 (1978), no. 1, 1–14. (V. I. Bakke) 80b:65042 65K10
- (with Vinter, R. B.) Continuous dependence of solutions of a differential inclusion on the right hand side with applications to stability of optimal control problems. *SIAM J. Control Optim.* 17 (1979), no. 3, 432–449. (Authors' summary) 80c:93068 93C30
- Štastnová, Venceslava (with Fučík, Svatopluk) Weak periodic solutions of the boundary value problem for nonlinear heat equations. (Czech and Russian summaries) *Apl. Mat.* 24 (1979), no. 4, 284–303. (Mitsuihiro Nakao) 80b:35007 35B10 (35K60)
- Staszcz, Stanisław See Bartnicka, Kalina, 80i:01009
- State, Luminia Toward a theory of cluster analysis. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 2, 291–297. (K. S. Fu) 80a:68117 68H05 (04A99, 62H30)
- Statman, Richard (with van Dalen, D.) Equality in the presence of apartness. *Essays on mathematical and philosophical logic (Proc. Fourth Scandinavian Logic Sympos. and First Soviet-Finnish Logic Conf., Jyväskylä, 1976)*, pp. 95–116, *Synthese Library*, 122, Reidel, Dordrecht, 1979. (C. Smoryński) 80b:03089 03F05 (03F05)
- Lower bounds on Herbrand's theorem. *Proc. Amer. Math. Soc.* 75 (1979), no. 1, 104–107. (G. E. Minc) 80b:03080 03F05 (03F20)
- Intuitionistic propositional logic is polynomial-space complete. *Theoret. Comput. Sci.* 9 (1979), no. 1, 67–72. (R. E. Ladner) 80m:68042 68C25
- The typed  $\lambda$ -calculus is not elementary recursive. *Theoret. Comput. Sci.* 9 (1979), no. 1, 73–81. (Author's summary) 80m:68043 68C25
- Statuševičius, V. (with Rudziskis, R.; Saulis, L. I.) Large deviations for sums of independent random variables. (Russian. Lithuanian and English summaries) *Lietuv. Mat. Šb.* 19 (1979), no. 1, 169–179, 232. (S. A. Book) 80f:60029 60F10
- Stauffer, Barbara M. A special fifth degree polynomial. *Proc. West Virginia Acad. Sci.* 48 (1976), no. 2–4, 93–94 (1979). (G. A. Heuer) 80g:26004 26A09
- Staut, W. Maximale Ideale von  $k$ -Algebren und Systeme 2-rangiger Stellen in algebraischen Funktionenkörpern. *Arch. Math. (Basel)* 31 (1978/79), no. 3, 266–275. (K. Kiyek) 80f:12025 12F20 (14H05)
- Stavriniadis, C. P. A procedure for coupling dynamical equations. *Comput. Methods Appl. Mech. Engrg.* 20 (1979), no. 1, 1–7. (Djordje Djukic) 80f:70019 70G10 (93A10)
- Stavakaja, O. N. Markov fields as invariant states for local processes. *Locally interacting systems and their application in biology (Proc. School-Sem. on Markov Interaction Processes in Biology, Pushchino, 1976)*, pp. 113–121, *Lecture Notes in Math.*, 653, Springer, Berlin, 1978. (F. L. Spitzer) 80a:60132 60K35
- Starviki, M. Š. Approximation of continuous and differentiable functions in a locally compact field. (Russian) *Mat. Zametki* 25 (1979), no. 3, 367–378, 476. (Neal Koblitz) 80f:12020 12B40 (41A10, 41A65)
- Stawikowska, S. (with Grande, Zbigniew) La semicontinuité et la propriété de Baire. (English summary) *Proc. Amer. Math. Soc.* 77 (1979), no. 1, 48–52. (S. N. Mukhopadhyay) 80b:26003 26A15
- Stazi, Luigi (with Ferrarese, Giorgio) On the structure of the rotations in a three-dimensional hyperbolic space. (Italian. English summary) *Rend. Mat.* (6) 11 (1978), no. 4, 543–563 (1979). (K. Strubecker) 80e:51011 51F25 (51M10, 53A35)
- Stebbins, Sarah Necessity and natural language. *Philos. Stud.* 37 (1980), no. 1, 1–12. (J. F. A. K. van Benthem) 80m:03021 03A05 (03B45, 03B99)
- Stecenko, V. Ja. Existence criteria for a positive solution of a linear operator equation. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* 22 (1979), no. 2, 84–87. (A. V. Džiskariani) 80f:47022 47A50 (47B55)
- Stech, Harlan W. The Hopf bifurcation: a stability result and application. *J. Math. Anal. Appl.* 71 (1979), no. 2, 525–546. (J. M. Cushing) 80b:34100 34K15 (34C25)
- Stecher, Michael (with Kiffe, Thomas) A characterization of the range of a nonlinear Volterra integral operator. *Nonlinear equations in abstract spaces (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977)*, pp. 365–374, Academic Press, New York, 1978. (William L. Perry) 80b:45004 45D05 (45N05)
- (with Rundell, William) A Runge approximation and unique continuation theorem for pseudoparabolic equations. *SIAM J. Math. Anal.* 9 (1978), no. 6, 1120–1125. (E. Kreyszig) 80c:35055 35K99
- (with Rundell, William) The nonpositivity of solutions to pseudoparabolic equations. *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 251–254. (Charles C. Conley) 80c:35031 35K25
- (with Kiffe, Thomas)  $L^2$  solutions of Volterra integral equations. *SIAM J. Math. Anal.* 10 (1979), no. 2, 274–280. (A. Ramm) 80c:45005 45E99 (45G10, 47H05)
- Steck, George P. Lower bounds for the multivariate normal Mills' ratio. *Ann. Probab.* 7 (1979), no. 3, 547–551. (I. R. Savage) 80g:62043 62H99
- Stecki, J. (with Sokolowski, S.) Statistical mechanics of adsorption: virial expansions in a



- three-dimensional model of adsorption. *Acta Phys. Polon. A* 55 (1979), no. 5, 611-625. (S. V. Temko) **80b:82011** 82A05
- Stechkin, S. B. Approximation theory and analytic number theory. (Russian) *The theory of the approximation of functions* (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 333-338, "Nauka", Moscow, 1977. (J. S. Joel) **80b:10056** 10Hxx
- Stechko, G. (with Kustov, E. F.; Zaharov, N. A.) Application of unitary groups for determining tensor components in crystals and selection principles for phase transitions. *Phys. Status Solidi (B)* 91 (1979), no. 1, 43-57. (P. M. van den Broek) **80b:82033** 82A60 (20C35, 22E70)
- Stedrović, B. Doing arithmetic with resolution. (Russian summary) *Scripta Fac. Sci. Natur. UJEP Brunensis—Math.* 8 (1978), no. 10, 63-67. (G. E. Peterson) **80a:68111** 68G15
- Stidry, M. Concerning Cesari's theorems. *Comment. Math. Univ. Carolin.* 19 (1978), no. 3, 501-512. (T. E. Williamson, Jr.) **80f:47057** 47H15 (35B10)
- Stieh, Will-Hans A note on the Lorentz transformation. *J. Math. Phys.* 20 (1979), no. 8, 1684-1686. (L. Reizip) **80j:83002** 83A05 (34A34)
- Generalized Liouville equation, entropy, and dynamic systems containing limit cycles. *Phys. A* 95 (1979), no. 1, 181-190. (Author's summary) **80c:82029** 82A35 (58F05)
- Steele, J. Michael Inequality of average squared error criterion in density estimation. (French summary) *Canad. J. Statist.* 6 (1978), no. 2, 193-200. (Ibrahim A. Ahmad) **80j:62041** 62G05 (62E20)
- Existence of submatrices with all possible columns. *J. Combin. Theory Ser. A* 24 (1978), no. 1, 84-88. (Norbert Sauer) **80f:05055** 05C35 (05A10)
- (with Ellis, Martin H.) Catching small sets under flows. (French summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* 15 (1979), no. 1, 33-40. (U. Krengel) **80c:28027** 28D10
- (with del Junco, Andrés) Hammersley's law for the van der Corput sequence: an instance of probability theory for pseudorandom numbers. *Ann. Probab.* 7 (1979), no. 2, 267-275. (Harald Niederreiter) **80f:65010** 65C10
- (with Boyd, David W.) Random exchanges of information. *J. Appl. Probab.* 16 (1979), no. 3, 657-661. (J. W. Moon) **80i:60010** 60C05 (05A15, 94A15)
- (with Boyd, David W.) Monotone subsequences in the sequence of fractional parts of multiples of an irrational. *J. Reine Angew. Math.* 306 (1979), 49-59. (F. Schweiger) **80h:10044** 10F40 (60F99)
- Steen, Lynn Arthur (with Seebach, J. Arthur, Jr.) ★Counterexamples in topology. Second edition. Springer-Verlag, New York-Heidelberg, 1978. xi + 244 pp. ISBN 0-387-90312-7 (Editors) **80a:54001** 54-01
- See also Mathematics today, **80b:00007**
- Steenge, Albert E. On two types of stability in the dynamic Leontief model. *Econom. Lett.* 1 (1978), no. 2, 105-109. (Author's summary) **80b:90046** 90A16
- Stefanescu, C. Al. (with Negoită, C. V.) Fuzzy objects in topoi: a generalization of fuzzy sets. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 24(28) (1978), no. 3-4, 25-28. (Editors) **80j:03081** 03E72 (03G30, 94D05)
- Stefanescu, Doru On the epimorphism theorem. (Romanian. English summary) *Stud. Cerc. Mat.* 30 (1978), no. 4, 465-470. (B. d'Orgeval) **80b:14008** 14E10
- Stefanescu, Mirela A correspondence between the class of left nonassociative near-rings and a class of quasigroups. *An. Univ. Timișoara Ser. Științ. Mat.* 15 (1977), no. 2, 149-156 (1978). (J. J. Malone) **80b:20096** 20N05 (16A76)
- Infra-near rings of affine type. *An. Științ. Univ. "Al. I. Cuza" Iași Sect. I a Mat. (N.S.)* 24 (1978), no. 1, 5-14. (J. J. Malone) **80b:16030** 16A76
- A correspondence between a class of near-rings and a class of loops. (Romanian summary) *An. Univ. Timișoara Ser. Științ. Mat.* 16 (1978), no. 1, 89-98 (1979). (Jean-Pierre Soublin) **80j:20078** 20N05
- Correspondence between the class of left nonassociative C-rings and a class of loops. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur. (8)* 64 (1978), no. 1, 1-7. (R. Artzy) **80b:20108** 20N07
- Stefani, G. (with Zecca, Pietro) Properties of convex sets with application to differential theory of multivalued functions. *Nonlinear Anal.* 2 (1978), no. 5, 583-595. (Luccio Boccardo) **80i:49035** 49E15 (46G99)
- Stefani, Gianna (with Modugno, Marco) On the geometrical structure of shock waves in general relativity. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 30 (1979), no. 1, 27-50. (Authors' summary) **80c:83021** 83C55 (53C80)
- Stefanini, Luciano (with Corradi, Corrado) Using the mixed linear-nonlinear approach for the solution of nonlinear estimation problems arising in applied econometrics. (Italian and French summaries) *Statistica (Bologna)* 39 (1979), no. 1, 25-34. (Authors' summary) **80b:62110** 62P20
- di Stefano, Francesco Paolo See Di Stefano, Francesco Paolo
- Steffen, Ann E. (with Aly, Adel A.) A single facility location problem among rectangular regions. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 5, pp. 507-515, *Operations Research Verfahren*, 35, Hain, Meisenheim, 1979. (Authors' summary) **80c:90124** 90C50 (90C08)
- Steffen, Klaus (with Wente, Henry C.) The nonexistence of branch points in solutions to certain classes of Plateau type variational problems. *Math. Z.* 163 (1978), no. 3, 211-238. (A. J. Tromba) **80k:58043** 58E12 (49F10, 53A10, 53C40)
- Steffens, Franz See Symposium: Operations Research, **80d:90004a**; Symposium: Operations Research, **80d:90004b**; Symposium: Operations Research, **80d:90004c**; Symposium: Operations Research, **80d:90004d** and Symposium: Operations Research, **80d:90004e**
- Steffens, Henry John ★James Prescott Joule and the concept of energy. *Dawson, London; Science History Publications/USA, New York*, 1979. xi + 173 pp. ISBN 0-88202-170-2 (R. H. Atkin) **80i:01016** 01A55 (80-03)
- Steffens, Karsten Regressive functions and stationary sets. *Higher set theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1977)*, pp. 423-435, *Lecture Notes in Math.*, 669, Springer, Berlin, 1978. (Thomas J. Jech) **80f:03052** 03E05 (06A10)
- (with Galvin, Fred; Hesse, G.) On the number of automorphisms of structures. *Discrete Math.* 24 (1978), no. 2, 161-166. (W. Taylor) **80b:03038** 03C50 (05C05, 08B25)
- Stegall, Charles Optimization of functions on certain subsets of Banach spaces. *Math. Ann.* 236 (1978), no. 2, 171-176. (Jean-Paul Penot) **80b:46022** 46G99 (46B99, 49B27)
- Stegbecher, Hans On the metric entropy of some classes of holomorphic functions. (Italian summary) *Rend. Istit. Mat. Univ. Trieste* 9 (1977), no. 1-2, 1-5 (1978). (K. S. Padmanabhan) **80c:30009** 30C85
- Eine mehrdimensionale Version der Ungleichung von LeVeque. (English summary) *Monatsh. Math.* 87 (1979), no. 2, 167-169. (L. Kuipers) **80b:10048** 10F40
- Stegert, H. Ein mathematisches Modell zur Beschreibung nichtlinearer Oszillatoren. *VII. Internationale Konferenz über nichtlineare Schwingungen (Berlin, 1975), Band II, 2*, pp. 407-413, *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977, 6, Akademie-Verlag, Berlin, 1978. (J. Švejda) **80c:70024** 70K10 (34C15)
- Stegenga, David A. A geometric condition which implies BMOA. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 1, pp. 427-430, *Proc. Sympos. Pure Math., XXXV, Part 1, Amer. Math. Soc., Providence, R.I.*, 1979. (Lowell Hansen) **80b:30033** 30D60 (30C85)
- Steger, Joseph L. Coefficient matrices for implicit finite difference solution of the inviscid fluid conservation law equations. *Comput. Methods Appl. Mech. Engrg.* 13 (1978), no. 2, 175-188. (A. Pozzi) **80a:76015** 76B99 (65P05)
- Stehling, Frank Wilhelm Krelles Produktionskoeffizienten und neutraler technischer Fortschritt. *Quantitative Wirtschaftsforschung*, pp. 663-675, Mohr, Tübingen, 1977. (Peter Bod) **80b:90013** 90A11 (90B30)
- Steib, Michael Lee A bounded velocity postulate and special relativity. *J. Math. Anal. Appl.* 67 (1979), no. 1, 94-95. (From the text) **80b:83006** 83A05 (51B20)
- Steiger, Arno D. (with Pexton, Robert L.) Degenerate roots of three transcendental equations involving spherical Bessel functions. *Math. Comp.* 33 (1979), no. 147, 1041-1048, *loose microfiche suppl.* (Authors' summary) **80j:65057** 65H10 (65D20)
- Steiger, W. L. (with Gross, S.) Least absolute deviation estimates in autoregression with infinite variance. *J. Appl. Probab.* 16 (1979), no. 1, 104-116. (V. J. Yohai) **80f:62083** 62M10
- Steiglitz, Kenneth (with Toueg, Sam) The design of small-diameter networks by local search. *IEEE Trans. Comput.* 28 (1979), no. 7, 537-542. (Authors' summary) **80g:94107** 94C15 (68E10)
- Stielhag, Trond (with Wolfbrandt, Arne) An attempt to avoid exact Jacobian and nonlinear equations in the numerical solution of stiff differential equations. *Math. Comp.* 33 (1979), no. 146, 521-534. (W. H. Enright) **80b:65087** 65L05
- Stein, Charles M. Asymptotic evaluation of the number of Latin rectangles. *J. Combin. Theory Ser. A* 25 (1978), no. 1, 38-49. (K. Yamamoto) **80b:05036** 05B15
- Stein, Elias M. (with Wainger, Stephen) Problems in harmonic analysis related to curvature. *Bull. Amer. Math. Soc.* 84 (1978), no. 6, 1239-1295. (Alberto Torchinsky) **80b:42023** 42B20 (28A15)
- Some problems in harmonic analysis. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 1, pp. 3-20, *Proc. Sympos. Pure Math., XXXV, Part 1, Amer. Math. Soc., Providence, R.I.*, 1979. (R. A. Hunt) **80b:42027** 42B15 (32A35)
- (with Gundy, R. F.)  $H^p$  theory for the poly-disc. *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 3, 1026-1029. (Jacques Vauthier) **80j:32012** 32A35 (31B30, 42B30)
- Stein, Elliott Free actions on products of spheres. *Michigan Math. J.* 26 (1979), no. 2, 187-193. (Steven H. Weintraub) **80j:57042** 57S25 (57R65, 57S17)
- Stein, G. (with Doyle, J. C.) Robustness and observers. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 607-611. (N. Harris McCamroch) **80b:93013** 93B05
- Stein, Karl Topological properties of holomorphic and meromorphic mappings. *Variétés analytiques compactes (Colloq. Nice, 1977)*, pp. 203-216, *Lecture Notes in Math.*, 683, Springer, Berlin, 1978. (W. Thimm) **80i:32056** 32J10 (32H99)
- Stein, P. R. (with Waterman, Michael S.) On some new sequences generalizing the Catalan and Motzkin numbers. *Discrete Math.* 26 (1979), no. 3, 261-272. (Edward A. Bender) **80j:05014** 05A99 (10A35, 10A40)
- Stein, R. B. (with Andreassen, S.; Ögütörel, Mehmet Namık) Application of optimal multichannel filtering to simulated nerve signals. *Biol. Cybernet.* 32 (1979), no. 1, 25-33. (Authors' summary) **80f:92006** 92A09
- Steinacker, P. Zur Semantik superschwacher modaler Kalküle. *Wiss. Z. Karl-Marx-Univ. Leipzig Ges. Sprachwiss. Reihe* 28 (1979), no. 3, 319-323. (Steve Kuhn) **80b:03046** 03B45
- Steinberg, Robert Conjugacy in semisimple algebraic groups. *J. Algebra* 55 (1978), no. 2, 348-350. (Wim H. Hesselink) **80f:20048** 20G15 (14L99)
- Steinby, Magnus (with Gécség, Ferenc) The algebraic theory of tree automata. I. (Hungarian) *Mat. Lapok* 26 (1975), no. 3-4, 169-207 (1978). (István Babcsányi) **80b:68072** 68D30 (68F10)
- (with Gécség, Ferenc) Minimal ascending tree automata. *Acta Cybernet.* 4 (1978/79), no. 1, 37-44. (Max Dauchet) **80f:68062** 68D05
- Steiner, H. (with Rammerstorfer, F. G.; Grossmayer, A.; Ziegler, F.) Plötzliche Veränderung von Randbedingungen eines Biegebalkens. (English summary) *Acta Mech.* 33 (1979), no. 3, 147-162. (Authors' summary) **80b:73046** 73K05
- Steiner, Hans-Georg See Didaktik der Mathematik, **80a:00004**
- Steiner, Mark Mathematics, explanation, and scientific knowledge. *Noûs* 12 (1978), no. 1, 17-28. (Paul Ernest) **80c:00015** 00A25 (03A05)
- Steiner, R. J. The group of units in K-theory modulo an odd prime. *Canad. J. Math.* 31 (1979), no. 5, 915-928. (J. P. May) **80b:55016** 55N20 (55P35, 55P60)
- Steiner, Ray P. A theorem on the Syracuse problem. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1977)*, pp. 553-559, *Congress. Numer., XX, Utilitas Math., Winnipeg, Man.*, 1978. (B. Stolt) **80g:10003** 10A05
- On nth powers in the Lucas and Fibonacci series. *Fibonacci Quart.* 16 (1978), no. 5, 451-458. (Paula A. Kemp) **80b:10016** 10A35
- On kth-power numerical centers. *Fibonacci Quart.* 16 (1978), no. 5, 470-471. (Author's introduction) **80a:10034** 10B15
- On Cullen numbers. *BIT* 19 (1979), no. 2, 276-277. (Author's summary) **80j:10009** 10A25 (10A40)
- Steiner, Richard (with Hilton, Peter; Mislin, Guido; Roitberg, Joseph) On free maps and free homotopies into nilpotent spaces. *Algebraic topology (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 202-218, *Lecture Notes in Math.*, 673, Springer, Berlin, 1978. (Albert O. Shar) **80c:55007** 55P60
- Steiner, Siegfried Eine Charakterisierung der Riemannschen Mannigfaltigkeiten. *Arch. Math. (Basel)* 31 (1978/79), no. 2, 171-176. (F. Brickell) **80c:53050** 53C20 (53C60)

- Steinfeld, Ottó** ★Quasi-ideals in rings and semigroups. With a foreword by L. Rédei. *Disquisitiones Mathematicae Hungaricae*, 10. *Akadémi Kiadó, Budapest*, 1978. xi + 154 pp. ISBN 963-05-1696-9 (H. J. Weiner) **80e:16001** 16-02 (20M10) (with Gluskin, L. M.) Rings (semigroups) containing minimal (0-minimal) right and left ideals. *Publ. Math. Debrecen* **25** (1978), no. 3-4, 275-280. (T. E. Hall) **80e:20090** 20M12 (20M25)
- On similarly decomposable semigroups. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 601-611, *Colloq. Math. Soc. János Bolyai*, 20, North-Holland, Amsterdam, 1979. (J. L. Chrislock) **80g:20075** 20M10
- On groupoid lattices. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 357-372, *Heyn, Klagenfurt*, 1979. (J. C. Ault) **80h:06018** 06F99 (06A23)
- Steinberg, Z. A.** The system of Einstein-Maxwell equations and the calibration of the four-vector of the electromagnetic field. (Russian) *Dokl. Akad. Nauk SSSR* **243** (1978), no. 1, 85-88. (From the text) **80b:78003** 78A25 (83C50)
- Steinhardt, P.** (with Chaudhuri, P.; Levi, A. C.) Edge and screw dislocations in an amorphous solid. *Phys. Rev. Lett.* **43** (1979), no. 20, 1517-1520. (Authors' summary) **80h:82032** 82A60
- Steinhardt, U.** (with Neumann, K.) Time planning by means of GERT networks with basic elements. *Operations Research Verfahren*, 30, pp. 111-129, *Hain, Meisenheim*, 1979. (Authors' summary) **80h:90146** 90C35 (90B10)
- Steinlein, H.** On two results of J. Dugundji about extensions of maps and retractions. *Proc. Amer. Math. Soc.* **77** (1979), no. 2, 289-290. (V. A. Kalinin) **80g:54016** 54C15 (47H10)
- Steinmann, O.** Quantum fields in two-soliton sectors. *Nuclear Phys. B* **145** (1978), no. 1, 141-165. (Author's summary) **80b:81005** 81E15 (35Q99)
- Steinmetz, Norbert** Zur Wertverteilung von Exponentialpolynomen. (English summary) *Manuscripta Math.* **26** (1978/79), no. 1-2, 155-167. (Ilpo Laine) **80e:30012** 30D35 (10G05)
- (with Mues, Erwin) Meromorphe Funktionen, die mit ihrer Ableitung Werte teilen. (English summary) *Manuscripta Math.* **29** (1979), no. 2-4, 195-206. (D. Drasin) **80k:30025** 30D30 (30D35)
- Steinrück, E. A.** (with Sobolevskii, P. E.) An approach to the solution of ill-posed problems. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 5, 900-904, 958. (J. Kačur) **80h:35128** 35R25
- Stellik, V. G.** (with Maslova, N. V.) Mathematical models of the optimal quality production level in a production unit. (Russian. English summary) *Izvest. Operacii i ASU* No. 13 (1979), 13-20, 132. (Authors' summary) **80g:90122** 90C50 (90C11)
- Stelle, K. S.** (with West, P. C.) de Sitter gauge invariance and the geometry of the Einstein-Cartan theory. *J. Phys. A* **12** (1979), no. 8, L205-L210. (B. N. Frolov) **80i:83036** 83D05 (22E46, 58A05)
- (with West, P. C.) Algebraic derivation of  $N=2$  supergravity constraints. *Phys. Lett. B* **90** (1980), no. 4, 393-397. (Authors' summary) **80m:83046** 83E99
- Stellmacher, Irène** Dynamical coupling of periodic systems. II. A particular case of homographic solution. *Astronom. and Astrophys.* **80** (1979), no. 3, 301-307. (Author's summary) **80m:70012** 70F10
- Existence de solutions périodiques pour le mouvement d'une particule gravitant autour d'un sphéroïde. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 9, B165-B168. (Author's summary) **80j:70016** 70M05
- Steinmann, N. T.** Some properties of  $F$ -monogenic functions. (Russian. English summary) *Vestnik Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **5** (1979), no. 5, 43-46, 139. (A. J. Lohwater) **80m:30001** 30A05
- Stemple, Joel G.** The four color problem. *Papers in mathematics*, pp. 91-101, *Ann. New York Acad. Sci.*, 321, *New York Acad. Sci., New York*, 1979. (From the summary) **80m:05047** 05C15
- Stenčikov, G. L.** (with Andreev, N. E.; Silin, V. P.) A numerical method for the solution of a system of Vlasov equations that is based on a combination of the method of particles in a cell and the water bag method. (Russian) *Zh. Vyčisl. Mat. i Mat. Fiz.* **19** (1979), no. 1, 165-173, 270. (Authors' summary) **80d:82048** 82A45 (65P05)
- Stender, Hans-Joachim** Zur Parametrisierung reell-quadratischer Zahlkörper. *J. Reine Angew. Math.* **311/312** (1979), 291-301. (T. Metsänkylä) **80k:12007** 12A45 (10B05, 12A25)
- Über die Grundeinheit der reell-quadratischen Zahlkörper  $\mathbb{Q}(\sqrt{A^2N^2 + BN + C})$ . *J. Reine Angew. Math.* **311/312** (1979), 302-306. (T. Metsänkylä) **80k:12008** 12A45 (10B05, 12A25)
- (with Schertz, Reinhard) Eine Abschätzung der Klassenzahl gewisser reiner Zahlkörper sechsten Grades. *J. Reine Angew. Math.* **311/312** (1979), 347-355. (K. Lakkis) **80k:12011** 12A50 (12A45)
- Stenflo, L.** On the stability of a magnetized plasma in a large amplitude circularly polarized wave. *Phys. Scripta* **21** (1980), no. 6, 831-835. (Author's summary) **80m:76007** 76X05 (82A45)
- Stenger, Frank** A "sinc-Galerkin" method of solution of boundary value problems. *Math. Comp.* **33** (1979), no. 145, 85-109. (Rolf Rannacher) **80b:65112** 65L10 (65N30)
- Stenger, H.** A minimax approach to randomization and estimation in survey sampling. *Ann. Statist.* **7** (1979), no. 2, 395-399. (Jean Larisse) **80e:62005** 62D05 (62C20)
- Stenholm, Stig** Schrödinger and the reality of quantum physics. (Swedish. English summary) *Arkiv för Fysik* **31** (1979), no. 2, 81-101. (S. D. Chatterji) **80g:81003** 81B05 (01A60)
- Stenin, A. A.** (with Ignatenko, V. N.; Siz, V. N.) Synthesis of optimal controls in systems with terminal data. (Russian) *Adapt. Sistemy Avtomat. Upravleniya No. 7* (1979), 29-34, 127. (Authors' summary) **80g:93039** 93C15
- Sten'kin, V. V.** The differentiability of functions of unbounded selfadjoint operators under a relatively bounded perturbation. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* **1978**, vyp. 4, 147-148, 154. (From the summary) **80b:47036** 47B25 (47A60)
- Stens, R. L.** (with Butzer, P. L.) The operational properties of the Chebyshev transform. II. Fractional derivatives. *The theory of the approximation of functions (Proc. Internat. Conf., Kahuga, 1975)* (Russian), pp. 49-61, "Nauka", Moscow, 1977. (R. A. Askey) **80b:41004** 41A10
- (with Butzer, P. L.; Wehrns, M.) Saturation classes of the Cesàro and
- Abel-Poisson means of Fourier-Legendre series. Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* **33** (1978), no. 1-2, 19-35. (Manfred v. Golitschek) **80b:41012** 41A40 (42A10, 42C05)
- Stepanec, O. I.** Approximation by Fourier sums of continuous functions of two variables. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kahuga, 1975)* (Russian), pp. 330-332, "Nauka", Moscow, 1977. (L. Gogoladze) **80j:42032** 42B05
- Štěpánek, Petr** Cardinals in the inner model HOD. *Higher set theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1977)*, pp. 437-454, *Lecture Notes in Math.*, 669, Springer, Berlin, 1978. (John W. Dawson, Jr.) **80b:03006** 03E45 (06E55)
- Cardinal collapsing and ordinal definability. *J. Symbolic Logic* **43** (1978), no. 4, 635-642. (John W. Dawson, Jr.) **80b:03060** 03E45 (03E40, 06E55)
- Stepanjuk, N. N.** Some problems of controllability and observability of two-parameter discrete systems. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 12, 2190-2195, 2300. (Author's summary) **80g:93030** 93B05 (39A10)
- (with Minjuk, S. A.) On the theory of pointwise completeness of linear systems with lag. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 5, 784-794, 955. (M. M. Konstantinov) **80i:34129** 34K35 (39A10, 93B05)
- Stepanov, A. N.** (with Sestakov, A. A.) Index and divergence criteria for the stability of a singular point of an autonomous system of differential equations. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 4, 650-661, 764. (A. I. Perov) **80g:34047** 34D05 (34C05)
- Stepanov, B. M.** (with Medvedev, V. A.; Oleinikov, B. I.; Filinov, V. N.) On the optimal discrete representation of nonstationary random processes. (Russian) *Problemy Peredachi Informacii* **14** (1978), no. 2, 99-104. (Z. A. Piranavili) **80d:60057** 60G35 (94A05)
- Stepanov, S. A.** Lower bounds for incomplete sums of the characters of polynomials. (Russian) *Analytic number theory, mathematical analysis and their applications* (dedicated to I. M. Vinogradov on his 85th birthday). *Trudy Mat. Inst. Steklov.* **140** (1977), 175-177, 210. (András Sárközy) **80k:10036** 10G20
- An elementary method in algebraic number theory. (Russian) *Mat. Zametki* **24** (1978), no. 3, 425-431, 448. (J. W. S. Cassels) **80c:10043** 10G10 (12C25, 14G15, 14G15)
- Stepanov, S. N.** Iteration methods for numerical calculation of queueing systems. (Russian) *Information networks and their analysis* (Russian), pp. 51-57, 217, "Nauka", Moscow, 1978. (Author's summary) **80g:65035** 65F10 (60K25)
- Stepanov, V. D.** Convolution integral operators. (Russian) *Dokl. Akad. Nauk SSSR* **243** (1978), no. 1, 45-48. (Richard E. Frankfurt) **80e:47042** 47G05 (42B20, 45E05)
- Stepanov, V. E.** (with Jappa, Ju. A.) The Lie derivative of geometric objects (on the triad formulation of gravitational theory). (Russian. English summary) *Vestnik Leningrad. Univ. Fiz. Him.* **1978**, vyp. 4, 42-46, 149. (From the summary) **80d:83066** 83C99 (49A99, 53A55)
- Clifford algebras and Dirac matrices in a tensor formulation. (Russian. English summary) *Vestnik Leningrad. Univ. Fiz. Him.* **1979**, vyp. 1, 104-106, 123. (D. Ž. Đoković) **80i:15020** 15A66 (15A72, 81E99)
- Stepanov, V. I.** (with Ryčkov, S. S.) A characterization of the algebraic compactness of abelian groups. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 3(207), 196. (J. Cichó) **80k:20054** 20K99 (08A45)
- Stepanov, V. V.** (with Gončarskii, A. V.) Algorithms for the approximate solution of ill-posed problems on some compact sets. (Russian) *Dokl. Akad. Nauk SSSR* **245** (1979), no. 6, 1296-1299. (Russell C. Thompson) **80g:65069** 65J15
- Stepanova, L. A.** (with Gort, G. V.; Kudrjova, L. V.) ★Классические задачи динамики твердого тела. Развитие и современное состояние. (Russian) [Classical problems in the theory of solid bodies. Their development and current state] "Naukova Dumka", Kiev, 1978. 294 pp. (Vadim Komkov) **80m:70001** 70-01 (01A50, 01A55, 34-03, 70-03, 70E99)
- Stephanides, Adam** (with Usiskin, Zalman) Magic triangular regions of order 4 and 5. *J. Recreational Math.* **11** (1978/79), no. 3, 176-180. (Katherine Heinrich) **80e:05027** 05B30
- Stephanopoulos, George** (with Morari, Manfred) Comments on finding the generic rank of a structural matrix. With a reply by R. W. Shields and J. B. Pearson. *IEEE Trans. Automat. Control* **23** (1978), no. 3, 509-510. (Editors) **80a:93040** 93B05
- Stephanopoulos, Gregory** (with Fredrickson, A. G.; Aris, Rutherford) The growth of competing microbial populations in a CSTR with periodically varying inputs. *AIChE J.* **25** (1979), no. 5, 863-872. (Authors' summary) **80g:92032** 92A15
- (with Aris, Rutherford; Fredrickson, A. G.) A stochastic analysis of the growth of competing microbial populations in a continuous biochemical reactor. *Math. Biosci.* **45** (1979), no. 1-2, 99-135. (From the summary) **80e:92013** 92A09
- Stephens, A. B.** (with Johnson, Charles R.; Kellogg, R. B.) Complex eigenvalues of a nonnegative matrix with a specified graph. II. *Linear and Multilinear Algebra* **7** (1979), no. 2, 129-143. (R. C. Thompson) **80g:15020a** 15A48 (05C50, 15A18)
- (with Johnson, Charles R.; Kellogg, R. B.) Erratum to: "Complex eigenvalues of a nonnegative matrix with a specified graph. II" (*Linear and Multilinear Algebra* **7** (1979), no. 2, 129-143). *Linear and Multilinear Algebra* **8** (1979/80), no. 2, 171. (Editor) **80g:15020b** 15A48
- Stephens, M. A.** Vector correlation. *Biometrika* **66** (1979), no. 1, 41-48. (Noel Cressie) **80k:62081** 62H20
- (with Solomon, Herbert) Approximations to densities in geometric probability. *J. Appl. Probab.* **17** (1980), no. 1, 145-153. (Adrian Baddeley) **80k:60021** 60D05 (52A22)
- Stephens, N. M.** (with Lunnon, W. F.; Pleasants, P. A. B.) Arithmetic properties of Bell numbers to a composite modulus. I. *Acta Arith.* **35** (1979), no. 1, 1-16. (L. Carlitz) **80k:05006** 05A10 (10A40)
- Dirichlet characters and polynomials. *Bull. London Math. Soc.* **11** (1979), no. 1, 52-54. (D. R. Heath-Brown) **80i:10053** 10G99
- (with Atkinson, M. D.) On the maximal multiplicative complexity of a family of bilinear forms. *Linear Algebra Appl.* **27** (1979), 1-8. (Werner Bani) **80i:15019** 15A63 (68C25)
- Stephenson, J. W.** (with Manohar, Ram P.) Forbidden nodes for curved finite elements. *Internat. J. Numer. Methods Engrg.* **14** (1979), no. 9, 1421-1427. (Authors' summary) **80e:65105** 65N30



- Stephenson, Kenneth** The finite range of an inner function. *Bull. London Math. Soc.* 11 (1979), no. 3, 300-303. (R. McLaughlin) **80m:30041** 30D50 (30F99)
- Functions which follow inner functions. *Illinois J. Math.* 23 (1979), no. 2, 259-266. (Richard E. Frankfurt) **80h:30030** 30D55 (47B38)
- Two counterexamples involving inner functions. *Proc. Amer. Math. Soc.* 73 (1979), no. 1, 22-24. (R. McLaughlin) **80f:30023** 30D50
- (with Campbell, Douglas M.; Cima, Joseph A.) A Bloch function in all  $H^p$  classes, but not in BMOA. *Proc. Amer. Math. Soc.* 78 (1980), no. 2, 229-230. (D. Protas) **80k:30033** 30D45 (30D55)
- Stephenson, W.** (with Burgess, W. D.) An analogue of the Pierce sheaf for noncommutative rings. *Comm. Algebra* 6 (1978), no. 9, 863-886. (G. Michler) **80f:16025** 16A48
- (with Burgess, W. D.) Rings all of whose Pierce stalks are local. *Canad. Math. Bull.* 22 (1979), no. 2, 159-164. (Kwangil Koh) **80g:16018** 16A32
- Stepin, A. M.** Equidistribution of the entropy of amenable groups of transformations. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 9, 3-7. (B. S. Pickel') **80f:28025** 28D20
- Stepleman, R. S.** Monotone convergence and effective stopping criteria for numerical processes. *BIT* 19 (1979), no. 2, 279-281. (M. S. Cheema) **80f:65053** 65H05 (90B35)
- Steppeler, J.** Fluid computations using infinitesimal functionals. *Comput. & Fluids* 6 (1978), no. 4, 241-258. (Author's summary) **80m:76023** 76D05 (49A99)
- Sierboul, François** Sur le nombre transversal des hypergraphes uniformes. (English summary) *Discrete Math.* 22 (1978), no. 1, 91-96. (Pavol Hell) **80e:05087** 05C65 (05B30)
- Smallest 3-graphs having a 3-colored edge in every  $k$ -coloring. *Discrete Math.* 27 (1979), no. 2, 205-210. (Michael O. Albertson) **80k:05081** 05C65 (05C15, 05C35)
- Sternan, George** (with Ore, F. R., Jr.) An operator approach to weighted cross sections. *Nuclear Phys. B* 165 (1980), no. 1, 93-118. (Authors' summary) **80m:81084** 81F99
- Stern, A.** (with Balachandran, A. P.; Trahern, C. G.) Nonlinear models as gauge theories. *Phys. Rev. D* (3) 19 (1979), no. 8, 2416-2425. (A. Rouet) **80e:81052** 81E10 (55R10)
- (with Balachandran, A. P.; Marmo, G.; Skagerstam, B. S.) Magnetic monopoles with no strings. *Nuclear Phys. B* 162 (1980), no. 3, 385-396. (Authors' summary) **80k:81160** 81G10
- (with Balachandran, A. P.; Marmo, G.; Skagerstam, B. S.) Spinning particles in general relativity. *Phys. Lett. B* 89 (1980), no. 2, 199-202. (Authors' summary) **80m:83029** 83C99
- Stern, Jacques** Partitions of the real line into  $\mathfrak{m}_1$  closed sets. *Higher set theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1977)*, pp. 455-460. *Lecture Notes in Math.*, 669, Springer, Berlin, 1978. (A. Kanamori) **80f:03058** 03E35
- Le problème des cardinaux singuliers d'après R. B. Jensen et J. Silver. *Séminaire Bourbaki*, 29e année (1976/77), Exp. No. 494, pp. 59-72. *Lecture Notes in Math.*, 677, Springer, Berlin, 1978. (Editors) **80m:03085** 03E55
- Arbres dont toutes les branches sont faiblement Cauchy. *Séminaire sur la Géométrie des Espaces de Banach* (1977-1978), Exp. No. 6, 8 pp., École Polytech., Palaiseau, 1978. (J. P. R. Christensen) **80a:04005** 04A20
- (with Shelah, Saharon) The Hanf number of the first order theory of Banach spaces. *Trans. Amer. Math. Soc.* 244 (1978), 147-171. (B. I. Zil'ber) **80a:03047** 03C65 (46B99)
- Suites transfinies d'ensembles boréliens. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 10, A527-A529. (Author's summary) **80k:03069** 03E15
- Le groupe des isométries d'un espace de Banach. (English summary) *Studia Math.* 64 (1979), no. 2, 139-149. (Erhard Behrends) **80f:46022** 46B99
- Stern, Jiri** New techniques in ordinary and partial differential equations. *ČSAV 24* (1979), no. 1, 108-137. (From the text) **80f:65002** 65-02
- Stern, M. S.** Application of the El-Gendi method to the Schrödinger integral equation. *J. Comput. Phys.* 28 (1978), no. 1, 122-128. (J. Weidmann) **80d:81111** 81F99 (65R20)
- Stern, Manfred** Finite modular AC-lattices of the  $n$ th stage. (Russian) *Ordered sets and lattices*, No. 5 (Russian), pp. 107-114, 119, Saratov. Gos. Univ., Saratov, 1978. (Wojciech Cegła) **80m:06010** 06C05
- Baer lattices. *Wiss. Z. Martin-Luther-Universität Halle-Wittenberg Math.-Natur. Reihe* 27 (1978), no. 4, 135-140. (Ferenc Fenyes) **80k:06007** 06C99
- Baer lattices. II. *Wiss. Z. Martin-Luther-Universität Halle-Wittenberg Math.-Natur. Reihe* 27 (1978), no. 5, 65-69. (Ferenc Fenyes) **80k:06003a** 06B05
- Baer lattices. III. *Wiss. Z. Martin-Luther-Universität Halle-Wittenberg Math.-Natur. Reihe* 28 (1979), no. 1, 21-24. (Ferenc Fenyes) **80k:06003b** 06B05
- Stern, Melvin E.** Inequalities and variational principles for turbulent transport. *J. Fluid Mech.* 91 (1979), no. 3, 513-540. (François Rondy) **80k:76049** 76F99
- Stern, Morris** A general boundary integral formulation for the numerical solution of plate bending problems. *Internat. J. Solids and Structures* 15 (1979), no. 10, 769-782. (Author's summary) **80g:73051** 73K10
- Stern, Ronald J.** (with Heymann, Michael; Pachter, Meir) Two-player control problems with subspace targets. *Differential games and control theory, II (Proc. 2nd Conf., Univ. Rhode Island, Kingston, R.I., 1976)*, pp. 167-178. *Lecture Notes in Pure and Appl. Math.*, 30, Dekker, New York, 1977. (Editors) **80a:93110** 93C99 (90D05)
- PL homology 3-spheres and triangulations of manifolds. *Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977)*, II, *Topology Proc.* 2 (1977), no. 2, 621-630 (1978). (Martin Scharlemann) **80k:57038** 57Q15 (57R60)
- (with Galewski, David E.) Simplicial triangulations of topological manifolds. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976)*, Part 2, pp. 7-12. *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (B. J. Sanderson) **80m:57014** 57Q15
- (with Pachter, Meir) The controllability problem for affine targets. *J. Math. Anal. Appl.* 65 (1978), no. 3, 555-564. (R. Guidorzi) **80a:93041** 93B05
- (with Galewski, David E.) A universal 5-manifold with respect to simplicial triangulations. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 345-350. Academic Press, New York, 1979. (N. Martin) **80f:57007** 57Q15
- (with Pachter, Meir) On state restrained linear-quadratic control problems. *J. Math. Anal. Appl.* 69 (1979), no. 2, 315-328. (S. P. Bhattacharyya) **80k:93038** 93C45
- Sternberg, Eli** (with Knowles, James K.) On the failure of ellipticity and the emergence of discontinuous deformation gradients in plane finite elastostatics. *J. Elasticity* 8 (1978), no. 4, 329-379. (Gérard A. Maugin) **80d:76012** 76C99 (35Q99)
- (with Knowles, James K.) On the existence of an elastic potential for a simple material without memory. *Arch. Rational Mech. Anal.* 70 (1979), no. 1, 19-30. (R. L. Fosdick) **80h:73010** 73B99
- Sternberg, Robert L.** See *Differential games and control theory*, **80d:90001**
- Sternberg, Shlomo** On the role of field theories in our physical conception of geometry. *Differential geometrical methods in mathematical physics, II (Proc. Conf., Univ. Bonn, Bonn, 1977)*, pp. 1-80. *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (Vadim Komkov) **80g:81001** 81-02 (53C05, 58A10, 58F06, 81E10)
- Some preliminary remarks on the formal variational calculus of Gel'fand and Dikii. *Differential geometrical methods in mathematical physics, II (Proc. Conf., Univ. Bonn, Bonn, 1977)*, pp. 399-407. *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (Richard C. Swanson) **80c:49033** 49F99 (58E99, 58F07)
- Some recent results on the metaplectic representation. *Group theoretical methods in physics (Sixth Internat. Colloq., Tübingen, 1977)*, pp. 117-143. *Lecture Notes in Phys.*, 79, Springer, Berlin, 1978. (A. U. Klimyk) **80g:22015** 22E46
- Sternby, Jan** Comments on: "Convergence of least squares identification algorithms applied to unstable stochastic processes" (Internat. J. Systems Sci. 8 (1977), no. 6, 611-618) by Eli Fogel and Daniel Graupe. *Internat. J. Systems Sci.* 9 (1978), no. 7, 837-838. (Jiri Šustal) **80a:93181a** 93E12
- See also Fogel, Eli; et al., **80a:93181b**
- Sternfeld, Y.** (with Lindenstrauss, J.; Olsen, G.) The Poulsen simplex. (French summary) *Ann. Inst. Fourier (Grenoble)* 28 (1978), no. 1, vi, 91-114. (H. E. Lacey) **80h:46019a** 46A55
- See also Lusky, Wolfgang, **80h:46019b**
- Sternis, B. Ju.** Maslov's canonical operator method. (Russian) *Complex analysis and manifolds (Russian)*, pp. 47-113. *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (Th. Friedrich) **80k:58094** 58G15 (35C99)
- Stethair, Henrik** On positive semidefinite solutions of the operator Lyapunov equation. *J. Math. Anal. Appl.* 69 (1979), no. 1, 153-170. (Ju. L. Daleckii) **80m:47014** 47A62
- Štetter, H.** ★Анализ методов дискретизации для обыкновенных дифференциальных уравнений. (Russian) [Analysis of discretization methods for ordinary differential equations] Translated from the English by S. S. Artem'ev, G. V. Demidov, V. P. Il'in and Ju. I. Kuznetsov. Edited by G. I. Marčuk. "Mir", Moscow, 1978. 461 pp. (Editors) **80a:65143** 65Lxx (65-02)
- Global error estimation in ODE-solvers. *Numerical analysis (Proc. 7th Biennial Conf., Univ. Dundee, Dundee, 1977)*, pp. 179-189. *Lecture Notes in Math.*, 630, Springer, Berlin, 1978. (W. Börsch-Supan) **80a:65157** 65L05
- Interpolation and error estimation in Adams PC-codes. *SIAM J. Numer. Anal.* 16 (1979), no. 2, 311-323. (P. W. Gaffney) **80k:65054** 65L05 (65D05, 65G99)
- Studel, R.** Zur iterativen Lösung von nichtlinearen Integrodifferentialgleichungsproblemen. (English and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 4, 195-203. (I. Fenyő) **80g:65131** 65R20 (45J05, 45L05)
- Steuer, Ralph E.** Goal programming sensitivity analysis using interval penalty weights. *Math. Programming* 17 (1979), no. 1, 16-31. (Author's summary) **80g:90105** 90C31
- Steuerwalt, Michael** The existence, computation, and number of solutions of periodic parabolic problems. *SIAM J. Numer. Anal.* 16 (1979), no. 3, 402-420. (Jacques Robert) **80d:35011** 35B10 (65P05)
- Steurich, Manfred** (with Herzog, Jürgen) Golodideale der Gestalt  $a \cap b$ . *J. Algebra* 58 (1979), no. 1, 31-36. (Tadayuki Matsuoka) **80k:13005** 13D05
- Stentel, F. W.** (with van Harn, Klaas) Discrete analogues of self-decomposability and stability. *Ann. Probab.* 7 (1979), no. 5, 893-899. (Stephen James Wolfe) **80g:60014** 60E07
- (with Schurer, F.) On the degree of approximation by the operators of de la Vallée Poussin. *Monatsh. Math.* 87 (1979), no. 1, 53-64. (E. L. Stark and P. L. Butzer) **80h:41013** 41A44 (42A10)
- Infinite divisibility in theory and practice. *Scand. J. Statist.* 6 (1979), no. 2, 57-64. (Stephen James Wolfe) **80g:60015** 60E07
- Stevanović, K. R.** One-frequency nonlinear forced vibrations of uniform beams. (Russian and Serbo-Croatian summaries) *Teor. Primen. Meh.* No. 4 (1978), 39-50. (Author's summary) **80d:73078** 73K05 (73D30)
- One-frequency proper nonlinear vibration of thin plate. (Russian and Serbo-Croatian summaries) *Teor. Primen. Meh.* No. 4 (1978), 51-65. (M. C. Singh) **80d:73096** 73K10
- Stevens, P.** (with Dere, I.; Noldus, E.) Observers for bilinear systems with bounded input. *Internat. J. Systems Sci.* 10 (1979), no. 6, 649-668. (Authors' summary) **80k:93033** 93B05
- Stewart, Alan L.** (with Berman, Simeon M.) The mathematical theory of lateral impedance of visual activity and an application of Markov processes. *Biol. Cybernet.* 30 (1978), no. 2, 99-108. (S. M. Rudolfer) **80k:92051** 92A40 (60J70)
- (with Berman, Simeon M.) Laterally induced impedance effects in vision. *J. Math. Psych.* 18 (1978), no. 1, 73-99. (Authors' summary) **80k:92005** 92A09
- (with Berman, Simeon M.) A nonlinear integral equation for visual impedance. *Biol. Cybernet.* 33 (1979), no. 3, 137-141. (R. D. Luce) **80f:92007** 92A09 (45G10)
- (with Berman, Simeon M.) A unified model for the combined temporal and spatial Broca-Sulzer effect. *Biol. Cybernet.* 34 (1979), no. 3, 171-179. (M. E. Wise) **80m:92003** 92A09
- Stewart, Cameron L.** On a theorem of Kronecker and a related question of Lehmer. *Séminaire de Théorie des Nombres 1977-1978*, Exp. No. 7, 11 pp., CNRS, Talence, 1978. (A. J. van der Poorten) **80j:10039** 10F25 (12A99)
- On difference sets of sets of integers. *Séminaire Delange-Pisot-Poitou, 19e année 1977/78, Théorie des nombres*, Fasc. 1, Exp. No. 5, 8 pp., Secrétariat Math., Paris, 1978. (András Sárközy) **80k:10052** 10L05 (05B10)
- Algebraic integers whose conjugates lie near the unit circle. (French summary) *Bull. Soc. Math. France* 106 (1978), no. 2, 169-176. (Christopher Smyth) **80a:12002** 12A10 (10F40)
- Stewart, G. W.** Perturbation theory for the generalized eigenvalue problem. *Recent advances in numerical analysis (Proc. Sympos., Math. Res. Center, Univ. Wisconsin,*

- Madison, Wis., 1978), pp. 193–206. *Publ. Math. Res. Center Univ. Wisconsin*, 41, Academic Press, New York, 1978. (Ludwig Elsner) **80c:65092** 65F15  
(with Moler, Cleve B.) On the Householder-Fox algorithm for decomposing a projection. *J. Comput. Phys.* **28** (1978), no. 1, 82–91. (A. S. Householder) **80a:65083** 65F25
- The effects of rounding error on an algorithm for downdating a Cholesky factorization. *J. Inst. Math. Appl.* **23** (1979), no. 2, 203–213. (H. Ratschek) **80c:65046** 65G05 (65F30)
- Perturbation bounds for the definite generalized eigenvalue problem. *Linear Algebra Appl.* **23** (1979), 69–85. (F. Szidarovszky) **80c:15007** 15A18 (65F15)  
(with O'Leary, Dianne P.; Vandergraft, James S.) Estimating the largest eigenvalue of a positive definite matrix. *Math. Comp.* **33** (1979), no. 148, 1289–1292. (Authors' summary) **80d:65048** 65F15  
(with Bavelly, Connie A.) An algorithm for computing reducing subspaces by block diagonalization. *SIAM J. Numer. Anal.* **16** (1979), no. 2, 359–367. (Authors' summary) **80c:65094** 65F30  
(with Cline, A. K.; Moler, Cleve B.; Wilkinson, J. H.) An estimate for the condition number of a matrix. *SIAM J. Numer. Anal.* **16** (1979), no. 2, 368–375. (R. P. Tewarson) **80c:65048** 65F35 (65F05)
- Stewart, Ian (with Poston, Tim) Nonlinear modeling of multistable perception. Applications of catastrophe theory in the behavioral and life sciences. *Behavioral Sci.* **23** (1978), no. 5, 318–334. (R. D. Luce) **80c:92047** 92A20 (58C28)  
Lie algebras having large Cartan subalgebras. *Bull. London Math. Soc.* **11** (1979), no. 2, 124–128. (B. Hartley) **80c:17014** 17B65
- Stewart, J. M. (with Israel, W.) Transient relativistic thermodynamics and kinetic theory. *Ann. Physics* **118** (1979), no. 2, 341–372. (Brian DeFazio) **80d:80011** 80A20  
Hertz-Bromwich-Debye-Whittaker-Penrose potentials in general relativity. *Proc. Roy. Soc. London Ser. A* **367** (1979), no. 1731, 527–538. (Garry Ludwig) **80c:83017** 83C25
- Stewart, Marion B. Monopoly and the choice of product characteristics. *Econom. Lett.* **2** (1979), no. 1, 79–84. (Authors' summary) **80d:90028** 90A16  
Market structure and the search for exhaustible resources. *Econom. Lett.* **2** (1979), no. 1, 85–90. (Authors' summary) **80d:90086** 90C50 (90A16)
- Stewart, N. F. (with Erlander, S.; Nguyen, S.) On the calibration of the combined distribution-assignment model. *Transportation Res. Part B* **13** (1979), no. 3, 259–267. (Authors' summary) **80c:90041** 90B10
- Stewart, Theodore J. Optimal selection from a random sequence with learning of the underlying distribution. *J. Amer. Statist. Assoc.* **73** (1978), no. 364, 775–780. (Joseph A. Yahav) **80c:62063** 62L15 (62C10)
- Stewart, Warren E. (with Sørensen, Jan P.) Structural analysis of multicomponent reaction models. I. Systematic editing of kinetic and thermodynamic values. *AIChE J.* **26** (1980), no. 1, 98–104. (Authors' summary) **80c:80011** 80A30  
(with Sørensen, Jan P.) Structural analysis of multicomponent reaction models. II. Formulation of mass balances and thermodynamic constraints. *AIChE J.* **26** (1980), no. 1, 104–111. (Authors' summary) **80c:80015** 80A30
- Stewart, William J. (with Marie, Raymond A.) A hybrid iterative-numerical method for the solution of a general queueing network. *Measuring, modelling and evaluating computer systems (Proc. Third Internat. Sympos., Bad Godesberg, 1977)*, pp. 173–188, North-Holland, Amsterdam, 1977. (From the introduction) **80c:68086** 68C15
- Stewartson, Keith (with Daniels, P. G.) On the spatial oscillations of a horizontally heated rotating fluid. II. *Quart. J. Mech. Appl. Math.* **31** (1978), no. 2, 113–135. (M. N. L. Narasimhan) **80a:76031** 76E30 (35Q99)  
(with Cheng, H. K.) On the structure of inertial waves produced by an obstacle in a deep, rotating container. *J. Fluid Mech.* **91** (1979), no. 3, 415–432. (K. K. Par) **80c:76048** 76V05 (35Q20, 76C99)  
(with Cebeci, Tuncer; Williams, Peter G.) On the response of a stagnation boundary layer to a change in the external velocity. *SIAM J. Appl. Math.* **36** (1979), no. 2, 190–199. (R. K. Gupta) **80c:76022** 76N05  
(with Brown, S. N.) On finite amplitude Bénard convection in a cylindrical container. II. *SIAM J. Appl. Math.* **36** (1979), no. 3, 573–586. (Authors' summary) **80c:76047** 76R05  
(with Cebeci, Tuncer) On stability and transition in three-dimensional flows. *AIAA J.* **18** (1980), no. 4, 398–405. (Authors' summary) **80c:76046** 76E99
- Stey, G. C. Statistical viewpoint in classical mechanics. *Instabilities in dynamical systems (Proc. NATO Adv. Study Inst., Cortina d'Ampezzo, 1978)*, pp. 103–112, NATO Adv. Study Inst. Ser., Ser. C: Math. and Phys. Sci., 47, Reidel, Dordrecht, 1979. (R. C. Desai) **80c:82068** 82A05 (70F99)
- Stihapit, Y. R. (with Datta, Subhendu K.) Stokes flow past a sphere with a time dependent source at its centre. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 5, 791–798. (Authors' summary) **80c:76023** 76D99
- Stianum, M. (with Peregrine, D. H.) On averaged equations for finite-amplitude water waves. *J. Fluid Mech.* **94** (1979), no. 3, 401–407. (Alan Jeffrey) **80c:76018** 76B15
- Stichensoth, Henning ★Algebraische Funktionenkörper einer Variablen. Vorlesungen aus dem Fachbereich Mathematik der Universität Essen, I. Universität Essen, Fachbereich Mathematik, Essen, 1978. 120 pp. (K. Kiyek) **80c:14002** 14–01 (14H05)  
p-Klassengruppen algebraischer Funktionenkörper. *Arch. Math. (Basel)* **32** (1979), no. 5, 452–457. (W.-D. Geyer) **80m:14015** 14H05 (14H40)
- Stickforth, J. Additional remark to: "Another regularization of the Kepler problem" (Celestial Mech. 15 (1977), no. 1, 131). *Celestial Mech.* **18** (1978), no. 3, 257–258. (G. V. Hmelevskaja-Plotnikova) **80c:70018** 70F15 (34C99)  
See also Baumgarte, Joachim, **80c:70012**
- Stickney, Alan (with Watson, Layne T.) Digraph models of Bard-type algorithms for the linear complementarity problem. *Math. Oper. Res.* **3** (1978), no. 4, 322–333. (Rainer Burkard) **80j:90108** 90C33
- Stidham, Shaler, Jr. Socially and individually optimal control of arrivals to a GI/M/1 queue. *Management Sci.* **24** (1978), no. 15, 1598–1610. (Richard F. Serfozo) **80c:60114** 60K25
- Stiefel, Edward (with Kirchgraber, Urs) ★Methoden der analytischen Störungsrechnung und ihre Anwendungen. Leitfaden der Angewandten Mathematik und Mechanik, 44. B. G. Teubner, Stuttgart, 1978. viii + 294 pp. ISBN 3-519-02346-6 (Editors) **80c:70001** 70–01 (34C29, 58F05)
- Stieglitz, Andreas Cohomology theory of Dynkin algebras and Lie groups. *Arch. Math. (Basel)* **30** (1978), no. 4, 404–410. (Ronald Brown) **80d:57025** 57T10 (17B65, 22E6)  
Equivariant sheaf cohomology. *Manuscripta Math.* **26** (1978/79), no. 1–2, 201–221. (G. E. Bredon) **80c:55020** 55N30  
Actions of groups with periodic cohomology on Poincaré duality spaces. *Math. Ann.* **236** (1978), no. 1, 29–42. (Norman Levitt) **80m:57013** 57P10 (57S17)  
Chabauty- und Weil-Räume topologischer Gruppen. *Math. Nachr.* **85** (1978), 215–233. (A. M. Macbeath) **80h:22016** 22E40
- Stieglitz, Michael Der Satz von Budan-Fourier für allgemeine polynomiale Monoplinen (English and Russian summaries) *Z. Angew. Math. Mech.* **59** (1979), no. 6, 217–223. (J. Jetter) **80j:65015** 65D30 (65D07, 65D30)
- Stietjes, Thomas Jan See van Veen, S. C., **80f:01022**
- Stierlin, C. (with Hässig, Kurt; Reiser, P.) A note on primal network flow algorithms. (German summary) *Z. Oper. Res. Ser. A-B* **22** (1978), no. 5, A195–A198. (James R. Evans) **80a:90062** 90B10
- Stiffler, J. J. (with Blake, Ian F.) A note on generalized Room squares. *Discrete Math.* **21** (1978), no. 1, 89–93. (Rudolf Mathon) **80c:05035** 05B15  
The reliability of a fault-tolerant configuration having variable coverage. *IEEE Trans. Comput.* **27** (1978), no. 12, 1195–1197. (Mark Karpovsky) **80a:94049** 94C05  
Fault coverage and the point of diminishing returns. *J. Design Automat. Fault-Tolerant Comput.* **2** (1978), no. 4, 289–301. (Andor Dobó) **80c:90069** 90B25
- Stigler, Stephen M. Francis Ysidro Edgeworth, statistician. With discussion. *J. Roy. Statist. Soc. Ser. A* **141** (1978), no. 3, 287–322. (Authors' summary) **80a:62001** 62–01 (01A55)  
Correction to: "Linear functions of order statistics with smooth weight functions" (Ann. Statist. 2 (1974), 676–693). *Ann. Statist.* **7** (1979), no. 2, 466. (Editors) **80c:62031** 62G30 (62F35)
- van Stigt, Walter P. The rejected parts of Brouwer's dissertation on the foundations of mathematics. (French summary) *Historia Math.* **6** (1979), no. 4, 385–404. (H. C. Kennedy) **80a:01048** 01A60 (03–03)
- Stihl, M. (with Nenciu, G.; Rasche, G.; Woolcock, W. S.) General solution of multichannel partial-wave dispersion relations. I. Coincident thresholds, pole approximations. *Helv. Phys. Acta* **51** (1978), no. 4, 608–633. (N. Nakanishi) **80f:81096** 81F15 (47A40)
- Stihl, Teodor Induction and the complete sequences of conditions in the sense of P. I. Cohen. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 1, 129–133. (W. Hodges) **80a:03038** 03C25
- van Stijn, Th. L. See Van Stijn, Th. L.
- Still, Jonathan W. A class of new methods for congressional apportionment. *SIAM J. Appl. Math.* **37** (1979), no. 2, 401–418. (Maurice Salles) **80c:90017** 90A08
- Stillinger, Frank H. Solution of a quantum mechanical eigenvalue problem with long range potentials. *J. Math. Phys.* **20** (1979), no. 9, 1891–1895. (K. Veselić) **80a:81022** 81C05 (35J10)  
Duality relations for the Gaussian core model. *Phys. Rev. B* **3** (1979), no. 1, 299–302. (Authors' summary) **80c:82038** 82A67
- Stillman, Beatrice See Kovalevskaja, S. V., **80c:01033**
- Stillwell, John C. The compound crossing number of a knot. *Austral. Math. Soc. Gaz.* **6** (1979), no. 1, 1–10. (M. J. Dunwoody) **80c:57005** 57M25  
Isotopy in surface complexes from the computational viewpoint. *Bull. Austral. Math. Soc.* **20** (1979), no. 1, 1–6. (J. S. Birman) **80c:03059** 03D15 (57M25, 68C25)  
Unsolubility of the knot problem for surface complexes. *Bull. Austral. Math. Soc.* **20** (1979), no. 1, 131–137. (J. S. Birman) **80j:03060** 03D40 (20F10, 57M25)
- Stil'man, M. S. Repeating games with changing value of the payment unit. I. Attainable vectors of the winnings. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 1, 26–33, 219 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 1, 22–29. (R. E. Stearns) **80c:90114** 90D12
- Stinchcombe, R. B. Kubo and Zubarev formulations of response theory. *Correlation functions and quasiparticle interactions in condensed matter (Proc. NATO Advanced Study Inst., Wayzata, Minn., 1977)*, pp. 3–44, NATO Adv. Study Inst. Ser., Ser. B: Physics, 35, Plenum, New York, 1978. (S. V. Temko) **80c:82021** 82A15 (47A40)  
(with Green, M. B.; Sneddon, L.) Equivalence of (d+1)-dimensional Ising systems of arbitrary spin to a d-dimensional spin-1/2 quantum system. *J. Phys. A* **12** (1979), no. 7, L189–L192. (W.-H. Steeb) **80c:82048** 82A67
- Stinson, D. R. (with Mullin, Ronald C.) Near-self-complementary designs and a method of mixed sums. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 59–67, *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (Henry Beker) **80c:05031** 05B05  
A note on the existence of 7 and 8 mutually orthogonal Latin squares. *Ars Combin.* **6** (1978), 113–115. (D. Sotteau) **80c:05040** 05B15  
(with Mullin, Ronald C.; Wallis, W. D.) Skew squares of low order. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1978)*, pp. 413–434, *Congress. Numer.*, XXII, Utilitas Math., Winnipeg, Man., 1979. (Judith Q. Longyear) **80c:05021** 05B15 (62K10)
- Štípl, M. On the maximum principle in the linear theory of elasticity. (Russian and Czech summaries) *Acta Univ. Carolin.—Math. Phys.* **19** (1978), no. 2, 65–68. (René Hayat) **80a:73022** 73C99 (35J99)
- Stix, Thomas H. (with Rochester, Alexander B.) Stochastic instability of a nonlinear oscillator. *Phys. Rev. A* **3** (1979), no. 4, 1656–1665. (Authors' summary) **80c:70033** 70K20 (34D99)
- St. Mary, D. F. (with Eliason, S. B.) On oscillation of linear differential systems. *J. Math. Anal. Appl.* **66** (1978), no. 2, 379–386. (B. S. Lalli) **80d:34037** 34C10
- Stockenberg, Bernd Weak Chebyshev spaces and generalizations of a theorem by Krein. *J. Approx. Theory* **25** (1979), no. 3, 225–232. (Hans Strauss) **80f:41019** 41A50
- Stöckert, B. Remarks on anisotropic function spaces. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 789–797, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (Angelo Favini) **80c:46031** 46E35
- Stockmeyer, Larry J. (with Chandra, Ashok K.) Provably difficult combinatorial games. *SIAM J. Comput.* **8** (1979), no. 2, 151–174. (Y. L. Varol) **80d:68060** 68C25 (90Dxx)  
(with Wong, C. K.) On the number of comparisons to find the intersection of two relations. *SIAM J. Comput.* **8** (1979), no. 3, 388–404. (Authors' summary) **80c:68122** 68C25 (68E05)



- Storck, David (with Pagan, Gordon) Oscillation criteria for second order hyperbolic initial value problems. *Proc. Roy. Soc. Edinburgh Sect. A* 83 (1979), no. 3-4, 239-244. (Charles C. Conley) 80k:35008 35B05 (35L10)
- Stoeger, William R. Axisymmetric accretion flows very near black holes and Rosen-collapsed objects. *Gen. Relativity Gravitation* 10 (1979), no. 8, 671-679. (Andrew King) 80g:83038 83D05
- Stoer, J. (with Bulirsch, R.) ★Einführung in die numerische Mathematik. II. In reference to lectures by F. L. Bauer. Second edition. Heidelberg Taschenbücher, 114. Springer-Verlag, Berlin-New York, 1978. xi + 308 pp. ISBN 3-540-08840-7 (Editors) 80a:65005 65-01
- (with Schittkowski, K.) A factorization method for the solution of constrained linear least squares problems allowing subsequent data changes. *Numer. Math.* 31 (1978/79), no. 4, 431-463. (C. A. Botsaris) 80k:65129 65K05 (65F25, 90C05)
- Two examples on the convergence of certain rank-2 minimization methods for quadratic functionals in Hilbert space. *Linear Algebra Appl.* 28 (1979), 217-222. (Authors' summary) 80b:65044 65K99
- Stogail, A. O. (with Kondrat'ev, A. I.) The normative theory of games. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 9 (1979), 760-761, 780. (Authors' summary) 80k:90047 90D99
- Stohr, Edward A. Information systems for observing inventory levels. *Oper. Res.* 27 (1979), no. 2, 242-259. (N. U. Prabhu) 80e:90037 90B05
- Stoia, Mammela The singular set of a sheaf. (Romanian. English summary) *Stud. Cerc. Mat.* 30 (1978), no. 3, 295-337. (C. Bănică) 80k:14010 14B15 (14F15, 32C36)
- Stoica, Anca (with Stoica, Petre) On the consistency of the least squares estimate. (Romanian. English summary) *Bul. Inst. Politehn. București Ser. Electrotehn.* 40 (1978), no. 2, 93-102. (Authors' summary) 80k:93145 93E10 (93C55)
- Stoica, L. On two-parameter semimartingales. *Z. Wahrsch. Verw. Gebiete* 45 (1978), no. 3, 257-268. (Denis de Brucq) 80k:60071 60G44
- On excessive functions. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 3, 85-87. (Klaus Janssen) 80k:60095 60J40
- Stoica, Petre (with Stoica, Anca) On the consistency of the least squares estimate. (Romanian. English summary) *Bul. Inst. Politehn. București Ser. Electrotehn.* 40 (1978), no. 2, 93-102. (Authors' summary) 80k:93145 93E10 (93C55)
- (with Söderström, T.) Convergence properties of "A method for the identification of linear systems using the generalized least squares principle" (IEEE Trans. Automat. Control AC-22 (1977), no. 4, 631-634). *IEEE Trans. Automat. Control* 24 (1979), no. 1, 138-139. (Authors' summary) 80k:93130 93E12
- Comments on: "A Bayesian comparison of different classes of dynamic model using empirical data" (IEEE Trans. Automat. Control AC-22 (1977), no. 5, 715-727) by R. L. Kashyap. With a reply by R. L. Kashyap. *IEEE Trans. Automat. Control* 24 (1979), no. 3, 516-518. (Authors' summary) 80g:93092 93E20 (62M99)
- Stoikova, L. S. (with Golodnikov, A. N.) A numerical method for estimating certain functionals characterizing reliability. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 2, 73-77. (Z. Khali) 80k:90073 90B25
- Stoiliak, Stanislaw Some remarks on generalized monotonic type functions. *Funct. Approx. Comment. Math.* 7 (1979), 35-38. (Authors' summary) 80k:26008 26A48 (26A51)
- Stojaković, Zoran (with Ušan, Janec) On a system of functional equations on quasigroups. *Publ. Inst. Math. (Beograd) (N.S.)* 23(37) (1978), 223-228. (Pl. Kannappan) 80a:39008 39B50 (39B40)
- Stojan, Ju. G. (with Panasenko, A. A.) ★Периодическое размещение геометрических объектов. (Russian) [Periodic placing of geometric objects] "Naukova Dumka", Kiev, 1978. 175 pp. (E. Hertel) 80a:52016 52A45
- (with Ponomarenko, L. D.) A rational arrangement of geometric bodies in automated design problems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 1, 39-47, 219-220 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 1, 34-43. (Authors' summary) 80k:93021 93A99
- Stojan, N. M. (with Kaptevis, O. O.) An axially symmetric problem for an elastic space with two symmetric hyperbolic cuts. (Russian. English summary) *Vysisl. Prikl. Mat. (Kiev)* No. 38 (1979), 3-10, 162. (Authors' summary) 80f:73025 73C99 (30G20)
- Stojanec, V. T. (with Nikonenko, A. V.; Hesin, A. Ja.) The exactness of the method of approximate calculation of the area of an image at a given level of optical density. (Russian) *Problemy Shchita. Poiska No. 6 Zadaci Optimizacii* (1978), 275-281, 335. (Authors' summary) 80k:78002 78A05 (65D30)
- Stojanov, N. V. (with Balnov, D. D.) Academician Jurii Alekseevich Mitropol'skii (on the occasion of his 60th birthday). (Bulgarian) *Godišnik Vis. Učebn. Zaved. Priložna Mat.* 12 (1976), no. 1, 9-11 (1978). (Editors) 80b:01026 01A70 (34-03, 70-03)
- (with Paškov, P. I.) Conditional stability of the solutions of systems of differential equations with lag. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Priložna Mat.* 12 (1976), no. 1, 237-249 (1978). (Authors' summary) 80k:34104 34K20
- Stojanović, Dragiša A comparative analysis of economic development on the basis of a matrix of growth. (Czech summary) *Ekon. Mat. Obzor* 15 (1979), no. 4, 392-402. (From the introduction) 80k:90036 90A16
- Stojanović, Miroslava Solution of systems of Volterra linear integral equations by the remainder method. (Russian) *Mat. Vesnik* 2(15)(30) (1978), no. 1, 85-89. (Editors) 80k:45015 45L10
- Štokalo, I. Z. See Outlines on the history of mathematics and physics in the Ukraine. 80m:01044
- Stokahli, Andrzej Optimization of  $n$ -periodic control in a Markov model of an operational system. (Polish. Russian and English summaries) *Podstawy Sterowania* 7 (1977), no. 2, 139-148. (Authors' summary) 80i:93070 93E20
- Stoker, J. J. Uniqueness theorems for some open and closed surfaces in three-space. *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* 5 (1978), no. 4, 657-677. (Ju. Burago) 80g:53047 53C45 (31B20, 35B50)
- Stokes, A. N. Series operations using minimum storage. *J. Austral. Math. Soc. Ser. B* 21 (1979/80), no. 1, 84-89. (Authors' summary) 80k:65033 65D15
- Stokes, Nick (with Martin, Brian) Comparing methods for modelling dispersion in flowing media. *Utilitas Math.* 15 (1979), 307-322. (David Zachmann) 80k:76043 76R99 (65P05)
- Stolarski, H. (with Belytschko, T.) Large deformation, rigid-plastic dynamics by an extremum principle. *Comput. Methods Appl. Mech. Engrg.* 21 (1980), no. 2, 217-230. (Authors' summary) 80m:73040 73E99 (73E05)
- Stolarsky, Kenneth B. The binary digits of a power. *Proc. Amer. Math. Soc.* 71 (1978), no. 1, 1-5. (Stanley J. Benkoski) 80b:10020 10A40
- Quintuple diagonal determinants related to a digital distribution problem. *Linear and Multilinear Algebra* 8 (1979/80), no. 2, 145-152. (Donald W. Robinson) 80j:15006 15A15
- Stoljarov, A. V. Differential geometry of bands. (Russian) *Problemy in geometry, Vol. 10* (Russian), pp. 25-54, 224 (errata insert), VINITI, Moscow, 1978. (Vladislav Goldberg) 80e:53023 53B25
- The condition of quadracity for a regular hyperband. (Russian) *Kaliningrad. Gos. Univ. Differentsial' naja Geom. Mnogooobraz. Figur* No. 9 (1978), 93-101, 141. (Vladislav Goldberg) 80j:53018 53A20
- Stoljarov, V. V. The study of dynamical systems that have a given particular integral. (Russian) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1978, no. 1, 86-87, 94. (L. Reizigs) 80c:34027 34C05 (58F21)
- Stoljarova, E. M. (with Ivanilov, Ju. P.) Some questions of demographic modeling. (Russian) *Operations research (models, systems, solutions)*, No. 6 (Russian), pp. 128-153, 155. *Akad. Nauk SSSR, Vysisl. Centr, Moscow*, 1978. (B. G. Mirkin) 80i:92023 92A20 (92A15)
- Stoljarova, L. P. Mapping of the manifold of space quartics at points of  $P_4$ . (Russian) *Current problems of geometry and its applications (Russian)*, pp. 38-44, 107. *Čuvai. Gos. Univ., Cheboksary*, 1975. (E. J. F. Primrose) 80m:14019 14H45 (51A05)
- Stoll, Manfred Invertible and weakly invertible singular inner functions in the Bergman spaces. *Arch. Math. (Basel)* 31 (1978/79), no. 5, 501-508. (Kenneth Stephenson) 80f:30025 30D55
- Stoll, Wilhelm A Casorati-Weierstrass theorem for Schubert zeroes of semi-ample holomorphic vector bundles. (Italian summary) *Atti Accad. Naz. Lincei Mem. Cl. Sci. Fis. Mat. Natur. Sez. Ia* (8) 15 (1978), no. 3, 63-90. (Marcus Wright) 80k:32045 32H30 (32L99)
- Boundary values of holomorphic and meromorphic functions. Memorial issue for Marston Morse. *Bull. Inst. Math. Acad. Sinica* 6 (1978), no. 2, part 1, 247-258. (R. Michael Range) 80g:32011 32A40
- Stolor, E. L. The spectrum of normal and symmetric stochastic matrices. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* 1978, no. 12, 113-116. (O. Pokorná) 80k:15016 15A51
- Stoltenberg-Hansen, Viggo (with Normann, Dag) A non-adequate admissible set with a good degree-structure. *Generalized recursion theory, II* (Proc. Second Sympos., Univ. Oslo, Oslo, 1977), pp. 321-329. *Studies in Logic and Foundations of Math., 94*, North-Holland, Amsterdam, 1978. (Barry Cooper) 80b:03060 03D60
- Weakly inadmissible recursion theory. *Generalized recursion theory, II* (Proc. Second Sympos., Univ. Oslo, Oslo, 1977), pp. 391-405. *Studies in Logic and Foundations of Math., 94*, North-Holland, Amsterdam, 1978. (Stanley H. Stahl) 80b:03056 03D60
- Stöltz, Rolf Die Kleinsche Viergruppe als fixpunktfreie Automorphismengruppe. *J. Algebra* 55 (1978), no. 2, 500-508. (Wolfgang Knappp) 80f:20023 20D45
- Stoltz, Neal W. Isometries of inner product spaces and their geometric applications. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 527-541. Academic Press, New York, 1979. (P. J. Kahn) 80k:57043 57Q45 (57R50)
- Equivariant concordance of invariant knots. *Trans. Amer. Math. Soc.* 254 (1979), 1-45. (Yoshihiko Marumoto) 80g:57025 57Q45
- Stolze, Charles H. A history of the divergence theorem. (French summary) *Historia Math.* 5 (1978), no. 4, 437-442. (Willard Parker) 80j:01023 01A55 (20-03)
- Stone, A. H. (with Maharam, Dorothy) Realizing isomorphisms of category algebras. *Bull. Austral. Math. Soc.* 19 (1978), no. 1, 5-10. (Tadashi Ohkuma) 80a:54021 54C40 (54E50)
- Inverse limits of compact spaces. *General Topology Appl.* 10 (1979), no. 2, 203-211. (J. Segal) 80m:54014 54B25
- (with Maharam, Dorothy) Borel boxes. *Pacific J. Math.* 81 (1979), no. 2, 471-473. (Richard D. Mauldin) 80k:54007 54B10 (54C50, 54H05)
- Stone, David A. Notes on "A combinatorial formula for  $P_c(X)$ ". *Adv. in Math.* 32 (1979), no. 1, 36-67. (Robert D. MacPherson) 80g:57034 57R20 (05A19)
- On the path space of a simplicial complex. *Indiana Univ. Math. J.* 28 (1979), no. 1, 1-21. (Wolfgang Ziller) 80j:57018 57Q05 (58E10)
- Stone, Harold S. (with Rao, Gururaj S.; Hu, T. C.) Assignment of tasks in a distributed processor system with limited memory. *IEEE Trans. Comput.* 28 (1979), no. 4, 291-299. (Authors' summary) 80c:68018 68B20 (90B35)
- Stone, Lawrence D. Necessary and sufficient conditions for optimal search plans for moving targets. *Math. Oper. Res.* 4 (1979), no. 4, 431-440. (From the summary) 80j:90073 90B40
- Stone, M. G. A note on "Automorphism groups of partial orders" [Bull. Amer. Math. Soc. 79 (1973), 1011-1015; MR 47 #6820] by E. H. Bird. *Discrete Math.* 22 (1978), no. 3, 313-314. (Ascher Wagner) 80k:20010 20B27
- Stone, Richard Obituary: Jacob Marschak, 1898-1977. *J. Roy. Statist. Soc. Ser. A* 142 (1979), no. 1, 80-81. (Editors) 80d:01021 01A70
- Stonehewer, S. E. (with Gupta, Narain D.) Outer automorphisms of finitely generated nilpotent groups. *Arch. Math. (Basel)* 31 (1978/79), no. 1, 1-10. (K. W. Gruenberg) 80f:20039 20F28
- (with Losey, Gerald) Local conjugacy in finite soluble groups. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 118, 183-190. (Hartmut Laue) 80k:20008 20D10
- Stong, R. E. Semi-free group actions. *Illinois J. Math.* 23 (1979), no. 4, 666-680. (Czes Kosniowski) 80g:57054 57R85 (57S15)
- (with Capobianco, Frank L.; Kosniowski, Czes) Free involutions. *Math. Ann.* 242 (1979), no. 1, 21-26. (P. J. Kahn) 80j:57037 57S17 (57R85)
- Stora, R. Continuum gauge theories. *New developments in quantum field theory and statistical mechanics (Proc. Cargèse Summer Inst., Cargèse, 1976)*, pp. 201-224. NATO Adv. Study Inst. Ser., Ser. B: Physics, 26, Plenum, New York, 1977. (P. Pascual) 80f:81005 81E15 (81G20)
- (with Madore, J.; Richard, J. L.) An introduction to the twistor programme. *Phys. Rep.* 49 (1979), no. 2, 113-130. (B. N. Frolov) 80f:83047 83D05 (32L05, 58A99)

- See also Feynman path integrals, 80i:81014
- Storakers, Bertil** (with Markström, Karl) Buckling of cracked members under tension. *Internat. J. Solids and Structures* 16 (1980), no. 3, 217–229. (Authors' summary) 80m:73045 73H05
- Storch, Uwe** (with Scheja, Günter) Fortsetzung von Derivationen. *J. Algebra* 54 (1978), no. 2, 353–365. (Ernst Kunz) 80a:13004 13B10
- Storey, Colin** (with Frost, M. G.) Equivalence of a matrix over  $\mathbb{R}[s, z]$  with its Smith form. *Internat. J. Control* 28 (1978), no. 5, 665–671. (B. P. Molinari) 80a:93052 93B25 (15A15)  
(with Frost, M. G.) A note on the controllability of linear constant delay-differential systems. *Internat. J. Control* 28 (1978), no. 5, 673–679. (Andrzej W. Olbrot) 80b:93024 93B05  
On orthogonal trajectories and optimization. *J. Optim. Theory Appl.* 26 (1978), no. 3, 453–455. (Author's summary) 80c:65142 65K10 (65D30)  
(with Frost, M. G.) Further remarks on the controllability of linear constant delay-differential systems. *Internat. J. Control* 30 (1979), no. 5, 863–870. (Edward W. Kamen) 80j:93020 93B05
- Storey, D.** (with Avis, S. J.; Isham, Christopher J.) Quantum field theory in anti-de Sitter space-time. *Phys. Rev. D* 3 (1978), no. 10, 3565–3576. (Mineo Ikeda) 80c:81134 81M05 (58G35)  
(with Namazie, M. A.) Supersymmetric quantization of linearized supergravity. *Nuclear Phys. B* 157 (1979), no. 1, 170–188. (M. Carmeli) 80i:83021 83C45 (58E20, 81E05)
- Stork, Werner** Regularity and decay of eigenfunctions. *Math. Z.* 160 (1978), no. 1, 51–62. (M. Schechter) 80a:35100 35P99 (35B99)
- Störmer, Erling** Homogeneity of the state space of factors of type III<sub>1</sub>. *C\*-algebras and applications to physics* (Proc. Second Japan-USA Sem., Los Angeles, Calif., 1977), pp. 168–172. *Lecture Notes in Math.*, 650, Springer, Berlin, 1978. (From the introduction) 80i:46056 46L35
- Störmer, H.** Über das Testen von Ausschussanteilen mit verallgemeinerten *t*-Tests. (English summary) *Metrika* 26 (1979), no. 1, 5–24. (W. Uhlmann) 80b:62112 62N10
- Storozhenko, E. A.** On the question of the imbedding of certain classes of functions. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 3, 334–345, 428. (J. Benkő) 80c:46047 46E35  
Approximation by algebraic polynomials in the space  $L^p$ ,  $0 < p < 1$ . (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 4, 87–92. (Paul Nevai) 80a:41028 41A50
- Storozhenko, V. I.** (with Kosmodamianskii, O. S.) Homogeneous solutions of the problem of oscillations of thick multiply connected plates with an asymmetric stress tensor. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1979, no. 1, 23–27, 78. (Authors' summary) 80b:73017 73D30 (35Q99)
- Storvick, T. S.** (with Loyalka, S. K.; Petrelli, N.) Some exact numerical results for the BGK model: Couette, Poiseuille and thermal creep flow between parallel plates. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 3, 514–521. (Carlo Cercignani) 80j:76047 76P05 (65R20)
- Story, Donald P.** A Fubini theorem for inductive tensor product measures. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 1, 161–165. (Igor Kluvánek) 80c:28014 28B05 (46G10)
- Stothers, W. W.** Subgroups of infinite index in the modular group. *Glasgow Math. J.* 19 (1978), no. 1, 33–43. (Carol Treloff) 80b:20060 20H10 (10D07)  
Free subgroups of the free product of cyclic groups. *Math. Comp.* 32 (1978), no. 144, 1274–1280. (Ian M. Chiswell) 80c:20037 20E06  
(with Mason, A. W.) Remarks on a theorem of L. Greenberg on the modular group. *Pacific J. Math.* 78 (1978), no. 2, 385–395. (K. Wohlfahrt) 80c:20059 20H10  
Diagrams associated with subgroups of Fuchsian groups. *Glasgow Math. J.* 20 (1979), no. 2, 103–114. (David Singerman) 80j:20048 20H10 (05C25, 10D07, 30F35)
- Stoffer, D. C.** (with Strauss, A. M.) A theory of material divagation. *Internat. J. Engrg. Sci.* 16 (1978), no. 12, 1019–1028. (K. S. Harinath) 80d:73012 73B05
- Stout, Lawrence Neff** Quels sont les espaces topologiques dans les topos? *Ann. Sci. Math. Québec* 2 (1978), no. 1, 123–141. (Marta C. Bunge) 80d:18007 18B25 (18D35, 18F20)
- Stoutemyer, David R.** Automatic asymptotic and big-*O* calculations via computer algebra. *SIAM J. Comput.* 8 (1979), no. 3, 287–299. (Author's summary) 80c:68123 68C25  
See also Bogen, Richard A., 80b:65102
- Stoyan, Dietrich** A further bound for the mean stationary waiting time in *M/GI/s* queues. (German and Russian summaries) *Elektron. Informationsverarb. Kybernet.* 14 (1978), no. 7–8, 393–395. (T. Rolski) 80m:60101 60K25  
(with König, D.; Rolski, T.; Schmidt, V.) Stochastic processes with imbedded marked point processes (PMP) and their application in queueing. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 1, 125–141. (N. P. Leon'teva) 80c:60068 60G55 (60K25)
- Stoyan, Gilbert** On the identification of diffusion coefficients. *Mathematical models and numerical methods* (Papers, Fifth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975), pp. 367–377. Banach Center Publ., 3, PWN, Warsaw, 1978. (V. Sree-Hari-Rao) 80b:93146 93E12  
Numerical experiments on the identification of heat conduction coefficients. *Theory of nonlinear operators* (Proc. Fifth Internat. Summer School, Central Inst. Math. Mech. Acad. Sci. GDR, Berlin, 1977), pp. 259–268. Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech., 1978, 6, Akademie-Verlag, Berlin, 1978. (Mario Primicerio) 80i:35183 35R30 (65P05)  
Monotone difference schemes for diffusion-convection problems. (German and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 8, 361–372. (Author's summary) 80i:65146 65P05
- Stoyan, Yu. G.** See Stojan, Ju. G.
- Stoyle, P. N. R.** (with Vardulakis, A. I. G.) Generalized resultant theorem. *J. Inst. Math. Appl.* 22 (1978), no. 3, 331–335. (From the introduction) 80c:12025 12E05 (15A99, 93B30)  
(with Vardulakis, A. I. G.) An algorithm for decoupling and maximal pole assignment in multivariable systems by the use of state feedback. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 362–365. (Authors' summary) 80c:93092 93C99 (93C35)  
(with Vardulakis, A. I. G.) On certain connections between the geometric and the polynomial matrix approaches to linear system theory. *Internat. J. Control* 29 (1979), no. 4, 565–588. (O. I. Nwokah) 80f:93011 93A10  
(with Vardulakis, A. I. G.) The mechanism of decoupling. *Internat. J. Control* 29 (1979), no. 4, 589–605. (Authors' summary) 80b:93011 93A15  
(with Vardulakis, A. I. G.) On the computation of controllability subspaces. *Internat. J. Systems Sci.* 10 (1979), no. 12, 1343–1351. (Authors' summary) 80j:93029 93B05
- Straburzyński, Jan** The existence of solutions of some functional-differential equations of hyperbolic type. *Demonstratio Math.* 12 (1979), no. 1, 105–121. (A. F. Izé) 80a:35062 35R10
- Strade, Helmut** Darstellungen auflösbarer Lie-*p*-Algebren. *Math. Ann.* 232 (1978), no. 1, 15–32. (A. Blokh) 80b:17009 17B50 (17B30)
- Straffin, Philip D., Jr.** Periodic points of continuous functions. *Math. Mag.* 51 (1978), no. 2, 99–105. (Leo Jonker) 80b:58043 58F20 (26A18, 39A11)  
(with Brams, Steven J.) Prisoner's dilemma and professional sports drafts. *Amer. Math. Monthly* 86 (1979), no. 2, 80–88. (J. J. Buckley) 80i:90176 90D45 (90D10)
- Strahov, V. N.** (with Glasko, V. B.) The uniqueness problem in some inverse problems of geophysics. (Russian) *Problems in mathematical physics and numerical mathematics* (Russian), pp. 96–107, 324, “Nauka”, Moscow, 1977. (A. S. Alekseev) 80d:86003 86A20 (31B20, 35R30)  
The use of the methods of complex variable function theory in solving three-dimensional direct problems of gravimetry and magnetometry. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 1, 70–73. (Z. Nádeník) 80i:86006 86A20  
Solution of a direct two-dimensional gravimetry problem. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 2, 310–313. (Z. Nádeník) 80i:86007 86A20 (12D10, 26A09, 35R30)
- Strahovskaja, L. G.** (with Fedorenko, R. P.) A variant of the finite element method. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 950–960, 1082. (Authors' summary) 80b:65118 65N30  
(with Fedorenko, R. P.) Methods for the calculation of certain quasistationary states of the operation of a nuclear reactor. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 5, 1237–1252, 1357. (Z. Janković) 80m:82057 82A75
- Straight, David W.** Domino *f*-sets. *Z. Math. Logik Grundlag. Math.* 25 (1979), no. 3, 235–249. (R. A. Di Paola) 80b:03057 03D10 (68C30)
- Straight, H. Joseph** Chromatic number and the genus of a graph. *J. Graph Theory* 3 (1979), no. 1, 43–51. (Linda Lesniak-Foster) 80b:05030 05C15 (05C10)  
(with Schillo, Paul) On the problem of partitioning  $\{1, 2, \dots, n\}$  into subsets having equal sums. *Proc. Amer. Math. Soc.* 74 (1979), no. 2, 229–231. (John H. Loxton) 80f:05059 05C38 (10A45)
- Straka, G.** *f*-Konvergenz, Stabilität und Konsistenz in metrischen Räumen. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T446–T447. (Erich Bohl) 80a:65114 65J05
- Stralka, Albert** Quotients of products of compact chains. *Bull. London Math. Soc.* 11 (1979), no. 1, 1–4. (R. P. Dilworth) 80b:22004 22A26 (06B30)
- Strambach, Karl** Homotopieklassen idempotenter Multiplikationen. *Arch. Math. (Basel)* 31 (1978/79), no. 3, 276–285. (H. Scheerer) 80b:22006 22A30 (55Q05)
- Stramp, W.** On Vlasov's equation with mollified density for an electron gas in an exterior magnetic field. *J. Engrg. Math.* 13 (1979), no. 4, 355–375. (M. Drăganu) 80j:82022 82A45 (35Q20, 78A35)  
Zur Lösung von partiellen Differentialgleichungen mit Hilfe von Transformationsgruppen. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* 59 (1979), no. 3, T42–T44. (J. Christina) 80c:35007 35A30 (58A15)
- Strang, Gilbert** (with Temam, Roger) Existence de solutions relaxées pour les équations de la plasticité: étude d'un espace fonctionnel. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 7, A515–A518. (Authors' summary) 80b:35071 35J99 (73E99)  
A family of model problems in plasticity. *Computing methods in applied sciences and engineering* (Proc. Third Internat. Sympos., Versailles, 1977), I, pp. 292–305. *Lecture Notes in Math.*, 704, Springer, Berlin, 1979. (K. S. Harinath) 80f:73040 73E05 (49A22)  
(with Matthies, H.; Christiansen, E.) The saddle point of a differential program. *Energy methods in finite element analysis*, pp. 309–318, Wiley, Chichester, 1979. (I. B. Medvedevskii) 80c:49019 49B40 (73E20)  
(with Nickell, R. E.; Gartling, D. K.) Spectral decomposition in advection-diffusion analysis by finite element methods. *Comput. Methods Appl. Mech. Engrg.* 17/18 (1979), part 3, 561–580. (Michael J. O'Carroll) 80b:65115 65N30 (35Q20, 76R10)
- Strano, Rosario** Some properties of associative *Q*-rings. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 36 (1977/78), 87–102 (1979). (I. Gy. Maurer) 80j:08001 08A05 (16A99)
- Strasko, V. T.** See Strásko, V. T.
- Strásko, V. T.** (with Dimova, V. S.) Probability simulation and tolerance analysis of schematic functions for linear electronic circuits. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Pribl. Mat.* 12 (1976), no. 3, 1–12 (1978). (Authors' summary) 80b:94034 94C05
- Strásko, V. T.** (with Bakan, G. M.) A minimax approach to static plant control with incomplete information. Proceedings of the Conference of Young Scientists of the Institute of Cybernetics (Acad. Sci. Ukrain. SSR, Kiev). *Avtomatika* 1978, no. 5, 3–8, 92. (Russian. English summary; translated as *Societ Automat. Control* 11 (1978), no. 5, 1–6. (Ivar Petersen) 80j:93084 93C99 (90C39)  
(with Bakan, G. M.) Minimax control of multivalued control processes. (Russian. English summary) *Avtomatika* 1979, no. 3, 53–63, 93. (Authors' summary) 80c:93030 93B05 (93E20)
- Stráskrab, Ivan** (with Vejvoda, Otto) Correction: “Periodic solutions to abstract differential equations” (Czechoslovak Math. J. 23(98) (1973), 635–669). *Czechoslovak Math. J.* 27(102) (1977), no. 3, 511–513. (Editors) 80c:34062 34G20 (34C25)
- Strasser, Helmut** Global asymptotic properties of risk functions in estimation. *Z. Wahrsch. Verw. Gebiete* 45 (1978), no. 1, 35–48. (R. Ponnappalli) 80c:62045 62F15 (62F10)
- Strassner, Karl** Zerlegungssätze für nichtdeterministische Automaten. (English and Russian summaries) *Elektron. Informationsverarb. Kybernet.* 15 (1979), no. 1–2, 95–104. (R. G.



- Buharaev **80k:68037** 68D25  
Erweiterungen und Produkte von Semimoduln. (English and Russian summaries) *Elektron. Informatsionserarb. Kybernet.* 15 (1979), no. 5-6, 271-278. (Author's summary) **80m:68050** 68D05
- Straszak, A. See *Systems analysis applications to complex programs*, **80j:93008**
- Strathee, J. (with Salam, Abdus) Remarks on high-energy stability and renormalizability of gravity theory. *Phys. Rev. D* (3) 18 (1978), no. 12, 4480-4485. (Authors' summary) **80a:83008** 83C05 (44A40)  
(with Salam, Abdus) Confinement through tensor gauge fields. *Phys. Rev. D* (3) 18 (1978), no. 12, 4596-4609. (Authors' summary) **80b:81127** 81M05
- Stratigos, Panagiotis D. Wallman compactification, Stone-Čech compactification and relative compactness in the vague topology. *Math. Balkanica* 6 (1976), 245-251 (1978). (T. Thiruvikraman) **80k:54041** 54D35 (54A05)
- Stratonović, R. L. (with Vancjan, A. G.) Asymptotically error-free decoding in pure quantum channels. (Russian) With a loose English translation. *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* 7 (1978), no. 3, 161-173. (Authors' summary) **80b:94011** 94A15 (81C99, 94A40)  
Quadratic relations of the type of the Nyquist formula. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 1, 86-89. (Author's introduction) **80j:93113** 93E10
- Stratt, Richard M. Semiclassical statistical mechanics of fluids: nonperturbative incorporation of quantum effects in classical many body models. *J. Chem. Phys.* 70 (1979), no. 8, 3630-3638. (Author's summary) **80b:82020** 82A15
- Stratton, A. E. The type set of torsion-free rings of finite rank. *Comment. Math. Univ. St. Paul.* 27 (1978/79), no. 2, 199-211. (J. D. Fuelberth) **80t:20027** 20K15  
(with Webb, M. C.) Type sets and nilpotent multiplications. *Acta Sci. Math.* (Szeged) 41 (1979), no. 1-2, 209-213. (Roger H. Hunter) **80b:20073** 20K15 (16A22)
- Strube, Bernd (with Reibiger, Albrecht) Über die axiomatische Begründung einer allgemeinen Netzwerktheorie. *Wiss. Z. Tech. Univ. Dresden* 28 (1979), no. 2, 399-407. (Authors' summary) **80b:94037** 94C05
- Strubling, Howard Families of recognizable sets corresponding to certain varieties of finite monoids. *J. Pure Appl. Algebra* 15 (1979), no. 3, 305-318. (Hubert Grassmann) **80k:68046** 68D45 (20M35)  
Aperiodic homomorphisms and the concatenation product of recognizable sets. *J. Pure Appl. Algebra* 15 (1979), no. 3, 319-327. (Hubert Grassmann) **80k:68042** 68D30 (20M07)
- Strugan, B. (with Lindsay, K. A.) A thermodynamic viscous interface theory and associated stability problems. *Arch. Rational Mech. Anal.* 71 (1979), no. 4, 307-326. (Authors' summary) **80d:76029** 76D99  
(with Knops, R. J.) Mean velocity and the volume flow rate for steady one-dimensional flow of a mixture of two incompressible Newtonian fluids. *Quart. J. Mech. Appl. Math.* 32 (1979), no. 3, 259-263. (Ph. Mathieu) **80t:76043** 76T05
- Straus, A. V. See *Functional analysis*, **80j:47001**
- Straus, E. G. Some extremal problems in combinatorial geometry. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 308-312, *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (G. Purdy) **80j:05015** 05A99  
(with Subbarao, M. V.) On the representation of fractions as sum and difference of three simple fractions. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1977)*, pp. 561-579, *Congress. Numer., XX, Utilitas Math., Winnipeg, Man., 1978*. (W. A. Webb) **80j:10014** 10A30 (10B25)  
(with Kolesnik, G.) On the first occurrence of values of a character. *Trans. Amer. Math. Soc.* 246 (1978), 385-394. (Evelyn Scriba) **80k:10045** 10H35  
(with Arkin, Joseph; Hoggatt, Verner E., Jr.) On Euler's solution of a problem of Diophantus. *Fibonacci Quart.* 17 (1979), no. 4, 333-339. (Maurice Craig) **80m:10009** 10B05  
(with Goldberg, Moshe) Norm properties of C-numerical radii. *Linear Algebra Appl.* 24 (1979), 113-131. (K. Veselić) **80m:15017** 15A60
- Straus, V. A. On the theory of selfadjoint operators in Banach spaces with a Hermitian form. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 3, 685-692, 719. (R. M. Dzabzar-Zade) **80b:47047** 47B50
- Strauss, A. M. (with Stouffer, D. C.) A theory of material divagation. *Internat. J. Engrg. Sci.* 16 (1978), no. 10, 1019-1028. (K. S. Harinath) **80k:73012** 73B05  
(with Djukic, Dj. S.) Noether's theory for nonconservative generalised mechanical systems. *J. Phys. A* 13 (1980), no. 2, 431-435. (Authors' summary) **80m:70023** 70H99 (49A99)
- Strauss, Hans One-sided approximation and integration rules. *Multivariate approximation (Sympos., Univ. Durham, Durham, 1977)*, pp. 341-348, *Academic Press, London*, 1978. (A. Ramm) **80b:65028** 65D30  
Untersuchungen über Quadraturformeln. *Numerische Methoden der Approximationstheorie, Band 4 (Meeting, Math. Forschungsinst., Oberwolfach, 1977)*, pp. 306-319, *Internat. Schriftenreihe Numer. Math.*, 42, Birkhäuser, Basel, 1978. (Henning Esser) **80k:65023** 65D30 (41A55)  
Optimale Quadraturformeln und Perfektsplines. *J. Approx. Theory* 27 (1979), no. 3, 203-226. (K. Jetter) **80m:41007** 41A15 (65D07)
- Strauss, Raimond (with Moldenhauer, Wolfgang) Zur Lösung der Helmholtz-Gleichung in einem polygonberandeten Gebiet mittels des finite-Elemente-Verfahrens. *Rostock. Math. Kolloq.* No. 12 (1979), 101-111. (J. R. Cannon) **80k:65091** 65N30
- Strauss, Walter Alexander Nonlinear invariant wave equations. *Invariant wave equations (Proc. "Ettore Majorana" Internat. School of Math. Phys., Erice, 1977)*, pp. 197-249, *Lecture Notes in Phys.*, 73, Springer, Berlin, 1978. (Mark J. Ablowitz) **80b:35090** 35L05 (35Q20)  
(with Lin, Jeng Eng) Decay and scattering of solutions of a nonlinear Schrödinger equation. *J. Funct. Anal.* 30 (1978), no. 2, 245-263. (Teruo Ikebe) **80k:35056** 35P25  
Mathematical aspects of classical nonlinear field equations. *Nonlinear problems in theoretical physics (Proc. IX G.I.F.T. Internat. Sem. Theoret. Phys., Univ. Zaragoza, Zazara, 1978)*, pp. 123-149, *Lecture Notes in Phys.*, 98, Springer, Berlin, 1979. (Piero de Montoni) **80b:35092** 35L70 (35Q20, 81C05)  
(with Glassey, Robert T.) Decay of classical Yang-Mills fields. *Comm. Math. Phys.* 65 (1979), no. 1, 1-13. (Mark J. Ablowitz) **80c:81064** 81E10 (35Q20)  
(with Glassey, Robert T.) Decay of a Yang-Mills field coupled to a scalar field. *Comm. Math. Phys.* 67 (1979), no. 1, 51-67. (Jorge André Swieca) **80d:81071** 81E10 (22E99, 35Q99)  
The existence of the scattering operator for moving obstacles. *J. Funct. Anal.* 31 (1979), no. 2, 255-262. (J. Thomas Beale) **80b:35101** 35P25  
(with Glassey, Robert T.) Conservation laws for the classical Maxwell-Dirac and Klein-Gordon-Dirac equations. *J. Math. Phys.* 20 (1979), no. 3, 454-458. (A. A. Arsen'ev) **80b:81024** 81C05 (35Q20)
- Strauss-Kahn, Dominique (with Masson, André) Le temps dans l'analyse des phénomènes économiques: processus stochastiques et interprétation des données synchroniques. (English and Spanish summaries) *Ann. I.N.S.E.E.* No. 29 (1978), 63-114. (Authors' summary) **80a:90045** 90A20
- Strawderman, William E. Minimax adaptive generalized ridge regression estimators. *J. Amer. Statist. Assoc.* 73 (1978), no. 363, 623-627. (Pi-Erh Lin) **80c:62049** 62J07 (62C20)
- Stražar, V. I. Dual symmetry of the vector field of general type. (Russian. English summary) *Acta Phys. Polon. B* 9 (1978), no. 5, 449-458. (Author's summary) **80a:81038** 81C40 (35A30)  
(with Boguš, A. A.; Kruglov, S. I.) A group of inner symmetry in the 16-component theory of vector particles. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 22 (1978), no. 10, 893-895, 956. (M. Martinis) **80b:81128** 81G40 (58G35)  
(with Kresin, Ju. V.) Two-potential description of an electromagnetic field. (Russian. English summary) *Teoret. Mat. Fiz.* 36 (1978), no. 3, 426-429. (Andrzej Zardecki) **80c:78007** 78A25 (35Q99)  
(with Kruglov, S. I.; Tolkačev, E. A.) Symmetries of the classical theory of a vector field of general type. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauki* 1978, no. 6, 117-120, 143. (N. V. Micevič) **80d:78014** 78A25 (15A33, 83A05)  
(with Škol'nikov, P. L.) Dyal symmetry of vector and spinor fields. (Russian. English summary) *Acta Phys. Polon. B* 10 (1979), no. 2, 121-129. (Authors' summary) **80d:81083** 81E10 (22E05, 53C10)  
(with Kruglov, S. I.) Internal symmetry group in the quantum theory of a vector field of general type. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1979, no. 5, 41-45. (S. A. Vladimirov) **80j:81098** 81M05 (15A90, 22E70, 81E99)
- Streeter, R. F. Spontaneously broken symmetry. *Many degrees of freedom in field theory (Proc. Eighth Internat. Summer Inst. Theoret. Phys., Univ. Bielefeld, Bielefeld, 1976)*, pp. 197-223, *NATO Adv. Study Inst. Ser., Ser. B: Physics*, 30, Plenum, New York, 1978. (Jean Nuyts) **80d:81126** 81G25 (46L60)  
(with Basarab-Horwath, P.; Wright, J.) Lorentz covariance and kinetic charge. *Comm. Math. Phys.* 68 (1979), no. 3, 195-207. (Y. Kato) **80k:81217** 81M05 (22E70)
- Streibl, Ralph On finitely related soluble groups. *Topology and algebra (Proc. Colloq., Eidgenöss. Tech. Hochschule, Zurich, 1977)*, pp. 243-250, *Monographies Enseignement Math.*, 26, Univ. Genève, Geneva, 1978. (A. H. Rhemtulla) **80k:20037** 20F05 (20F16)  
A note on groups with torsion-free abelianization and trivial multiplier. *Comment. Math. Helv.* 54 (1979), no. 1, 147-158. (Vinay V. Deodhar) **80j:20035** 20E99 (20F40)
- Strecker, George E. (with Herrlich, Horst) Algebra  $\mathcal{U}$  topology. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 150-156, *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (Walter Tholen) **80j:18013** 18D30 (18C15)  
(with Adámek, Jiří; Herrlich, Horst) Least and largest initial completions. I, II. *Comment. Math. Univ. Carolin.* 20 (1979), no. 1, 43-58, 59-77. (Walter Tholen) **80t:18009** 18D30 (18A35, 18B30)
- Streclas, A. A. (with Jannussis, A. D.; Brodimas, G. N.) Quantum friction in a uniform magnetic field. *Lett. Nuovo Cimento* (2) 25 (1979), no. 9, 283-286. (H. S. P. Grissler) **80t:81077** 81G99
- Street, Anne Penfold (with Oates-Williams, Sheila) The analysis of colour symmetry. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 210-222, *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (From the introduction) **80t:20021** 20H15 (05B30, 51F15)
- Strehmel, Karl Eine Klasse A-stabiler Mehrschrittverfahren für Anfangswertaufgaben gewöhnlicher Differentialgleichungen. *Beiträge Numer. Math.* 7 (1979), 97-111. (H. Brunner) **80d:65093** 65L05
- Streich, W. J. (with Rösner, Th.) ★Theorie linearer Automaten. Studienbücherei. VEB Deutscher Verlag der Wissenschaften, Berlin, 1978. 157 pp. (Dorothy Bollman) **80d:68066** 68D15
- Streinu, Beana The Darboux property for the hierarchy of LL(k) languages. (Romanian. English summary) *Stud. Cerc. Mat.* 30 (1978), no. 5, 579-593. (Sorin Istrail) **80c:68088** 68F10
- Strelt, Franz Anisotropy and distance from the centre. Probabilistic models and statistical analysis. *Geometrical probability and biological structure: Buffon's 200th anniversary (Proc. Buffon Bicentenary Sympos., Paris, 1977)*, pp. 203-213, *Lecture Notes in Biomath.*, 23, Springer, Berlin, 1978. (R. V. Ambarcumjan) **80c:60021** 60D05 (62H15)  
On generalized inverse matrices and multivariate statistical distributions. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 513-519, *Academia, Prague*, 1978. (I. Olkin) **80b:62063** 62H10  
On a statistical approach to Bertrand's problem. *Elem. Math.* 33 (1978), no. 6, 134-138. (Roger E. Miles) **80f:60016** 60D05
- Strelt, L. (with Gielerak, Roman; Karwowski, W.) Construction of a class of characteristic functionals. *Feynman path integrals (Proc. Internat. Colloq., Marseille, 1978)*, pp. 182-188, *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (Koichiro Matsuno) **80k:81094** 81E10  
Null plane fields and automodel random processes. *Feynman path integrals (Proc. Internat. Colloq., Marseille, 1978)*, pp. 203-206, *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (Koichiro Matsuno) **80m:81054** 81E10
- Strelkov, N. A. Iterative methods for the solution of projection-difference analogues of boundary value problems for fourth-order linear and quasilinear equations. (Russian) *Ž. Vyssh. Mat. i Mat. Fiz.* 19 (1979), no. 1, 143-155, 269. (H. Marcinkowska) **80i:65102** 65N05

- Strelkov, S. A.** (with Kuz'mina, M. G.; Suiković, T. A.) A discrete analogue of the transfer equation of polarized radiation in plane strata. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 143 (1979), 34 pp. (Authors' summary) **80a:80906** 80A20
- Streller, Arndt** (with Franken, Peter) A general method for calculation of stationary interval reliability of complex systems with repair. (German and Russian summaries) *Elektron. Informationsverarb. Kybernet.* 14 (1978), no. 6, 283-290. (R. Subramanian) **80a:90047** 90B25
- (with Franken, Peter) Stationary generalized regenerative processes. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 1, 78-90. (M. V. Kartanov) **80a:60098** 60K05
- Stricker, Christophe** Une remarque sur les changements de temps et les martingales locales. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 20-21, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (From the text) **80a:60051** 60G44
- Les ralentissements en théorie générale des processus. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 364-377, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Jean Mémin) **80a:60046** 60G07 (60G44)
- (with Yor, Marc) Calcul stochastique dépendant d'un paramètre. *Z. Wahrsch. Verw. Gebiete* 45 (1978), no. 2, 109-133. (Dominique Lepingle) **80a:60047** 60G44 (60H05)
- Strickland, Elisabetta** On a longstanding conjecture of G. A. Miller. (Italian summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) 45 (1979), 163-170. (H. Kurzweil) **80j:20032** 20D99
- van Strien, Sebastian J.** Center manifolds are not  $C^\infty$ . *Math. Z.* 166 (1979), no. 2, 143-145. (M. C. Irwin) **80j:58049** 58F10 (34C05)
- Strietz, Heinrich** Vertauschungsverbände von Äquivalenzrelationen endlicher Mengen. *Arch. Math. (Basel)* 31 (1978/79), no. 2, 185-201. (Hartmut Höft) **80a:60007** 06B05 (06A10)
- Strnad, Jozef** A hundred years of Stefan's law. (Slovenian. English summary) *Obzornik Mat. Fiz.* 26 (1979), no. 3, 65-73. (Author's summary) **80a:01016** 01A55 (80-03)
- Einstein and Planck's law. (Slovenian. English summary) *Obzornik Mat. Fiz.* 26 (1979), no. 3, 74-85. (Author's summary) **80a:01020** 01A60 (81-03, 82-03)
- The Lorentz transformation—graphically. (Slovenian) *Obzornik Mat. Fiz.* 26 (1979), no. 4, 102-107. (Ilija Lukačević) **80a:83004** 83A05 (15A90, 51B20)
- Streeck, F.** (with Fröhlich, Jürg; Morchio, G.) Charged sectors and scattering states in quantum electrodynamics. *Ann. Physics* 119 (1979), no. 2, 241-284. (K. Wódkiewicz) **80a:81091** 81L05 (47A40, 81E05)
- Strodt, Jean-Jacques** (with Toint, Ph. L.) On the rate of convergence of unconstrained optimization algorithms that use a decomposition in uniformly independent subspaces. *Ann. Soc. Sci. Bruxelles Sér. I* 92 (1978), no. 3, 127-141. (D. J. van Wyk) **80a:65138** 65K05 (90C30)
- (with Nguyen Van Hien) Caractérisation des solutions optimales en programmation non différentiable. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 23, A1075-A1078. (Authors' summary) **80a:49025** 49D37
- (with Nguyen, V. Hien) An exponential penalty method for nondifferentiable minimax problems with general constraints. *J. Optim. Theory Appl.* 27 (1979), no. 2, 205-219. (Siegfried Schaible) **80a:90103** 90C30
- (with Nguyen, V. Hien) On the convergence rate for a penalty function method of exponential type. *J. Optim. Theory Appl.* 27 (1979), no. 4, 495-508. (Pierre Loridan) **80a:90130** 90C30 (49D29)
- (with Nguyen, V. Hien) Some properties of a uniformly linearly independent sequence of subspaces. *Linear Algebra Appl.* 25 (1979), 115-127. (W. C. Rheinboldt) **80a:65081** 65K10
- Strooker, R. J.** Aspects of elliptic curves; an introduction. *Nieuw Arch. Wisk.* (3) 26 (1978), no. 3, 371-412. (Reinhard Bölling) **80a:14019** 14K07 (10B10)
- A class of Diophantine equations connected with certain elliptic curves over  $Q(\sqrt{-13})$ . *Compositio Math.* 38 (1979), no. 3, 329-346. (M. A. Kenku) **80a:10019** 10B15 (14G25, 14K07)
- Application of non-linear programming to plane geometry. *Elem. Math.* 34 (1979), no. 1, 1-7. (Jacques Dubois) **80a:52023** 52A40 (51N20)
- Stroescu, Elena** Perturbation of nonlinear partial differential variational inequalities. II. *Proc. Roy. Soc. Edinburgh Sect. A* 82 (1978/79), no. 1-2, 153-170. (Gianfranco Bottaro) **80a:49016** 49A29 (35B32)
- Strok, V. V.** (with Homenko, M. P.) T-factorization of  $\otimes$ -graphs. (Russian) *Graph theory (Russian)*, pp. 135-142, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1977. (E. Hakimullin (RZMat 1978:12 V1009)) **80a:05065** 05C99 (05C50)
- The number of coverings of a complete S-segmented graph. (Russian) *Graph theory (Russian)*, pp. 143-144, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1977. (RZMat 1979:1 V642) **80a:05038** 05C10
- morin-Strom, Karl A.** See Morin-Strom, Karl A.
- Strömbeck, Peter** On left ideals in  $A_1$  and their associated graded ideals. *J. Algebra* 55 (1978), no. 1, 116-144. (Marie-Paule Malliavin) **80a:16002** 16A03 (17B35, 58A15)
- Stromberg, Jan-Olov** Non-equivalence between two kinds of conditions on weight functions. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 1, pp. 141-148, *Proc. Sympos. Pure Math., XXXV*, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (A. McD. Mercer) **80j:26012** 26B35
- A weighted  $L^2$ -norm inequality for partial differential operators with constant coefficients. *J. Differential Equations* 31 (1979), no. 2, 264-286. (J. Christina) **80a:35038** 35E20
- Stromberg, Karl** The Banach-Tarski paradox. *Amer. Math. Monthly* 86 (1979), no. 3, 151-161. (D. W. Bressler) **80a:04006** 04A20 (58G99)
- Strommer, Gyula** The construction theory in the Bolyai geometry. (Hungarian) *Mat. Lapok* 27 (1976), no. 1-2, 65-67 (1978). (Editors) **80a:51001** 51-03 (01A60, 51M10)
- Strommer, Thomas O.** The number of lines determined by a polygon. *Discrete Math.* 25 (1979), no. 1, 75-84. (J. W. Freeman) **80a:05018** 05B35 (51M20)
- (with Purdy, George B.) The maximal sizes of faces and vertices in an arrangement. *Discrete Math.* 28 (1979), no. 3, 331-334. (Kenneth Kalmanson) **80j:51003** 51A20 (05B30)
- Strong, H. R.** (with Markowsky, George; Chandra, Ashok K.) Search within a page. *J. Assoc. Comput. Mach.* 26 (1979), no. 3, 457-482. (Authors' summary) **80a:68042** 68H05 (68B15)
- Strongin, R. G.** Численные методы в многоэкстремальных задачах (информационно-статистические алгоритмы). (Russian) [Numerical methods in multi-extremal problems (informational-statistical algorithms)] *Оптимизация и Исследования Операций* [Monographs in Optimization and Operations Research] "Nauka", Moscow, 1978. 239 pp. (A. G. Žilinskas) **80a:65080** 65K10
- (with Barkalov, A. V.) A dynamic examination of compromise solutions in multiperson conflict. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 4, 897-907, 1067. (Authors' summary) **80a:90181** 90D35
- Stroock, D.** (with Holley, R.) Invariance principles for some infinite particle systems. *Stochastic analysis (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1978)*, pp. 153-173, *Academic Press, New York*, 1978. (F. L. Spitzer) **80a:60134** 60K35
- (with Holley, R.) Dual processes and their application to infinite interacting systems. *Adv. in Math.* 32 (1979), no. 2, 149-174. (T. M. Liggett) **80a:60104** 60K35 (60J25)
- Strooker, Jan R.** Karoubi-Villamayor K-theory is not homotopy Quillen theory. *Proc. Amer. Math. Soc.* 73 (1979), no. 2, 161-162. (Daniel R. Grayson) **80a:18014** 18F25 (13D15)
- Stroth, Gernot** An odd characterization of  $J_4$ . *Israel J. Math.* 31 (1978), no. 2, 189-192. (Shui Chi Chang) **80a:20018** 20D05
- A fusion lemma for a certain class of groups of characteristic 2-type. *J. Algebra* 55 (1978), no. 2, 293-301. (Bert Beisiegel) **80a:20018** 20D05
- A characterization of 3. *Acta Sci. Math. (Szeged)* 41 (1979), no. 1-2, 215-219. (David R. Mason) **80a:20025** 20D05
- Strotman, D.** (with So, S. I.) Wigner coefficients for  $SU(6) \supset SU(3) \otimes SU(2)$ . *J. Math. Phys.* 20 (1979), no. 1, 153-176. (Daniel A. Akyeampong) **80a:81047** 81C40 (20C30, 22E70)
- Evaluation of  $SU(6) \supset SU(3) \otimes SU(2)$  Wigner coefficients. *J. Math. Phys.* 20 (1979), no. 8, 1643-1647. (Author's summary) **80a:81045** 81C40 (22E70)
- Strood, Barry** Inference, belief, and understanding. *Mind* 88 (1979), no. 350, 179-196. (N. B. Cocchiarella) **80a:03005** 03A05
- Strube, R. F. E.** (with Holziński, W.) Paths and circuits in finite groups. *Discrete Math.* 22 (1978), no. 3, 263-272. (H. Bechtel) **80a:20052** 20F99 (05C25)
- Strubecker, Karl** Theorie der flächentreuen Abbildungen der Ebene. *Ber. Math.-Statist. Sect. Forsch. Graz* 1978, no. 92-95, *Ber. No. 93*, 23 pp. (Walter O. Vogel) **80a:53010** 53A40
- Struble, Raimond A.** The Fourier theorem. *J. Franklin Inst.* 306 (1978), no. 1, 63-76. (Vadim Komkov) **80a:46049** 46F10 (44A40)
- Strugov, Ju. F.** The compactness of families of mappings, quasiconformal in the mean. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 4, 859-861. (I. A. Volynec) **80a:30013** 30C60
- A differential property of an extremal mapping that is quasiconformal in the mean. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 5, 1138-1141. (V. G. Šeretov) **80a:30015** 30C60
- Struk, D. J.** J. A. Schouten and the tensor calculus. *Nieuw Arch. Wisk.* (3) 26 (1978), no. 1, 96-107. (Esther Portnoy) **80a:01029** 01A70 (01A60, 53-03)
- Strumia, A.** Transmission and reflection of a discontinuity wave through a characteristic shock in nonlinear optics. (Italian summary) *Riv. Mat. Univ. Pavia* (4) 4 (1978), 315-328 (1979). (Tommaso Ruggeri) **80a:78007** 78A40
- Struminskii, V. V.** A new trend in analysis of turbulence. Third All-Union Seminar on Turbulent Flows, Part I. *Fluid Mech.—Soviet Res.* 7 (1978), no. 1, 23-28. (Author's summary) **80j:76041** 76F99
- Struppa, Daniele** (with Lanteri, Antonio) Degenerations of compact surfaces and Lefschetz fibrations into curves of genus  $g > 1$ . (Italian. English summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 111 (1977), no. 2, 333-341 (1978). (Fabrizio Catanese) **80a:14018a** 14D05
- (with Lanteri, Antonio) Degenerations of compact surfaces and the Enriques degeneration principle. (Italian. English summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 111 (1977), no. 2, 359-365 (1978). (Antonio Cassa) **80a:14007** 14H10 (14H20)
- (with Lanteri, Antonio) Degenerations of compact surfaces along conjugated pairs. (Italian. English summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 111 (1977), no. 2, 376-382 (1978). (Fabrizio Catanese) **80a:14018b** 14D05
- Strutt, J.** (with Milgram, R. James; Zvengrowski, P.) Projective stable stems of spheres. *Bol. Soc. Mat. Mexicana* (2) 22 (1977), no. 2, 48-57. (Donald W. Kahn) **80a:55025** 55Q45 (55Q70)
- Strutyn, V. V.** (with Sobolev, V. A.) Reduction principles in the theory of differential equations with a manifold of stationary states. (Russian) *Proceedings of a Seminar on Differential Equations*, No. 3 (Russian), pp. 92-103, 149, *Kubyshev. Gos. Univ., Kubyshev*, 1977. (Authors' summary) **80a:34069** 34D15
- (with Sobolev, V. A.) Permissibility of changing over to precessional equations of gyroscopic systems. *Izv. Akad. Nauk SSSR Meh. Toerd. Tela* 13 (1978), no. 5, 10-17 (Russian); translated as *Mech. Solids* 13 (1978), no. 5, 7-13. (P. C. Parks) **80a:70005** 70D05 (34D10)
- See also *Proceedings: Seminar on Differential Equations*, **80a:34002**
- Strutyn, N. Z.** (with Krinečik, I. I.) An estimate of the effectiveness of the functioning of complex symmetric branching systems. (Russian) *Information processes in complex systems (Russian)*, pp. 31-36, 163, "Štiinca", Kishinev, 1978. (Authors' summary) **80a:90058** 90B25
- Strutyn, S. O.** A remark on the convergence of the difference method for nonlinear boundary value problems. (Russian) *Mat. Zametki* 24 (1978), no. 2, 237-240, 302. (I. P. Gavriljuk) **80a:65113** 65L10 (65Hxx)
- Stuart, Allan E. G.** (with Osborne, Anthony) On the separability of the sine-Gordon equation and similar quasilinear partial differential equations. *J. Math. Phys.* 19 (1978), no. 7, 1573-1579. (Mark J. Ablowitz) **80a:35126** 35Q20 (35A30)
- (with Bryan, Alan C.; Haines, Christopher R.) Solitons and separable elliptic solutions of the sine-Gordon equation. *Leti. Math. Phys.* 3 (1979), no. 4, 265-269. (Authors' summary) **80a:35111** 35Q20



- Stuart, C. I. J. M. (with Takahashi, Yasushi; Umezawa, H.) Mixed-system brain dynamics: neural memory as a macroscopic ordered state. *Found. Phys.* 9 (1979), no. 3-4, 301-327. (Authors' summary) **80c:92014** 92A09
- Stuart, Charles A. (with Chiappinelli, R.) Bifurcation when the linearized problem has no eigenvalues. *J. Differential Equations* 30 (1978), no. 3, 296-307. (Christian Fenske) **80a:34030** 34C05 (45M99, 58F14)
- (with Massabò, Ivar) Elliptic eigenvalue problems with discontinuous nonlinearities. *J. Math. Anal. Appl.* 66 (1978), no. 2, 261-281. (Y. I. Kannai) **80f:35102** 35P30 (35J65)
- Maximal and minimal solutions of elliptic differential equations with discontinuous nonlinearities. *Math. Z.* 163 (1978), no. 3, 239-249. (Jan Bochenek) **80g:35059** 35J60
- (with McLeod, J. B.) Nonlinear Sturm-Liouville problems with no secondary bifurcation. *Proc. Roy. Soc. Edinburgh Sect. A* 80 (1978), no. 3-4, 347-356. (G. A. Klaasen) **80g:34024** 34B25
- Bifurcation pour des problèmes de Dirichlet et de Neumann sans valeurs propres. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 16, A761-A764. (Author's summary) **80c:34068** 34G20
- (with Massabò, Ivar) Positive eigenvectors of  $k$ -set contractions. *Nonlinear Anal.* 3 (1979), no. 1, 35-44 (1978). (Norman Dancer) **80b:47073** 47H09
- Stahlerud, Allen R. (with Faridani, Hamid M.) Redundancy reduction in stochastic optimal control systems. *Internat. J. Control* 28 (1978), no. 4, 537-543. (Kenneth Wickwire) **80a:93189** 93E20
- Stack, B. W. (with Arthurs, E.) Analysis of a single-buffer loss-delay system. *Oper. Res.* 27 (1979), no. 1, 65-79. (Adam Wolisz) **80c:90065** 90B22 (68C15)
- (with Newman, Charles M.) Chernoff bounds for discriminating between two Markov processes. *Stochastics* 2, no. 3, 139-153 (1979). (T. Pitcher) **80f:62073** 62M02
- (with Newman, Charles M.) Optimal sampling of independent increment processes. *Stochastics* 2, no. 4, 213-225 (1979). (T. Pitcher) **80m:62080** 62M02 (60G30, 60J30)
- Stäckrad, Jürgen (with Vogel, Wolfgang) Toward a theory of Buchsbaum singularities. *Amer. J. Math.* 100 (1978), no. 4, 727-746. (Manfred Herrmann) **80f:14004** 14B05 (13H15)
- (with Vogel, Wolfgang) On Segre products and applications. *J. Algebra* 54 (1978), no. 2, 374-389. (Mary Schaps) **80c:14031** 14M05
- Stackwisch, Stephen (with Helton, Jon C.) An approximation technique for nonlinear integral operations. *J. Math. Anal. Appl.* 65 (1978), no. 2, 365-374. (J. Kolomyj) **80b:45026** 45P05 (45G10, 45N05, 46G99)
- Studden, W. J. (with Agarwal, Girdhar G.) Asymptotic design and estimation using linear splines. Optimization in statistics. *Comm. Statist. B—Simulation Comput.* 7 (1978), no. 4, 309-319. (B. L. Granovskii) **80f:62072** 62K05 (41A15, 62J05)
- Stuhlíčka, Ivan (with Havel, Václav) Bemerkung über gemeinsame Beziehung zwischen kartesischen Gruppen und kartesischen Zahlensystemen. (Czech summary) *Časopis Pěst. Mat.* 103 (1978), no. 4, 384-390, 409. (G. Pickert) **80c:51005** 51A35
- (with Havel, Václav) Ternárníce ohne Planaritätsbedingung. (Czech, Russian and English summaries) *Časopis Pěst. Mat.* 104 (1979), no. 1, 65-74, 93. (Elwyn H. Davis) **80d:20066** 20N10 (51J10)
- St. Udrescu, Valeriu See Udrescu, Valeriu St.
- Stuhler, Ulrich (with Rehmann, Ulf) On  $K_2$  of finite-dimensional division algebras over arithmetic fields. *Invent. Math.* 50 (1978/79), no. 1, 75-90. (Alan Candiotti) **80g:12012** 12A80 (12A57, 16A40)
- Stuhler, Frantisek RKHS approach to nonlinear estimation of random variables. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978), Vol. B*, pp. 239-246. Reidel, Dordrecht, 1978. (J. Bulatović) **80f:60037** 60G12
- Nonlinear estimators of polynomials in mean values of a Gaussian stochastic process. *Kybernetika (Prague)* 14 (1978), no. 3, 206-220. (Ju. I. Petunin) **80a:62135** 62M07
- Stuhler, R. L. (with Nash, Charles) On the use of the renormalisation group near the electron's mass shell. *Proc. Roy. Irish Acad. Sect. A* 78 (1978), no. 17, 149-156. (K. Kumar) **80a:81122** 81L05 (35Q99, 81E15)
- (with Nash, Charles) Infrared behaviour of Yang-Mills theories. *Proc. Roy. Irish Acad. Sect. A* 78 (1978), no. 22, 217-233. (P. K. Smrz) **80b:81050** 81E10
- Stummel, Friedrich The generalized patch test. *SIAM J. Numer. Anal.* 16 (1979), no. 3, 449-471. (Reinhard Scholz) **80c:65106** 65N30
- Stumpf, Harald (with Scheerer, K.) Unitarization in nonlinear spinor field quantum theory. *Z. Naturforsch.* A 34 (1979), no. 3, 284-291. (K. J. Le Couteur) **80b:81065** 81E99
- Stumpf, Helmut Some applications of convex analysis to non-linear elastic boundary value problems. (Russian summary) *Complex analysis and its applications (Russian)*, pp. 608-617, 672. "Nauka", Moscow, 1978. (Vadim Komkov) **80d:73037** 73C50 (49B22)
- Dual extremum principles and error bounds in non-linear elasticity theory. (German summary) *J. Elasticity* 8 (1978), no. 4, 425-438. (Erich Miersemann) **80b:73011** 73C50 (49H05)
- Strupak, S. F. See Parton, V. Z.; et al., **80a:73001**
- Sturm, Theo (with Kutinová, Blanka) On algebraic closures of compact elements. (Russian summary) *Czechoslovak Math. J.* 29(104) (1979), no. 3, 359-365. (Werner Poguntke) **80b:06006** 06A15 (06A23)
- (with Adámek, Jiří) On congruence lattices in a category. (Russian summary) *Czechoslovak Math. J.* 29(104) (1979), no. 3, 385-395. (E. G. Manes) **80j:18014** 18D99 (08A99)
- Sturova, I. V. Internal waves generated by local perturbations in a stratified fluid. (Russian) *Dinamika Splošn. Sredy* No. 35 *Dinamicheskie Zadachi Mekhaniki Splošnyh Sred* (1978), 122-140, 175. (Author's summary) **80c:76057** 76V05
- Sturz, I. Approximate integration of some special differential equations. (Romanian. French summary) *Bul. Ştiinţ. Tehn. Inst. Politehn. "Traian Vuia" Timişoara* 23(37) (1978), no. 1, 12-14 (1979). (Author's summary) **80j:34014** 34A45 (65L99)
- Stute, Winfried (with Gänsler, Peter) On realizability of stochastic processes. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978), Vol. A*, pp. 227-234. Reidel, Dordrecht, 1978. (M. G. Hahn) **80g:60036** 60G17 (60G05)
- (with Gänsler, Peter) Empirical processes: a survey of results for independent and identically distributed random variables. *Ann. Probab.* 7 (1979), no. 2, 193-243. (Jon A. Wellner) **80d:60002** 60-02 (60F05, 62E20, 62G99)
- Stützer, Hans-Jürgen (with Lauterbach, Lutz) Zur Realisierung stochastischer Automaten auf gestörten Automaten. (English and Russian summaries) *Elektron. Informationsverarb. Kybernet.* 14 (1978), no. 9, 463-474. (P. Turakainen) **80g:68045** 68D25
- Sekundärgrößen unbegrenzt teilbarer Punktprozesse. II. *Math. Nachr.* 83 (1978), 31-45. (F. Papangelou) **80b:60076** 60G55 (60E07)
- Styan, George P. H. (with Giguère, Monique Andrée) Multivariate normal estimation with missing data on several variates. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974), Vol. B*, pp. 129-139. Academia, Prague, 1978. (B. Raja Rao) **80c:62037** 62H12
- (with Dent, Warren T.) Uncorrelated residuals from linear models. *J. Econometrics* 7 (1978), no. 2, 211-225. (Authors' summary) **80m:62064** 62J05
- (with Wolkowicz, Henry) Extensions of Samuelson's inequality. *Amer. Statist.* 33 (1979), no. 3, 143-144. (Authors' summary) **80b:62038** 62G30 (60E15)
- (with Alalouf, I. S.) Characterizations of estimability in the general linear model. *Ann. Statist.* 7 (1979), no. 1, 194-200. (C. R. Rao) **80g:62044** 62J05
- (with Pukelsheim, Friedrich) Nonnegative definiteness of the estimated dispersion matrix in a multivariate linear model. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 3-4, 327-330. (J. Kleffe) **80j:62080** 62H12
- Stydzek, Andrzej The solution of the Navier-Stokes equation via successive approximations. *Sixth International Conference on Numerical Methods in Fluid Dynamics (Proc. Conf., Tbilisi, 1978)*, pp. 502-506. *Lecture Notes in Phys.*, 90, Springer, Berlin, 1979. (W. Velte) **80b:76016** 76D05 (65N99)
- Štyka, A. B. A generalization of the geometric representation of differential equations and methods of solution based on it. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 14-32, 311-312. Irkutsk. Gos. Univ., Irkutsk, 1976. (Author's summary) **80j:34016** 34A50 (65L99)
- Stynes, Martin On faster convergence of the bisection method for certain triangles. *Math. Comp.* 33 (1979), no. 146, 717-721. (K. Strubecker) **80c:51020** 51N99 (41A63)
- A simplification of Stenger's topological degree formula. *Numer. Math.* 33 (1979), no. 2, 147-155. (T. Y. Li) **80m:55002** 55M25 (65H10)
- Styplinski, Zenon On summability of Fourier series by Rogosinski's means. *Funct. Approx. Comment. Math.* 6 (1978), 25-28. (B. L. Gupta) **80j:42015** 42A24
- On a generalization of the theorem of Prössdorf. *Funct. Approx. Comment. Math.* 7 (1979), 101-104. (L. Leindler) **80k:42007** 42A10
- Styrylka, T. (with Majcher, G.) Multistage equalization of direct conditioned observations. (Polish) *Mat. Stos.* (3) 13 (1978), 67-71. (R. Kala) **80d:15002** 15A06 (65F05)
- Styř, Tadeusz On a maximum principle for nonlinear equations. *Mathematical models and numerical methods (Papers, Fifth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 69-78. Banach Center Publ., 3, PWN, Warsaw, 1978. (Gerhard Mertz) **80b:65065** 65H10 (65N10)
- Styřinec, V. B. Taking the root in the braid group. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 5, 1120-1131, 1183. (O. Krötenbeert) **80j:57002** 57M05 (20F36, 32C40)
- Su, Ding Qiang (with Wang, Ya Nan; Zhou, Bi Fang; Lu, Sheng Dong) An algorithm for finding the extreme values of a function of many variables and its application in the automatic design of astronomical optical systems. *Chinese Astronom.* 4 (1980), no. 1, 84-89. (Authors' summary) **80b:78033** 78A55 (85A99)
- Su, Stephen Y. H. (with Koren, Israel) Reliability analysis of  $N$ -modular redundancy systems with intermittent and permanent faults. *IEEE Trans. Comput.* 28 (1979), no. 7, 514-520. (Authors' summary) **80d:93067** 93E99
- Suñen Suan Nguen See Nguen Suan Nguen
- Suñez, Manuel Certain properties of locally convex topologies. (Spanish) *Collect. Math.* 29 (1978), no. 1, 43-61. (M. Valdivia) **80f:46002** 46A05
- Suñez, Rodolfo Functional differential equations of advanced type. *Bol. Soc. Mat. Mexicana* (2) 22 (1977), no. 1, 25-34. (J. R. Ockendon) **80d:34098** 34K05
- Šuba, I. M. (with Lomsadze, Ju. M.; Kriváček, I. Ju.) Construction of Wightman's axiomatic scheme for a concentratable field. VIII. Polynomial cluster property of Wightman functions. (Russian. English summary) *Ukrain. Fiz. Ž.* 23 (1978), no. 10, 1608-1615, 1750. (Olga M. Košeleva) **80b:81010** 81B10 (46N05)
- Subbala, Perla (with Mudholkar, Govind S.) Inferences concerning a mean vector when the variables are grouped into subsets. *Biometrical J.* 20 (1978), no. 1, 15-24. (Donald R. Jensen) **80d:62041** 62H15 (62J15)
- (with Mudholkar, Govind S.) A comparison of two tests for the significance of a mean vector. *J. Amer. Statist. Assoc.* 73 (1978), no. 362, 414-421. (N. Gini) **80a:62076** 62H15
- Subbarno, M. V. (with Straus, E. G.) On the representation of fractions as sum and difference of three simple fractions. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1977)*, pp. 561-579. *Congress. Numer., XX, Utilitas Math., Winnipeg, Man., 1978.* (W. A. Webb) **80j:10014** 10A30 (10B25)
- (with Suryanarayana, D.) Sums of the divisor and unitary divisor functions. *J. Reine angew. Math.* 302 (1978), 1-15. (Aleksandar Ivić) **80d:10009** 10H25 (10H15)
- (with Gioia, A. A.) The Scholz-Brauer problem in addition chains. II. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1978)*, pp. 251-274. *Congress. Numer., XXII, Utilitas Math., Winnipeg, Man., 1979.* (A. L. Whiteman) **80k:10078** 10L10 (05A05)
- Subbanyan, R. (with Vaithilingam, M. C.) Sensitivity-reduced design of linear regulators. *Internat. J. Control* 29 (1979), no. 3, 435-440. (S. G. Tzafestas) **80d:93033** 93B35 (93C35)
- Subbiah, S. (with Magill, K. D., Jr.) Semigroups with exactly three regular  $\mathcal{Q}$ -classes. *Semigroup Forum* 17 (1979), no. 3, 279-281. (A. I. Bakirov) **80d:54043** 54F25 (54H15)

- Subbotin, A. I.** (with Subbotina, N. N.) Necessary and sufficient conditions for the piecewise smooth value of a differential game. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 4, 862-865. (N. N. Petrov) **80c:90174** 90D25
- Subbotin, I. Ja.** Finite unsolvable groups with a quasicentralizer condition for normal divisors. (Russian) *Group-theoretical studies (Russian)*, pp. 94-117, 158. "Naukova Dumka", Kiev, 1978. (B. K. Durakov) **80i:20006** 20D05
- Subbotina, N. N.** (with Subbotin, A. I.) Necessary and sufficient conditions for the piecewise smooth value of a differential game. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 4, 862-865. (N. N. Petrov) **80c:90174** 90D25
- Subelman, Eduardo J.** Optimal betting strategies for favorable games. *Naval Res. Logist. Quart.* 26 (1979), no. 2, 355-363. (Ernst-Wilhelm Zachow) **80d:90104** 90D30 (90D35)
- Subhankulov, M. A.** See Babadjanov, P. R.; et al. **80a:01027**
- Subicz, Péter** Solution of an econometric model by mathematical programming. (Hungarian. English and Russian summaries) *Szigma—Mat.-Közgazdasági Folyóirat* 11 (1978), no. 3-4, 111-127. (Author's summary) **80c:90036** 90A99 (65P05, 90C99)
- Šubin, M. A.** ★ Псевдодифференциальные операторы и спектральная теория. (Russian) [Pseudodifferential operators and spectral theory] "Nauka", Moscow, 1978. 279 pp. (Toader Ioan) **80b:47057** 47G05 (35Sxx)
- On holomorphic families of subspaces of a Banach space. Translated from the Russian by K. Clancey, W. Kabbalo and G. Ph. A. Thijse. *Integral Equations Operator Theory* 2 (1979), no. 3, 407-420. (Editors) **80m:46045** 46G20 (32H99, 47A55)
- Šuhnikov, G. V.** (with Šifrin, E. G.) A numerical experiment for the solution of the Neumann problem and a problem with a directional derivative without fulfillment of solvability conditions. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 2, 533-540, 560. (Authors' summary) **80b:65026** 65D30 (65R10)
- Subrahmanyan, P.** On sums involving the integer part of  $x$ . *Math. Student* 45 (1977), no. 1, 8-12 (1978). (H. L. Abbott) **80d:10009** 10A20
- Subrahmanian, Kocherlakota** (with Chingānda, Enock F.) Robustness of the linear discriminant function to nonnormality: Edgeworth series distribution. *J. Statist. Plann. Inference* 2 (1978), no. 1, 79-91. (Jack C. Lee) **80i:62063** 62H30
- (with Chingānda, Enock F.) Robustness of the linear discriminant function to nonnormality: Johnson's system. *J. Statist. Plann. Inference* 3 (1979), no. 1, 69-77. (Peter A. Lachenbruch) **80i:62057** 62H30 (62F35)
- Subrahmanian, M. G.** (with Stapleton, R. C.) A multiperiod equilibrium asset pricing model. *Econometrica* 46 (1978), no. 5, 1077-1096. (J. A. Rickard) **80c:90024** 90A14
- Subrahmanyan, P.** (with Suryanarayana, D.) The maximal  $k$ -free divisor of  $m$  which is prime to  $n$ . II. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 3-4, 239-260. (E. J. Scourfield) **80i:10062** 10H25
- Subrahmanian, K. G.** A note on regular Kolam array grammars generating right triangles. *Pattern Recognition* 11 (1979), no. 5-6, 343-345. (Author's summary) **80i:68079** 68G10
- Subrahmanian, P. R.** (with Shanmugam, G.; Rajasekaran, M.; Devanathan, V.) Nilsson states in cylindrical representation. *Proceedings of the Sixteenth Anniversary Symposium on New Particles—Do They Imply New Physics?* (Inst. Math. Sci., Madras, 1978), Paper No. 12, 21 pp. *Maiscience Rep.*, 92, Inst. Math. Sci., Madras, 1978. (Authors' summary) **80d:81131** 81G35
- Subrahmanian, R.** (with Bhagwat, K. V.) On a theorem of Wigner on products of positive matrices. *Proc. Indian Acad. Sci. Sect. A Math. Sci.* 88 (1979), no. 1, 31-34. (G. M. Gubreev) **80b:15030** 15A48 (15A04)
- Subrahmanian, Ramachandran** (with Kistner, K.-P.) Regenerative Eigenschaften von Modellen der Zuverlässigkeitstheorie. *Second Symposium on Operations Research (Rheinisch-Westfälische Tech. Hochschule, Aachen, 1977), Teil 2*, pp. 713-725. *Operations Research Verfahren, XXIX*, Hain, Meisenheim, 1978. (Peter Franken) **80b:60117** 60K10 (62N05)
- Suchanek, Ana Maria** On almost sure convergence of Cesàro averages of subsequences of vector-valued functions. *J. Multivariate Anal.* 8 (1978), no. 4, 589-597. (S. D. Chatterji) **80d:60012** 60B11
- Sucher, J.** (with Drachman, R. J.) Global operators for  $\delta$  functions: extension to scattering states and the inclusion of spin. *Phys. Rev. A* (3) 20 (1979), no. 2, 424-441. (Woodford W. Zachary) **80g:81017** 81C10
- Sucheston, Louis** (with Krengel, Ulrich) On semimartingales, amarts, and processes with finite value. *Probability on Banach spaces*, pp. 197-266. *Advances in Probability and Related Topics*, 4, Dekker, New York, 1978. (Louis Blake) **80g:60053** 60G48
- (with Millet, Annie) Sur la caractérisation des conditions de Vitali par la convergence essentielle de classes d'amarts. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 21, A1015-A1017. (Authors' summary) **80b:60070** 60G48
- (with Akcoglu, Mustafa A.) A ratio ergodic theorem for superadditive processes. *Z. Wahrsch. Verw. Gebiete* 44 (1978), no. 4, 269-278. (Paul C. Shields) **80b:28021** 28D05 (60F15)
- (with Brunel, Antoine) Sur l'existence de dominants exacts pour un processus sur-additif. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 2, A153-A155. (Authors' summary) **80b:60070** 60G99 (28D99)
- (with Millet, Annie) La convergence essentielle des martingales bornées dans  $L^1$  n'implique pas la condition de Vitali V. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 11, A595-A598. (Authors' summary) **80b:60065** 60G42
- (with Millet, Annie) Characterizations of Vitali conditions with overlap in terms of convergence of classes of amarts. *Canad. J. Math.* 31 (1979), no. 5, 1033-1046. (U. Krengel) **80j:60080** 60G48
- (with Krengel, Ulrich) Temps d'arrêt et tactiques pour des processus indexés par un ensemble ordonné. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 4, A193-A196. (Authors' summary) **80m:60055** 60G40
- Sucha, Ios** (with Valușescu, Ilie) Factorization theorems and prediction theory. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 9, 1393-1423. (H. Salehi) **80i:60042** 60G25 (47A68)
- See also Romanian-Finnish Seminar on Complex Analysis, **80i:30002**
- Suĭkov, N. M.** Some linear groups with complementary groups. (Russian) *Algebra i Logika* 16 (1977), no. 5, 603-620, 624. (G. Karpilovsky) **80a:20048** 20G15
- garcía-Sucre, M.** See García-Sucre, M.
- Sud, A. R.** (with Sud, K. K.) Analytic continuations of the Lauricella function. *J. Math. Phys.* 19 (1978), no. 12, 2485-2490. (Christiane Coudray) **80c:33003** 33A30
- (with Sud, K. K.) Asymptotic expansions of radial integrals for Dirac-Coulomb functions. *J. Phys. A* 11 (1978), no. 10, L237-L241. (W. Witschel) **80b:81100** 81G10 (33A45)
- Sud, K. K.** (with Sud, A. R.) Analytic continuations of the Lauricella function. *J. Math. Phys.* 19 (1978), no. 12, 2485-2490. (Christiane Coudray) **80c:33003** 33A30
- (with Sud, A. R.) Asymptotic expansions of radial integrals for Dirac-Coulomb functions. *J. Phys. A* 11 (1978), no. 10, L237-L241. (W. Witschel) **80b:81100** 81G10 (33A45)
- Suda, Nobuhide** (with Matsuyoshi, E.) Invariant zeros and input-output structure of linear, time-invariant systems. *Internat. J. Control* 28 (1978), no. 4, 525-535. (B. P. Molinari) **80g:93020** 93B05 (93B10)
- Interconnection of systems. (Japanese) *Systems and Control* 22 (1978), no. 11, 675-682. (Tadao Murata) **80f:93015** 93A15 (93C99)
- Sudakov, D. M.** (with Kurtšvil, A. G.; Morozov, A. M.) A system of tests for checking the probabilistic characteristics of uniformly distributed random numbers. (Russian) *Sakharth. SSR Mecn. Akad. Gamothol. Centr. Šrom.* 18 (1978), no. 2 *Voprosy Vyčisl. Tehn. i Upravlenija*, 150-174. **80c:65021** 65C10
- (with Morozov, A. M.) The variance of an estimate of the mean value of a stationary random process. (Russian) *Sakharth. SSR Mecn. Akad. Gamothol. Centr. Šrom.* 18 (1978), no. 2 *Voprosy Vyčisl. Tehn. i Upravlenija*, 182-191. (I. M. Stojanov) **80d:62078** 62M09
- Sudakov, S. N.** Canonical equations of motion of a rigid body with a vortex filling. (Russian) *Meh. Toerd. Tela* No. 11 (1979), 67-71, 119. (B. D. Jovanović) **80j:76011a** 76C99 (70E99)
- The form of a closed cavity in which there exist uniform vortex motions of an ideal incompressible fluid. (Russian) *Meh. Toerd. Tela* No. 11 (1979), 72-78, 119. (B. D. Jovanović) **80j:76011b** 76C99 (70E99)
- Sudakov, V. N.** (with Dovbyš, L. N.; Nikol'skii, N. K.) How good can a nonhereditarily complete family be? (Russian. English summary) Investigations on linear operators and the theory of functions, VIII. *Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 73 (1977), 52-69, 230-231 (1978). (Authors' summary) **80d:46041** 46C05
- Typical distributions of linear functionals in finite-dimensional spaces of high dimension. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 6, 1402-1405. (R. M. Dudley) **80b:60011** 60B11
- Geometric problems in the theory of infinite-dimensional probability distributions. Cover to cover translation of Trudy Mat. Inst. Steklov 141 (1976). *Proc. Steklov Inst. Math.* 1979, no. 2, i-v, 1-178. (Editors) **80c:60052** 60G15 (28A35, 52A05)
- A remark on convergence in a limit theorem for distributions of random functionals. (Russian. English summary) Investigations in the theory of probability distributions, IV. *Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 85 (1979), 197-206, 242, 247. (R. M. Dudley) **80m:60010** 60B11
- See also Investigations in the theory of probability distributions, **80c:60005**
- Sudarshan, E. C. G.** Unitary unified field theories. *Mathematical physics and physical mathematics (Proc. Internat. Sympos., Warsaw, 1974)*, pp. 441-470. *Math. Phys. and Appl. Math.*, 2, Reidel, Dordrecht, 1976. (From the summary) **80i:81138** 81E99 (81G25)
- Tachyons and the search for a preferred frame. *Tachyons, monopoles, and related topics (Proc. First Session, Interdisciplinary Sem., Erice, 1976)*, pp. 43-46. North-Holland, Amsterdam, 1978. (Editors) **80a:83054** 83C99 (00A89)
- (with Sherry, T. N.) Interaction between classical and quantum systems: a new approach to quantum measurement. I. *Phys. Rev. D* (3) 18 (1978), no. 12, 4580-4589. (R. M. Dreizler) **80b:81054** 81C99 (58F06)
- (with Gorini, Vittorio; Frigerio, Alberto; Verri, Maurizio; Kossakowski, Andrzej) Properties of quantum Markovian master equations. *Rep. Math. Phys.* 13 (1978), no. 2, 149-173. (Mary Beth Ruskai) **80c:82015** 82A15
- (with Mukunda, N.) Structure and representation of correlation functions and the density matrix for a statistical wave field in optics. *J. Math. Phys.* 20 (1979), no. 5, 1801-1810. (G. S. Agarwal) **80i:81082** 81K05
- Sudbery, A.** Quaternionic analysis. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 2, 199-224. (H. H. Snyder) **80g:30031** 30G35
- Sudborough, I. H.** On the tape complexity of deterministic context-free languages. *J. Assoc. Comput. Mach.* 25 (1978), no. 3, 405-414. (Author's summary) **80b:68065** 68F05 (68C25, 68C40)
- Sudderth, William D.** (with Lane, David A.) Diffuse models for sampling and predictive inference. *Ann. Statist.* 6 (1978), no. 6, 1318-1336. (Bruce M. Hill) **80a:60006** 60A05 (28A10, 62A15, 62G30)
- (with Dubins, Lester E.) On stationary strategies for absolutely continuous houses. *Ann. Probab.* 7 (1979), no. 3, 461-476. (E.-A. Weiss, Jr.) **80f:60044** 60G40 (62C05)
- Sudkamp, Thomas A.** An additional remark on self-conjugate functions of Boolean algebras. *Notre Dame J. Formal Logic* 19 (1978), no. 4, 637-638. (R. Beazer) **80a:06011** 06E05
- On full cylindric set algebras. *Notre Dame J. Formal Logic* 20 (1979), no. 4, 785-793. (S. Comer) **80j:03089** 03G15
- Suenaga, Yasuhito** (with Kamae, Takahiko; Kobayashi, Tomonori) A high-speed algorithm for the generation of straight lines and circular arcs. *IEEE Trans. Comput.* 28 (1979), no. 10, 728-736. (Authors' summary) **80b:68033** 68C05 (68B99)
- Suetin, P. K.** ★ Классические ортогональные многочлены. (Russian) [Classical orthogonal polynomials] Second edition, augmented. "Nauka", Moscow, 1979. 415 pp. (Editors) **80b:33001** 33-01
- Sueyoshi, Yutaka** On ramification of  $p$ -extensions of  $p$ -adic number fields. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 32 (1978), no. 2, 199-204. (Jürgen Ritter) **80i:12018** 12B15 (12B25, 12B25)
- Suffczynski, Maciej** (with Gorzkowski, Waldemar) The subgroups of the double crystallographic point groups. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astron. Phys.* 26 (1978), no. 6, 563-565. (G. F. Koster) **80a:20055** 20H15
- (with Cracknell, A. P.; Davies, B. L.; Kunert, H.; Popenda, J.) Selection rules for the holosymmetric double space groups based on the body-centred cubic Bravais lattice. *Comm. Roy. Soc. Edinburgh Phys. Sci. No. 14* (1979), 177-192. (T. Janssen) **80i:82025** 82A60 (20C35, 20H15)
- (with Kunert, H.; Michalska, M.; Cracknell, A. P.; Davies, B. L.) Selection rules



- for the double space groups  $O_h^2(Fm3c)$  and  $O_h^2(Fd3c)$ . *Comm. Roy. Soc. Edinburgh Phys. Sci. No. 17* (1979), 227-240. (T. Janssen) **80c:82063** 82A60
- Suflets, Zbigniew** (with Rafajłowicz, Ewaryst) Two-level computation technique for distributed system parameter identification using maximum likelihood approach. (Russian summary) *Systems Sci.* 4 (1978), no. 2, 129-137. (O. A. Sebakhy) **80a:93156** 93E10 (93C40)
- Sugaw, F. V.** See **Hadamard, Jacques**, **80b:35091**
- Sugamoto, Akio** Dual transformation in abelian gauge theories. *Phys. Rev. D* (3) **19** (1979), no. 6, 1820-1825. (Author's summary) **80b:81065** 81D99  
(with Seo, Koichi; Okawa, Masanori) Dual transformation in non-Abelian gauge theories. *Phys. Rev. D* (3) **19** (1979), no. 12, 3744-3753. (T. F. Morris) **80g:81048** 81E10 (53C80)
- Sugar, R. L.** (with Blankenbecler, Richard; DeGrand, T.) Moment method for eigenvalues and expectation values. *Phys. Rev. D* (3) **21** (1980), no. 4, 1055-1061. (Authors' summary) **80m:81118** 81H05 (81C05)
- Sugata, Kazuhiro** (with Morita, Kenichi; Umeo, Hiroshi) The language accepted by an  $n$ -bounded multicounter automaton and its computing ability. *Systems-Comput.-Controls* **8** (1977), no. 2, 71-79 (1978). (Ronald E. Prather) **80b:68077** 68D35  
(with Morita, Kenichi; Umeo, Hiroshi) Computation complexity of  $n$ -bounded counter automaton and multidimensional rebound automaton. *Systems-Comput.-Controls* **8** (1977), no. 2, 80-87 (1978). (A. L. Selman) **80g:68068** 68D05  
(with Umeo, Hiroshi; Morita, Kenichi) Some notes concerning the shape of two-dimensional input tapes. *Systems-Comput.-Controls* **8** (1977), no. 4, 61-67 (1979). (Authors' summary) **80g:68070** 68D05  
(with Morita, Kenichi; Umeo, Hiroshi) Computational complexity of  $L(m, n)$  tape-bounded two-dimensional Turing machines. *Systems-Comput.-Controls* **8** (1977), no. 6, 17-24 (1979). (Authors' summary) **80f:68060** 68C40 (03D15, 68C25)  
(with Morita, Kenichi; Umeo, Hiroshi) Language recognition abilities of several two-dimensional tape automata and their relation to tape complexities. *Systems-Comput.-Controls* **8** (1977), no. 6, 58-65 (1979). (Authors' summary) **80f:68093** 68F10 (68C40, 68D20)
- Sugavanam, A.** (with Wu, J. C.) Method for the numerical solution of turbulent flow problems. *AIAA J.* **16** (1978), no. 9, 948-955. (David M. Burley) **80c:76026** 76F05 (65P05)
- Sugawara, Masahiro** (with Kobayashi, Teiichi) Note on KO-rings of lens spaces mod 2'. *Hiroshima Math. J.* **8** (1978), no. 1, 85-90. (B. J. Sanderson) **80c:55033** 55R50
- Sugawara, Noriko** (with Nôno, Kiyoharu; Sasaki, Kenji) Continuation and quotient representation of meromorphic functions. *Bull. Fukuoka Univ. Ed. III* **28** (1978), 17-27. (W. R. Zame) **80k:32018** 32E10
- Sugawara, Tamio** Nonimmersion and nonembedding theorems for complex Grassmann manifolds. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 2, 59-64. (Samuel A. Iliori) **80j:57027** 57R40 (14M15, 32M10, 53C30)
- Sugden, R. A.** Inference on symmetric functions of exchangeable populations. *J. Roy. Statist. Soc. Ser. B* **41** (1979), no. 2, 269-273. (V. P. Godambe) **80g:62005** 62D05
- Suggett, G. J.** General relativity and conformal invariance. I. A new look at some old field equations. *J. Phys. A* **12** (1979), no. 3, 367-373. (Andrew King) **80c:83047a** 83D05  
General relativity and conformal invariance. II. Non-existence of black holes. *J. Phys. A* **12** (1979), no. 3, 375-381. (Andrew King) **80c:83047b** 83D05
- Sugimoto, Eiji** A short note on new indexing polynomials of finite fields. *Inform. and Control* **41** (1979), no. 2, 243-246. (Author's summary) **80g:94062** 94B25 (12C05, 68C05)
- Sugisaka, Masanori** (with Nakamori, Seiichi) Design of linear predictor by covariance information. (Japanese. English summary) *Systems and Control* **22** (1978), no. 12, 761-768. (Authors' summary) **80c:93113** 93E10  
Imbedding approach to designing discrete linear least-squares estimators using covariance information. *Rep. Fac. Engrg. Oita Univ.* **1979**, no. 5, 47-54. (Robert Kertz) **80h:93059** 93E10  
(with Nakamori, Seiichi) Derivation of estimation equation by the covariance information in the two-dimensional distributed system. (Japanese. English summary) *Rep. Fac. Engrg. Oita Univ.* **1979**, no. 5, 55-60. (Authors' summary) **80c:93118** 93E10
- Suglira, Nariaki** See **Special Issue: Theory and practice for categorical data analysis**, **80d:62042**
- Sugiyama, Shobei** On nonlinear Volterra integral equations with a small parameter. *Mem. School Sci. Engrg. Waseda Univ. No. 40* (1976), 131-139 (1977). (George Seifert) **80g:45010** 45G10 (34K15, 45D05, 45J05)  
On functional integral equations. *Mem. School Sci. Engrg. Waseda Univ. No. 41* (1977), 135-153 (1978). (R. K. Miller) **80g:45004a** 45D05  
On comparison theorems of functional integral equations. *Mem. School Sci. Engrg. Waseda Univ. No. 42* (1978), 65-74 (1979). (R. K. Miller) **80g:45004b** 45D05
- Sugiyama, Takakazu** ★Coefficients of zonal polynomials of order two. *Computer Science Monographs*, **12**. Institute of Statistical Mathematics, Tokyo, 1979. 52 pp. (From the introduction) **80c:33001** 33-04 (62H10, 65A05)
- Sugiyama, Yasuo** (with Kanai, Takeo) On a (21, 11, 6) binary code. *IEEE Trans. Inform. Theory* **25** (1979), no. 1, 109. (Authors' summary) **80b:94023** 94B05 (94B15)
- Sugita, S. M.** (with Voevodin, A. F.) Numerical calculation of one-dimensional flows of water in river channel and canal systems. (Russian) *Dinamika Splošn. Sredy* No. 35 *Dinamicheskie Zadachi Mehaniki Splošnyh Sred* (1978), 40-60, 173. (Authors' summary) **80f:65139** 65P05 (76B99)
- Two-dimensional (planned) non-steady-state flows of water. (Russian) *Dinamika Splošn. Sredy* No. 35 *Dinamicheskie Zadachi Mehaniki Splošnyh Sred* (1978), 141-172, 175-176. (Author's summary) **80c:76017** 76C99
- Suh, I. H.** (with Sozańska-Bień, Zofia) Proportional minus delay controller. *IEEE Trans. Automat. Control* **24** (1979), no. 2, 370-372. (Authors' summary) **80c:93033** 93B05
- Suhadolc, Anton** ★Linearni topološki prostori. (Slovenian) [Linear topological spaces] Zbirka Izbranih Poglavit iz Matematike [Collection of Selected Papers in Mathematics], **11**. Društvo Matematikov, Fizikov in Astronomov SRS, Ljubljana, 1979. 160 pp. (Editors) **80f:46002** 46-01
- Suhanov, A. D.** (with Logunov, A. A.; Medvedev, B. V.; Muzafarov, L. M.; Pavlov, V. P.; Polivanov, M. K.) Analytical structure of the amplitude of 3-3 forward scattering. (Russian. English summary) *Teoret. Mat. Fiz.* **40** (1979), no. 2, 179-193. (Authors' summary) **80i:81050** 81F15
- Suharev, A. G.** Optimal formulas of numerical integration for some classes of functions of several variables. (Russian) *Dokl. Akad. Nauk SSSR* **246** (1979), no. 2, 282-285. (J. Kofron) **80j:65016** 65D30  
A sequentially optimal algorithm for numerical integration. *J. Optim. Theory Appl.* **28** (1979), no. 3, 363-373. (Author's summary) **80c:65032** 65D30  
Optimal algorithms for iterated numerical integration. *J. Optim. Theory Appl.* **28** (1979), no. 3, 375-390. (Author's summary) **80f:65023** 65D30
- Suhlin, M. F.** The differentiability of the solution of an ordinary differential equation with respect to the initial condition. (Russian) *Mat. Sb. (N.S.)* **106(140)** (1978), no. 3, 440-454, 496. (E. S. Čičkin) **80b:34083** 34G20 (34A10)
- Suhlin, S. V.** A group property and conservation laws of an equation of transonic motion of a gas. (Russian) *Dinamika Splošn. Sredy* No. 36 *Dinamika Židkosti so Svobodnymi Granicami* (1978), 130-137, 162. (Author's introduction) **80h:76037** 76N15 (35A30, 58H05)
- Suhomlin, N. B.** Separation of variables in Kolmogorov's equation. II. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* **1979**, no. 3(202), 27-32. (V. G. Kolomic) **80g:82020a** 82A05  
(with Barinov, N. P.) Separation of variables in Kolmogorov's equation. III. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* **1979**, no. 3(202), 33-35. (V. G. Kolomic) **80g:82020b** 82A05
- Suhorebrii, V. G.** Problems of analysis and synthesis of dynamical systems with random perturbations. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 3* (1979), 24 pp. (Author's summary) **80g:93093** 93E20
- Suhorukov, A. P.** (with Karamzin, Ju. N.; Filipčuk, T. S.) A new class of coupled solitons in dispersive media with quadratic nonlinearity. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* **19** (1978), no. 4, 91-98. (A. Ramn) **80g:78005** 78A40
- Suhorukov, V. A.** (with Kočergin, V. P.; Klimok, V. I.) The homogeneous layer of the ocean in the framework of "differential" models. (Russian) *Čisl. Metody Meh. Splošn. Sredy* **8** (1977), no. 5, 102-114. (L. A. Bunimovich) **80b:86001** 86A05
- Suhov, Ju. M.** (with Dobrušin, R. L.) On the problem of the mathematical foundation of the Gibbs postulate in classical statistical mechanics. *Mathematical problems in theoretical physics (Proc. Internat. Conf., Univ. Rome, Rome, 1977)*, pp. 325-340. *Lecture Notes in Phys.*, **80**, Springer, Berlin, 1978. (R. A. Minlos) **80g:82004** 82A05 (60K35)  
(with Dašjan, Ju. R.) On the question of the Gibbs description of random processes with discrete time. (Russian) *Dokl. Akad. Nauk SSSR* **242** (1978), no. 3, 513-516. (J. Fritz) **80b:82027** 82A30 (60K35)  
Strong solution of the chain of Bogoljubov equations in one-dimensional classical statistical mechanics. (Russian) *Dokl. Akad. Nauk SSSR* **244** (1979), no. 5, 1081-1084. (From the introduction) **80c:82012** 82A05 (58F11)
- Suhov, Yu.** (with Marchioro, C.; Pellegrinotti, A.; Pulvirenti, M.) Time evolution of Gibbs states for an anharmonic lattice. *Comm. Math. Phys.* **66** (1979), no. 2, 131-146. (Authors' summary) **80i:82014** 82A05 (60K35)
- Suita, Nobuyuki** (with Jenkins, James A.) On the representation and compactification of Riemann surfaces. *Bull. Inst. Math. Acad. Sinica* **6** (1978), no. 2, part 2, 423-427. (C. Wang) **80c:30035** 30F99
- Sukharev, A. G.** See **Suharev, A. G.**
- Sukhov, Yu. M.** (with Siforov, V. I.; Zinov'ev, V. A.) On some problems in the information theory and related areas. (Russian summary) *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* **7** (1978), no. 6, 407-427. (Michele Elia) **80i:94005** 94A15
- Šukurjan, S. K.** A result concerning the functional equivalence of program schemata with nondegenerate statements. *Programirovanie* **1979**, no. 2, 41-49 (Russian); translated as *Programming and Comput. Software* **5** (1979), no. 2, 106-113. (Author's summary) **80m:68024** 68B10 (68D05)
- Sulaberidze, T. G.** (with Piranashvili, Z. A.) On optimal prediction and filtering of nonlinearly transformed Gaussian random processes. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* **91** (1978), no. 2, 313-316. (Ju. M. Kabanov) **80m:60051** 60G25 (62M20)
- Sulanke, Hannelore** See **Fisz, Marek**, **80c:60001**
- Sulanke, Rolf** See **Fisz, Marek**, **80c:60001**
- Sularia, M.** (with Negoită, C. V.) Optimization in fuzzy environment. *Digital processing and transmission of data and control of processes by means of computers*, pp. 241-251. *Problems of Automation*, **10**, Ed. Acad. RS România, Bucharest, 1978. (Klaus Tammer) **80c:90113b** 90C15
- Šul'ce, B. V.** See **Schulze, B.-W.**
- Suleimanov, A. S.** (with Bondarenko, B. A.) Polywave quasipolynomial functions and their applications to certain problems of oscillation theory. (Russian) *Direct and inverse problems for partial differential equations and their applications (Russian)*, pp. 175-182, 188. "Fan", Tashkent, 1978. (A. Haimovici) **80i:35029** 35C10  
A class of exact solutions of the wave equation in cylindrical coordinates. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 53 (1978), 18-24, 179-180. (P. Günther) **80b:35019** 35C05 (35L05)
- Suleimanov, N. M.** The behavior of the solutions of the Dirichlet problem for nonlinear elliptic equations in infinite domains. (Russian) *Functional analysis and its applications*, No. 3 (Russian), pp. 160-168. "Ėlm", Baku, 1978. (From the text) **80c:35025** 35J65  
The behavior of the solutions of the Dirichlet problem for nonlinear elliptic equations in unbounded domains. (Russian) *Dokl. Akad. Nauk SSSR* **239** (1978), no. 4, 797-799. (I. Aganović) **80a:35054** 35J65
- Sulem, Catherine** (with Fournier, Jean-Daniel; Frisch, Uriel; Sulem, Pierre Louis) Remarques sur un modèle unidimensionnel pour la turbulence magnétohydrodynamique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 10, A571-A573. (Authors' summary) **80b:76017** 76F05 (35Q99)  
(with Sulem, Pierre Louis) Quelques résultats de régularité pour les équations de la turbulence de Langmuir. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 3, A173-A176. (W. F. Ames) **80i:35165** 35Q20 (76X05)  
(with Sulem, Pierre Louis) Mouvement sphérique du fluide parfait incompressible. (English summary) *J. Mécanique* **18** (1979), no. 4, 775-790. (Authors' summary) **80b:76031** 76C99

- Sulem, Pierre Louis** (with Bardos, C.; Penel, P.; Frisch, Uriel) Modified dissipativity for a nonlinear evolution equation arising in turbulence. *Arch. Rational Mech. Anal.* 71 (1979), no. 3, 237-256. (J. F. Heyda) **80k:35110** 35Q20 (76F05)
- (with Sulem, Catherine; Fournier, Jean-Daniel; Frisch, Uriel) Remarques sur un modèle unidimensionnel pour la turbulence magnétohydrodynamique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 10, A571-A573. (Authors' summary) **80k:76017** 76F05 (35Q99)
- (with Sulem, Catherine) Quelques résultats de régularité pour les équations de la turbulence de Langmuir. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 3, A173-A176. (W. F. Ames) **80k:35165** 35Q20 (76X05)
- (with Sulem, Catherine) Mouvement sphérique du fluide parfait incompressible. (English summary) *J. Mécanique* 18 (1979), no. 4, 775-790. (Authors' summary) **80k:76031** 76C99
- Sul'ga, M. O.** Thermoelastic surface waves in a regularly layered half-space. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 4* (1979), 293-296, 321. (M. Sokolowski) **80g:73017** 73C40
- Sul'ga, N. F.** (with Abizeer, A. I.; Boldyrev, V. F.) The theory of elastic scattering and bremsstrahlung of fast charged particles in crystals. (Russian. English summary) *Fiz. Elementar. Častic i Atom. Jadra* 10 (1979), no. 1, 51-89. (G. A. Skorobogatov) **80d:81107** 81F20
- Sul'ga, A. M.** (with Nguen Dong An) Equations for variations in the trajectory of nonholonomic mechanical systems. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 53 (1978), 125-129, 183. (V. T. Golovchan) **80k:70016** 70F25 (49A10)
- (with Andreev, A. S.) On the problem of the stabilization of the equilibrium point of a solid body with variable moments of inertia in its motion relative to the center of mass. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 5, 951-954, 960. (Authors' summary) **80c:70009** 70E99
- Suliciu, Ion** (with Mihăilescu-Suliciu, Mihaela) Energy for hypoelastic constitutive equations. *Arch. Rational Mech. Anal.* 71 (1979), no. 4, 327-344. (R. L. Fosdick) **80h:73005** 73B05 (73E99)
- Mihăilescu-Suliciu, Mihaela** See Mihăilescu-Suliciu, Mihaela
- Sullkavill, R. S.** (with Osipov, V. Z.) The oscillation in an elliptic orbit of a rigid body containing a spherical cavity that is entirely filled with a viscous fluid. (Russian) Questions of the theory of functions and mathematical physics. *Sakharit. SSR Mecn. Akad. Math. Inst. Šom* 58 (1978), 175-186. (From the introduction) **80m:70011** 70E99 (34C99)
- Sulimov, M. G.** Convergence of the difference method in the problem of radiation in a semibounded strip. (Russian) *Metody Vychisl.* No. 11 (1978), 160-166, 191-192. (Author's summary) **80c:65196** 65N20
- Sullivan, Dennis** A foliation of geodesics is characterized by having no "tangent homologies". *J. Pure Appl. Algebra* 13 (1978), no. 1, 101-104. (Robert Roussarie) **80c:57019** 57R30
- (with Siebenmann, L.) On complexes that are Lipschitz manifolds. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 503-525, Academic Press, New York, 1979. (Oscar Burlet) **80c:57027** 57Q05 (32G15)
- A homological characterization of foliations consisting of minimal surfaces. *Comment. Math. Helv.* 54 (1979), no. 2, 218-223. (Bruce L. Reinhart) **80m:57022** 57R30
- Sullivan, Francis E.** A generalization of uniformly rotund Banach spaces. *Canad. J. Math.* 31 (1979), no. 3, 628-636. (R. C. James) **80h:46023** 46B20
- Sullivan, John Brendan** Relations between the cohomology of an algebraic group and its infinitesimal subgroups. *Amer. J. Math.* 100 (1978), no. 5, 995-1014. (Mitsuhiro Takeuchi) **80a:14021** 14L15
- Simply connected groups, the hyperalgebra, and Verma's conjecture. *Amer. J. Math.* 100 (1978), no. 5, 1015-1019. (Mitsuhiro Takeuchi) **80a:14022** 14L15
- Representations of Witt groups. *Pacific J. Math.* 78 (1978), no. 2, 519-523. (Mitsuhiro Takeuchi) **80g:14039** 14L15
- The representative functions on the hyperalgebra. *J. Algebra* 61 (1979), no. 1, 28-36. (Mitsuhiro Takeuchi) **80m:14029** 14L15 (16A24, 17B45)
- Sullivan, John J.** Recoupling coefficients of the general linear group in bases adapted to shell theories. *J. Math. Phys.* 19 (1978), no. 8, 1681-1687. (Nigel B. Backhouse) **80a:81039** 81C40 (00A89)
- Sullivan, Paul J.** The use of the distance-neighbour function to select service centres. *Information linkage between applied mathematics and industry (Proc. First Annual Workshop, Naval Postgraduate School, Monterey, Calif., 1978)*, pp. 557-566, Academic Press, New York, 1979. (Author's summary) **80g:90069** 90B99 (68A05, 90C50)
- Sullivan, R. P.** Ideals in transformation semigroups. *Comment. Math. Univ. Carolin.* 19 (1978), no. 3, 431-446. (William R. Nico) **80g:20079** 20M20
- Partial translations of semigroups. *Acta Sci. Math. (Szeged)* 41 (1979), no. 1-2, 221-225. (Mohan S. Putcha) **80h:20100** 20M10
- Sul'man, V. S.** A fixed-point theorem. (Russian) *Funktsional. Anal. i Prilozhen.* 13 (1979), no. 1, 88-89. (L. Gorniewicz) **80d:54061** 54H25 (55M20)
- Sultan, Alan** (with Bachman, George) Measure theoretic techniques in topology and mappings of replete and measure replete spaces. *Bull. Austral. Math. Soc.* 18 (1978), no. 2, 267-285. (J. C. Oxtoby) **80c:28007** 28A60 (54H12)
- (with Bachman, George) Representations of linear functionals on spaces of continuous functions, repletions, and general measure extensions. *J. Math. Anal. Appl.* 67 (1979), no. 2, 277-293. (Robert F. Wheeler) **80m:46022** 46E10
- Sultantbekov, F. F.** Regular functions of a triangle. (Russian) *The constructive theory of functions and functional analysis (Russian)*, pp. 54-57, Kazan. Univ., Kazan, 1977. (Editors) **80g:54057** 54H99 (60B99)
- Sultangazin, U. M.** (with Kalibbaeva, G. K.) A form of notation for equations of the method of spherical harmonics for a kinetic equation. (Russian) *Čisl. Metody Meh. Splajn. Sredy* 9 (1978), no. 5 *Matematičeskoe Modelirovanie*, 140-145. (From the introduction) **80c:82028** 82A40 (33A45)
- Solution of symmetric positive systems of differential equations. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977)*, pp. 397-404, *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (Michel Cotsaftis) **80c:35009** 35C10 (65P05)
- (with Djusembaev, B. B.) Theorem on the existence and uniqueness of a solution in model kinetic equations. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1979, no. 3, 35-43, 89. (G. A. Skorobogatov) **80i:35040** 35F20 (35E05)
- Sultanova, Z. T.** On the question of the calculation of ray type networks in a multiply connected domain. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 35 (1979), no. 9, 8-10. (Author's summary) **80m:90051** 90B10
- Šumakov, V. M.** (with Sapožnikov, V. V.; Sapožnikov, V. I. V.) Contact circuit monitoring. *Automat. i Telemekh.* 1978, no. 11, 175-182. (Russian); translated as *Automat. Remote Control* 39 (1978), no. 11(2), 1723-1728 (1979). (Authors' summary) **80g:94091** 94C10
- Šumakov, L. N.** (with Popov, I. I.; Romanenko, A. G.) Set-theoretic modeling of information systems. (Russian) *Voprosy Informacion. Teorii i Praktiki* No. 33-34 (1978), 16-63. (Vladimir Sleinikov) **80g:68027** 68B15 (68C01)
- Šumbatov, A. S.** (with Rumjancev, V. V.) On the problem of a generalization of the Hamilton-Jacobi method for nonholonomic systems. (German and Russian summaries) *Z. Angew. Math. Mech.* 58 (1978), no. 11, 477-481. (D. L. Rod) **80c:70024** 70H20 (70F25)
- Šumenkov, E. A.** (with Matrosov, V. M.; Vasil'ev, S. N.; Karatuev, V. G.; Novikov, M. A.; Jadykin, S. A.) Machine deduction of theorems on dynamic properties with vector functions of Lyapunov. *Kibernetika (Kiev)* 1979, no. 2, 27-36. (Russian); translated as *Cybernetics* 15 (1979), no. 2, 184-194. (Authors' summary) **80m:68082** 68G15
- Šumilina, V. P.** The inconsistency of the system  $\mathfrak{F}_1^4$  of combinatory logic. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 3, 3-8. (Author's summary) **80d:03013** 03B40
- Šumil'ro, Hideyasu** (with Mori, Shigefumi) On Hartshorne's conjecture. *J. Math. Kyoto Univ.* 18 (1978), no. 3, 523-533. (P. E. Newstead) **80j:14033** 14J30 (14F10, 14J40)
- Šumilov, B. M.** Local approximations by linear splines of two variables. (Russian) *Vychisl. Sistemy No. 75 Metody Splajn-Funkcii* (1978), 23-35, 137-138. (A. Lupas) **80k:65016** 65D07
- Šumilov, V. F.** Optimal stabilization of linear systems. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 3, 151-153, 160. (M. F. Kirichenko) **80c:93118** 93D05
- Šumlin, V. I.** (with Morozov, S. F.) A nonlinear system of junction transfer in statistical nerve ensembles. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 9, 1661-1666, 1726. (V. P. Kalashnikov) **80i:35163** 35Q20 (92A09)
- (with Morozov, S. F.) Optimization of nonlinear transport processes. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 4, 794-798. (D. A. Šulaja) **80m:49026** 49B99 (82A70)
- (with Morozov, S. F.) Optimization of nonlinear systems of transport theory. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 1, 99-111, 268. (Authors' summary) **80c:82049** 82A70 (49B99)
- Sumioka, Takeshi** On QF-3 and I-Gorenstein rings. *Osaka J. Math.* 16 (1979), no. 2, 395-403. (C. Vinsonhaler) **80f:16020** 16A36
- Sumiyama, Takao** Note on  $r$ -rings. *Math. Japon.* 23 (1978/79), no. 4, 369-370. (Javed Ahsan) **80g:16023** 16A48 (16A66)
- Note on maximal Galois subrings of finite local rings. *Math. J. Okayama Univ.* 21 (1979), no. 1, 31-32. (Lindsay N. Childs) **80k:16027** 16A44
- Sumner, David P.** The connected Ramsey number. *Discrete Math.* 22 (1978), no. 1, 49-55. (Ralph Faudree) **80a:05152** 05C55
- Randomly matchable graphs. *J. Graph Theory* 3 (1979), no. 2, 183-186. (F. Harary) **80k:05088** 05C99
- (with Oberly, David J.) Every connected, locally connected nontrivial graph with no induced claw is Hamiltonian. *J. Graph Theory* 3 (1979), no. 4, 351-356. (Linda Lesniak-Foster) **80j:05006** 05C45
- Sun, H. S.** On groups generated by the squares. *Fibonacci Quart.* 17 (1979), no. 3, 241-246. (J. L. Alperin) **80i:20010** 20D99
- (with Cohen, M. E.) On some extensions of the Wang-Carlitz identity. *Fibonacci Quart.* 17 (1979), no. 4, 299-305. (Editors) **80k:05010** 05A19
- (with Cohen, M. E.) Some extensions of the Brock-Carlitz identity. *Proc. Amer. Math. Soc.* 76 (1979), no. 1, 178-185. (L. Carlitz) **80j:05015** 05A19
- Sun, Ji Guang** Harmonic functions on a class of real classical domains. (Chinese) *Acta Math. Sinica* 21 (1978), no. 3, 277-281. (Y.-T. Siu) **80j:31008** 31B05 (32M15, 53C35, 58E20)
- Sun, Qi** (with Ke, Zhao) The Diophantine equation  $x^4 - pqy^2 = 1$ . (Chinese. English summary) *Kexue Tongbao* 24 (1979), no. 16, 721-723. (Authors' summary) **80k:10012** 10B10
- Sun, Shun Hua** The spectrum distribution of completely controllable linear systems. (Chinese. English summary) *Acta Math. Sinica* 21 (1978), no. 3, 193-205. (Author's summary) **80d:47060** 47B40 (93B05)
- Sun, T. C.** (with Mukherjee, Arunava) Convergence of products of independent random variables with values in a discrete semigroup. *Z. Wahrsch. Verw. Gebiete* 46 (1978/79), no. 2, 227-236. (V. M. Maksimov) **80b:60017** 60B15
- Sun, Yi Sui** (with Chen, Xiang Yan; Luo, Ding Jun) Some problems concerning the regions of motion in the general three-body problem. (Chinese. English summary) *Acta Astronom. Sinica* 19 (1978), no. 2, 119-130. (Authors' summary) **80b:70011** 70F07
- Sumada, Toshikazu** Spectrum of a compact flat manifold. *Comment. Math. Helv.* 53 (1978), no. 4, 613-621. (Shūichi Tanno) **80c:58028** 58G25 (53C22)
- Rigidity of certain harmonic mappings. *Invent. Math.* 51 (1979), no. 3, 297-307. (L. Lemaire) **80f:58021** 58E20 (31C12)
- Sumaga, Teruo** (with Kondo, Eiji; Sakamoto, Ryūji) Design of linear functional filters for linear stochastic systems. *Internat. J. Control* 29 (1979), no. 1, 133-143. (R. S. Bucy) **80c:93122** 93E11
- Sumahara, Yoshifumi** (with Aihara, Shin'ichi; Koyama, Muneshi; Kojima, Fumio) On the optimal control for distributed parameter systems with white noise coefficients. *Proceedings of the International Symposium on Stochastic Differential Equations (Rin. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976)*, pp. 397-408, Wiley, New York, 1978. (Authors' summary) **80g:93094** 93E20
- Sunakawa, Sigenobu** ★ Квантовая теория рассеяния. (Russian) [The quantum theory of scattering] Translated from the Japanese by I. I. Ivančik. Edited by I. M. Dremn. "Mir", Moscow, 1979. 268 pp. (A. Ramm) **80i:81001** 81-02 (81F10)



- Somov, V. N. (with Aliiev, F. A.; Larin, V. B.; Naumenko, K. I.) ★Оптимизация линейных инвариантных во времени систем управления. (Russian) [Optimization of linear time-invariant control systems] Edited by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii]. "Naukova Dumka", Kiev, 1978. 327 pp. (Vadim Komkov) 80d:93044 93C99 (49B99)
- Sundararajan, C. Stability analysis of plates by a complementary energy method. *Internat. J. Numer. Methods Engng.* 15 (1980), no. 3, 343-349. (Author's summary) 80m:73046 73H05
- Sundararajan, D. On the Kuranishi space of a holomorphic principal bundle over a compact complex manifold. *Studies in analysis*, pp. 233-239, *Advances in Math., Suppl. Studies*, 4, Academic Press, New York, 1979. (H. Kerner) 80j:32039 32G13  
See also Hyperbolic complex analysis, 80k:32001
- Sundaresan, Mahur K. Decentral and multilevel controllability of large-scale systems. *Internat. J. Control* 30 (1979), no. 1, 71-80. (R. Gidrozor) 80f:93016 93A15 (93A13, 93B05)
- Sundberg, C. (with McDonald, Gerard) Toeplitz operators on the disc. *Indiana Univ. Math. J.* 28 (1979), no. 4, 595-611. (R. G. Douglas) 80k:47034 47B35 (32A35, 46J15)
- Sunder, Viakalathur Shankar (with Halmos, Paul Richard) ★Bounded integral operators on  $L^2$  spaces. *Ergebnisse der Mathematik und ihrer Grenzgebiete*, 96. Springer-Verlag, Berlin-New York, 1978. xv + 132 pp. ISBN 3-540-08894-6 (W. A. J. Luxemburg) 80g:47036 47B38 (47G05)  
Absolutely bounded matrices. *Indiana Univ. Math. J.* 27 (1978), no. 6, 919-927. (P. Szepietki) 80d:47052 47B38 (47G05)
- Two characterization theorems for integral operators. *Integral Equations Operator Theory* 1 (1978), no. 2, 250-269. (J. Weidmann) 80d:47079 47G05 (45P05, 47B38)
- Sundt, Bjørn A hierarchical credibility regression model. *Scand. Actuar. J.* 1979, no. 2-3, 107-114. (Gregory Taylor) 80k:62107 62P05  
On choice of statistics in credibility estimation. *Scand. Actuar. J.* 1979, no. 2-3, 115-123. (Gregory Taylor) 80j:62096 62P05
- Sunkel, Hans ★Approximation of covariance functions by non-positive definite functions. Reports of the Department of Geodetic Science, 271. Ohio State University, Department of Geodetic Science, Columbus, Ohio, 1978. iii + 84 pp. (Author's summary) 80k:86004 86A30 (60G12)
- Sunkelson, J. An estimate of the rate of convergence in the central limit theorem for  $m$ -dependent random vectors. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 18 (1978), no. 4, 175-186, 203. (G. K. Eagleson) 80k:60031 60F05
- Sunkov, V. P. (with Sozotov, A. I.) Infinite groups saturated by Frobenius subgroups. (Russian) *Algebra i Logika* 16 (1977), no. 6, 711-735, 742. (B. Hartley) 80a:20041 20F50  
(with Šafiro, A. A.) A characterization of an infinite Černikov group, which is not a finite extension of a quasicyclic group. (Russian) *Mat. Sb. (N.S.)* 107(149) (1978), no. 2, 289-303, 318. (Richard E. Phillips) 80b:20041 20E25
- Sunouchi, Gen-ichirō Uniform summability of Fourier series at a point of continuity. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 799-804. *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (Prem Chandra) 80f:42007 42A24 (42A16)  
(with Lee, E. T. Y.) On the majorant properties in  $L^p(G)$ . *Tōhoku Math. J.* (2) 31 (1979), no. 1, 41-48. (Walter R. Bloom) 80g:43010 43A25 (43A15)
- Sunouchi, Haruo (with Suzuki, Fukuzō) Local perturbations of difference approximations for hyperbolic equations. *Bull. Sci. Engng. Res. Lab. Waseda Univ.* No. 83 (1978), 72-82. (Authors' summary) 80f:65095 65M05
- Suomela, P. Invariant measures of time-reversible Markov chains. *J. Appl. Probab.* 16 (1979), no. 1, 226-229. (Gérard Letac) 80d:60084 60J05
- Suppes, Patrick See Biography: Suppes, Patrick, 80m:01040
- Suprun, V. M. (with Šurenkov, V. M.) Precise formulas for the distribution of some boundary functionals of stable processes. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist.* No. 20 (1979), 126-128, 159. (N. H. Bingham) 80f:60067 60J30
- Suprunenko, D. A. (with Tyškevič, R. I.) The similarity and substitutive equivalence of  $(0, 1)$ -matrices. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 22 (1978), no. 6, 485-487, 571. (A. Lee) 80f:15012 15A21 (15A36)  
On unipotent groups of matrices over a division ring. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 2, 289-291. (G. A. Solfer) 80k:20047 20H25
- Suprunenko, I. D. (with Zaleskii, A. E.) Classification of finite irreducible linear groups of rank 4 over a field of characteristic  $p > 5$ . (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1978, no. 6, 9-15, 138. (A. A. Mahnev) 80g:20059 20G40  
Subgroups of  $GL(n, p)$  containing  $SL(2, p)$  in an irreducible representation of degree  $n$ . (Russian) *Mat. Sb. (N.S.)* 109(151) (1979), no. 3, 453-468, 480. (Ju. I. Merzljakov) 80m:20039 20G40 (20H30)
- Susquet, Pierre-Marie Existence et régularité des solutions des équations de la plasticité. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 24, A1201-A1204. (Author's summary) 80a:73033 73E99 (35Q99)
- Suryai, L. Large  $\alpha$ -critical graphs with small deficiency. On line-critical graphs. II. *Studia Sci. Math. Hungar.* 10 (1975), no. 3-4, 397-412 (1978). (M. Aigner) 80a:05124 05C35  
A note on a conjecture of Gallai concerning  $\alpha$ -critical graphs. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 1065-1074. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (Gary Haggard) 80c:05088 05C35
- Suranyi, Peter Classical, cross-section generating solutions of field equations. *J. Math. Phys.* 20 (1979), no. 8, 1720-1726. (G. R. Allcock) 80i:81063 81G20 (22E70)
- Surdu, M. Stochastic electrodynamics. *Proceedings of the Symposium on the Foundations of Modern Physics (Loma-Koli, 1977)*, pp. 293-306. *Publ. Univ. Joensuu, Ser. B1*, 14, Univ. Joensuu, Joensuu, 1978. (Gérard A. Maugin) 80m:82059 82A99 (78A99, 81L05)  
A further visit to the steady state universe. *Found. Phys.* 10 (1980), no. 1-2, 175-179. (Author's summary) 80m:85008 85A40
- Surenkov, V. M. (with Suprun, V. M.) Precise formulas for the distribution of some boundary functionals of stable processes. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist.* No. 20 (1979), 126-128, 159. (N. H. Bingham) 80f:60067 60J30
- Boundary conditions and an ergodic theorem for processes with independent increments. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 1, 52-61. (M. G. Šur) 80f:60068 60J30 (60J50)
- Surgailis, D. An expansion of the free Markov field. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 1, 181-186, 232. (Author's summary) 80e:82029 82A42 (60G60)  
(with Dobrušin, R. L.) On the innovation problem for Gaussian Markov random fields. *Z. Wahrsch. Verw. Gebiete* 49 (1979), no. 3, 275-291. (Loren D. Pitt) 80j:60084 60G60 (60H15)  
On the Markov property of a class of linear infinitely divisible fields. *Z. Wahrsch. Verw. Gebiete* 49 (1979), no. 3, 293-311. (Loren D. Pitt) 80j:60085 60G60 (60H15)
- Surlinov, Ju. A. An iterative-zonal method of investigation and computation of radiant heat transfer in an absorbing and scattering medium. (Russian) *Izv. Sibirk. Otdel. Akad. Nauk SSSR Ser. Tehn. Nauk* No. 2 (1978), 106-125, 168. (Author's summary) 80a:80007 80A20 (65R20)
- Surmanidze, O. E. Direct decompositions of locally compact abelian groups. (Russian. Georgian and English summaries) *Sakharth. SSR Mecn. Akad. Moambe* 89 (1978), no. 2, 293-295. (Helmut Boseck) 80a:22005 22B05  
Direct decomposition of linearly discrete abelian groups. (Russian. Georgian and English summaries) *Sakharth. SSR Mecn. Akad. Moambe* 89 (1978), no. 3, 529-532. (J. Hausen) 80a:20063 20K25
- Surova, N. S. An investigation of the problem of reconstructing a derivative by using an optimal regularizing integral operator. (Russian) *Numerical methods and programming*, No. 1 (Russian), pp. 30-34, 195. *Saratov. Gos. Univ., Saratov*, 1977. (B. T. Poljak) 80i:65024 65D25
- Surovov, L. K. (with Vilkov, V. B.) Some sufficient conditions of existence of a saddle point for the Lagrange function. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 3, 11-15, 121. (Authors' summary) 80k:49017 49B36
- Surowski, David B. Permutation characters of finite groups of Lie type. *J. Austral. Math. Soc. Ser. A* 27 (1979), no. 3, 378-384. (S. I. Gelfand) 80k:20020 20G05 (20C20)
- Sury, J. The image identification of automatic acoustic sensor by the method of "cuts". (Russian summary) *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* 8 (1979), no. 3, 161-177. (Author's summary) 80e:68227 68G10
- Suryanarayana, D. Quasiperfect numbers. II. *Bull. Calcutta Math. Soc.* 69 (1977), no. 6, 421-426. (G. Greaves) 80m:10003 10A20  
On a paper of S. Chowla and H. Walum: "On the divisor problem" (Proceedings of Symposia on Pure Mathematics, Vol. VIII, pp. 138-143, Amer. Math. Soc., Providence, R.I., 1965). *J. Indian Math. Soc. (N.S.)* 41 (1977), no. 3-4, 293-299 (1978). (S. L. Segal) 80a:10063 10H25  
On the functional equation  $S(m, n)F(n/(m, n)) = F(n)h(n/(m, n))$ . *Aequationes Math.* 18 (1978), no. 3, 322-329. (András Sárközy) 80g:10007 10A20  
Generalization of two identities of Ramanujan and Eckford Cohen. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 2, 424-430. (B. Garrison) 80b:10051 10G05  
(with Gandhi, J. M.; Kasube, H.) Congruences for Bernoulli numbers modulo  $p^3$ . (Italian summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 3, 517-525. (Wells Johnson) 80j:10017 10A40  
(with Subbarao, M. V.) Sums of the divisor and unitary divisor functions. *J. Reine Angew. Math.* 302 (1978), 1-15. (Aleksandar Ivic) 80d:10049 10H25 (10H15)  
(with Subrahmanyam, P.) The maximal  $k$ -free divisor of  $m$  which is prime to  $n$ . II. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 3-4, 239-260. (E. J. Scourfield) 80i:10062 10H25
- Šurygin, V. A. Estimates of the complexity of normal algorithms. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 5, 1097-1101. (V. N. Agafonov) 80b:03059 03D15 (68C25)
- Šurygin, V. V. Totally geodesic subspaces in spaces over algebras. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* 1977, no. 11(186), 127-129. (J. Vanžura) 80a:53048 53C15  
Analytic subspaces of spaces over algebras. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* 1978, no. 4(191), 127-131. (L. Tamásy) 80e:53011 53A99
- Susarla, V. (with O'Bryan, Thomas E.) Empirical Bayes interval estimates involving uniform distributions. *Comm. Statist. A—Theory Methods* 8 (1979), no. 4, 385-397. (R. S. Singh) 80k:62011 62C12 (62F15)  
(with Phadia, Eswar G.) An empirical Bayes approach to two-sample problems with censored data. *Comm. Statist. A—Theory Methods* 8 (1979), no. 13, 1327-1351. (R. S. Singh) 80m:62008 62C12 (62G10)
- Suškevič, T. A. Calculation of strong anisotropy of scattering in problems of radiation propagation with a unidirectional source. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 132* (1979), 32 pp. (Author's summary) 80k:26010 86A35 (65P05, 78A45)  
(with Kuz'mina, M. G.; Strelkov, S. A.) A discrete analogue of the transfer equation of polarized radiation in plane strata. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 143* (1979), 34 pp. (Authors' summary) 80k:80006 80A20  
(with Mišin, I. V.) Mathematical model of a space-frequency characteristic of an "underlying surface-atmosphere" system. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 76* (1979), 29 pp. (Authors' summary) 80m:78003 78A10 (86A10)
- Suško, V. G. (with Pjažinskii, V. I.) Small-parameter asymptotics of some solutions to the Cauchy problem for a quasilinear parabolic equation. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 2, 283-285. (V. M. Isakov) 80k:35046 35K55
- Suško, V. N. Fermization of the  $(\sin \phi)_2$ -interaction in a box. (Russian. English summary) *Teoret. Mat. Fiz.* 37 (1978), no. 2, 171-202. (S. V. Temko) 80k:81055 81C99 (46N05)
- Suškov, B. G. (with Samylovskii, A. I.) Piecewise linear approximation of a nonconvex set by a polyhedron. (Russian) *Z. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 878-888, 1081. (Authors' summary) 80j:65012 65D10 (57Q55, 90C25)
- Suškova, T. A. Construction of an approximate solution of a second-order linear differential equation in the neighborhood of a multiple turning point. (Russian) *Asymptotic methods in systems theory (Russian)*, pp. 96-104. *Irkutsk. Gos. Univ., Irkutsk*.

1977. (From the text) **80j:34015** 34A45 (34E20)
- Semilia, A. A.** (with Kopeiko, V. I.) Quadratic modules over polynomial rings. (Russian) Algebraic numbers and finite groups. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **86** (1979), 114–124, 190–191. (W. Vogel) **80k:13007** 13F20 (10C05, 14F05)
- Sussangkarn, Chal** (with Goldman, Steven Marc) On the concept of fairness. *J. Econom. Theory* **19** (1978), no. 1, 210–216. (Andrew Schotter) **80a:90009** 90A06 (90A14)
- Süsse, Herbert** (with Oelschlägel, Dieter) Fehlerabschätzung beim Verfahren von Wolfe zur Lösung quadratischer Optimierungsprobleme mit Hilfe der Intervallarithmetik. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* **9** (1978), no. 3, 389–396. (Authors' summary) **80a:90109** 90C20 (65G10)
- (with Oelschlägel, Dieter; Schmielow, Roswitha) Die Behandlung von Aufgaben aus der Optimierung dynamischer Systeme mittels intervallanalytischer Methoden. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* **21** (1979), no. 1, 105–111. (Authors' summary) **80g:93056** 93C99 (65G10)
- Sussmann, Hector J.** (with Zahler, Raphael S.) A critique of applied catastrophe theory in the behavioral sciences. Applications of catastrophe theory in the behavioral and life sciences. *Behavioral Sci.* **23** (1978), no. 5, 383–389. (Editors) **80b:58018** 58C28
- (with Zahler, Raphael S.) Catastrophe theory as applied to the social and biological sciences: a critique. Mathematical methods in the social sciences, III. *Synthese* **37** (1978), no. 2, 117–216. (I. Stewart) **80h:58001** 58-02 (00A69, 58C28, 92-02)
- Subanalytic sets and feedback control. *J. Differential Equations* **31** (1979), no. 1, 31–52. (H. R. Gluck) **80b:34005** 32H05 (32B20, 57R25)
- A bang-bang theorem with bounds on the number of switchings. *SIAM J. Control Optim.* **17** (1979), no. 5, 629–651. (F. S. Van Vleck) **80a:49009** 49A36 (93C15)
- Šutorović, A. M.** Adequate dual measures of similarity in problems of pattern recognition with heterogeneous criteria. (Russian) *Vychisl. Sistemy No. 69 Voprosy Obrabotki Informacii pri Proektirovanii Sistem* (1977), 147–152, 158. (V. D. Dimitrov) **80d:68123** 68G10
- Šustov, A. P.** (with Aserova, R. M.; Smirnov, Ju. F.; Tolstoj, V. N.) An algebraic approach to the analysis of the geometry of deformed nuclei in the Hartree-Fock method with projections. (Russian. Kazakh summary) Materials of the 28th Meeting on Nuclear Spectroscopy and the Structure of Atomic Nuclei (Alma-Ata, 1978) (Russian). *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* **1978**, no. 6, 67–75, 95. (Authors' summary) **80c:81124** 81G35 (22E70)
- Suzuki, Y.** (with Tóth, K.) On the role of some subgroups of the Poincaré group in models of high-energy physics. I. (Italian and Russian summaries) *Nuovo Cimento A* (11) **52** (1979), no. 4, 479–499. (S. Sankaran) **80i:81064** 81G20
- Suzko, Roman** (with Weinfeld, Tamara) Filters and natural extensions of closure systems. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **8** (1979), no. 3, 130–132. (From the introduction) **80m:03063** 03B99
- Suszycki, Alfred** On extensions of multivalued maps. (Russian summary) *Bull. Acad. Polon. Sci. Ser. Sci. Math.* **27** (1979), no. 2, 183–188. (G. L. Cain, Jr.) **80i:54019** 54C60 (54C20, 54C55, 54C56)
- Šutek, L.** (with Bednár, P.) A finite sequential automaton as the model of a continuous dynamic system. Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976), Part 3, pp. 1427–1439, North-Holland, Amsterdam, 1978. (Zbigniew Nahorki) **80i:93040** 93C60 (68D15)
- Suter, Ueli** (with Sigrist, François) On immersions  $CP^n \rightarrow R^{4n-3a(n)}$ . Algebraic topology (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977), pp. 106–115, *Lecture Notes in Math.*, 673, Springer, Berlin, 1978. (Oscar Burlet) **80g:57042** 57R42
- (with Sigrist, François) On the exponent and the order of the groups  $J(x)$ . Algebraic topology (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977), pp. 116–122, *Lecture Notes in Math.*, 673, Springer, Berlin, 1978. (Richard R. Patterson) **80d:55019** 55R40
- Sutherland, Bill** A brief history of the quantum soliton with new results on the quantization of the Toda lattice. Conference on the Theory and Application of Solitons (Tucson, Ariz., 1976). *Rocky Mountain J. Math.* **8** (1978), no. 1-2, 413–428. (Enrico Onofri) **80h:81037** 81C99 (58F06)
- Sutherland, Colin E.** Type analysis of the regular representation of a nonunimodular group. *Pacific J. Math.* **79** (1978), no. 1, 225–250. (G. L. Litvinov) **80i:22018** 22D25 (46L45)
- Sutherland, W. A.** (with Crabb, M. C.) A bundle over the tangent sphere-bundle of a  $\pi$ -manifold. *Quart. J. Math. Oxford Ser. (2)* **30** (1979), no. 117, 1–19. (David Handel) **80c:55036** 55S40
- Sutherland, W. R. S.** (with Mangasarian, O. L.) Solution of the linear inverse vector optimization problem by a single linear program. *Math. Programming* **15** (1978), no. 2, 232–235. (J. A. Tomlin) **80f:90075** 90C05
- Sutinen, Joo G.** See Control theory in mathematical economics, **80f:90006**
- Suttorp, L. G.** Numerical solution of the spinor Bethe-Salpeter equation and the Goldstein problem. *Ann. Physics* **113** (1978), no. 2, 257–276. (Author's summary) **80j:81037** 81D10
- Šuvajová, ě. Z.** Construction of an element of the best approximation of a derivative. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 5(203), 203–204. (E. Neuman) **80b:65019** 65D15 (41A10)
- Suvaila, L. V.** The structure of the solutions of a mixed problem and the Cauchy problem for a nonstationary equation. (Russian) *Mathematical models and numerical methods (Papers, Fifth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 103–108, Banach Center Publ., 3, PWN, Warsaw, 1978. (From the text) **80d:35035** 35G05
- The stabilization of the solution of a mixed problem for a nonstationary equation. (Russian) Boundary value problems for differential equations. *Mat. Issled.* **46** (1978), 75–90, 98. (A. P. Soldatov) **80b:35076** 35K35
- Ševčuk, V. I.** The minimal number of edges in a doubly connected graph with given diameter. (Russian) Principles of the construction of information disseminating devices (Russian), pp. 87–90, 161, "Nauka", Moscow, 1978. (A. Astromoff) **80c:05095** 05C40
- Suvorčenkova, G. A.** (with Otelbaev, M.) A necessary and sufficient condition of boundedness and continuity for a class of Uryson operators. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 2, 428–432, 461. (J. Girshovich) **80g:47080** 47H99 (47G05)
- Suvorov, G. D.** (with Ivanov, O. V.; Pomen'nikov, Ju. V.) Conformally invariant bicompact extensions of a simply connected domain. (Russian) *Dokl. Akad. Nauk*
- SSSR* **240** (1978), no. 6, 1281–1284. (E. Halfar) **80k:54040** 54D35
- (with Aptekar, A. S.; Gusarova, N. I.; Popov, V. I.; Prohoda, G. M.; Ševčuk, V. I.) The method of simplex-splines (as applied to the optimal layout of gas pipelines) (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **No. 9** (1978), 708–709, 777. (Authors' summary) **80j:90022** 90B99
- See also Metric questions of the theory of functions and mappings, **80c:30012**
- Metric questions of the theory of functions and mappings, **80j:30003** and Questions in the metric theory of mappings and its application, **80j:30004**
- Suzawa, Gilbert S.** A theory of long-run production function. *Control theory in mathematical economics (Proc. Third Kingston Conf., Part B, Univ. Rhode Island, Kingston, R.I., 1978)*, pp. 1–37, *Lecture Notes in Pure and Appl. Math.*, 47, Dekker, New York, 1979. (From the introduction) **80g:90059** 90B30
- Suzuki, Fukuzō** (with Sunouchi, Haruo) Local perturbations of difference approximation for hyperbolic equations. *Bull. Sci. Engrg. Res. Lab. Waseda Univ.* **No. 83** (1978), 72–82. (Authors' summary) **80f:65095** 65M05
- Suzuki, Gintaro** Note on unbiased estimation of the standard deviation of normal distribution. (Japanese. English summary) *Proc. Int. Statist. Math.* **26** (1979), no. 1, 133–136. (Author's summary) **80i:62021** 62F10
- Suzuki, Hisao** The four estates and arithmetics—Nō (farmers). (Japanese) *Sūgakushi Kenkyū* **No. 77** (1978), 4–8. (S. Hitotumatu) **80f:01006** 01A27
- (with Ōya, Shinichi; Shimodaira, Kazuo; Hagino, Kōgo; Takagi, Shigeo) Memories of the days when the Society was founded. (Japanese) Special issue on the 20th anniversary of Sūgakushi Kenkyū. *Sūgakushi Kenkyū* **No. 80** (1979), 76–88. (K. Inoue) **80k:01008** 01A27 (01A60)
- Suzuki, Hisatoshi** A generalized knapsack problem with variable coefficients. *Math. Programming* **15** (1978), no. 2, 162–176. (Eitan Zemel) **80c:90109** 90C10
- Suzuki, Humio** On the definition of the wave front set of a distribution. *Tsukuba J. Math.* **2** (1978), 127–134. (Ju. V. Egorov) **80k:58095** 58G15
- Suzuki, Jingoro** The normality of product with a paracompact  $M$ -space. *Bull. Tokyo Gakuji Univ.* (4) **30** (1978), 17–20. (C. M. Pareek) **80a:54031** 54D15 (54D20)
- Suzuki, Kazuyuki** On a preventive maintenance with monitored system. (Japanese summary) *J. Oper. Res. Soc. Japan* **22** (1979), no. 1, 69–83. (Masanori Kodama) **80h:90077** 90B25
- Suzuki, Masaki** Intrinsic metrics of pseudoconvex domains in  $C^n$ . *Math. Rep. Toyama Univ.* **2** (1979), 125–132. (Marcus Wright) **80k:32037** 32F15 (32E25, 32H15)
- Suzuki, Masahiko** (with Yoshinaga, Etsuo) On the topological types of singularities of Brieskorn-Pham type. *Sci. Rep. Yokohama Nat. Univ. Sect. I* **No. 25** (1978), 37–43. (P. Orlik) **80k:32009** 32C40 (14B05)
- (with Yoshinaga, Etsuo) Topological types of quasihomogeneous singularities in  $C^n$ . *Topology* **18** (1979), no. 2, 113–116. (H. B. Laufer) **80k:32017** 32C40
- Suzuki, Masakazu** Sur les intégrales premières de certains feuilletages analytiques complexes. *Fonctions de plusieurs variables complexes, III (Sém. François Norguet, 1975–1977)*, pp. 53–79, 394, *Lecture Notes in Math.*, 670, Springer, Berlin, 1978. (V. A. Golubeva) **80h:57038** 57R30 (32C25, 32L99, 58A15)
- Sur les opérations holomorphes de  $C$  et de  $C^*$  sur un espace de Stein. *Fonctions de plusieurs variables complexes, III (Sém. François Norguet, 1975–1977)*, pp. 80–88, 394, *Lecture Notes in Math.*, 670, Springer, Berlin, 1978. (J. Kajiwara) **80h:32057** 32M05 (32E10, 32L99)
- Suzuki, Masuo** Existence of the thermodynamic limit in nonequilibrium systems. *J. Statist. Phys.* **20** (1979), no. 2, 163–173. (M. Lawrence Glasser) **80c:82037** 82A55
- (with Sogo, Kiyoshi; Matsuba, Ikuro; Ikeda, Hiroshi; Chikama, Terumi; Takano, Hiroshi) Real-space renormalization group approach to critical dynamics. Migdal approximation and other new methods. *Progr. Theoret. Phys.* **61** (1979), no. 3, 864–880. (Authors' summary) **80c:82022** 82A25
- Suzuki, Naoyoshi** On the generalized local cohomology and its duality. *J. Math. Kyoto Univ.* **18** (1978), no. 1, 71–85. (Markus Brodmann) **80i:13004** 13D03
- Suzuki, Norihisa** (with Flon, Lawrence) Consistent and complete proof rules for the total correctness of parallel programs. 19th Annual Symposium on Foundations of Computer Science (Ann Arbor, Mich., 1978), pp. 184–192, IEEE, Long Beach, Calif., 1978. (Authors' summary) **80c:68026** 68B10 (68B20)
- (with Flon, Lawrence) Nondeterminism and the correctness of parallel programs. Formal description of programming concepts (Proc. IFIP Working Conf., St. Andrews, N.B., 1977), pp. 589–608, North-Holland, Amsterdam, 1978. (Authors' summary) **80c:68056** 68B20
- (with Jefferson, David) Verification decidability of Presburger array programs. *J. Assoc. Comput. Mach.* **27** (1980), no. 1, 191–205. (Authors' summary) **80m:68047** 68C30 (03B25, 68B10, 68G15)
- Suzuki, Osamu** The problems of Riemann and Hilbert and the relations of Fuchs in several complex variables. *Équations différentielles et systèmes de Pfaff dans le champ complexe (Sem., Inst. Rech. Math. Avancée, Strasbourg, 1975)*, pp. 325–364, *Lecture Notes in Math.*, 712, Springer, Berlin, 1979. (D. Lieberman) **80k:32031** 32L99 (32D15, 34C06)
- Remarks on examples of 2-dimensional weakly 1-complete manifolds which admit only constant holomorphic functions. *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* **25** (1979), no. 3, 253–261. (Alan T. Huckleberry) **80i:32049** 32F10
- Suzuki, R.** (with Kawato, M.) Biological oscillators can be stopped—topological study of a phase response curve. *Biol. Cybernet.* **30** (1978), no. 4, 241–248. (From the summary) **80c:92006** 92A05
- (with Kawato, M.; Sokabe, M.) Synergism and antagonism of neurons caused by an electrical synapse. *Biol. Cybernet.* **34** (1979), no. 2, 81–89. (From the summary) **80g:92010** 92A09
- Suzuki, Takashi** Equations of motion in Ehrenfest's theorem for heavy-ion collisions. (Italian summary) *Nuovo Cimento A* (11) **48** (1978), no. 2, 247–255. (Francesco Guerra) **80c:81091** 81F20
- On the rate of convergence of the difference finite element approximation for parabolic equations. *Proc. Japan Acad. Ser. A Math. Sci.* **54** (1978), no. 10, 326–331. (M. Zlamal) **80a:65233** 65N30
- Suzuki, Toshiaki** On zeta functions associated with quadratic forms of variable coefficients. *Nagoya Math. J.* **73** (1979), 117–147. (T. Ono) **80j:10034** 10C15 (10D24, 10H10)
- Distributions with automorphy and Dirichlet series. *Nagoya Math. J.* **73** (1979), 157–169. (O. M. Fomenko) **80h:10038** 10D24



- Suzumura, Kotaro** On the consistency of libertarian claims. *Rev. Econom. Stud.* 45 (1978), no. 2, 329-342. (From the introduction) **80j:90012** 90A07 (90A06)
- Suzumura, Nobuo** (with Ishii, Naohiro; Iwata, Akira) Classification of nonstationary time series by Kullback's information measure. (Japanese. English summary) *Bull. Nagoya Inst. Tech.* 30 (1978), 323-332 (1979). (From the summary) **80j:62073** 62M99
- (with Ishii, Naohiro; Iwata, Akira) Evaluation of an autoregressive process by information measure. *Internat. J. Systems Sci.* 9 (1978), no. 7, 743-751. (From the summary) **80a:62144** 62M10 (94A17)
- (with Ishii, Naohiro; Iwata, Akira) Segmentation of nonstationary time series. *Internat. J. Systems Sci.* 10 (1979), no. 8, 883-894. (Authors' summary) **80h:94016** 94A17 (62M15)
- Švabka, A. B.** (with Mahan'kov, V. G.; Kummer, G.) Many-dimensional U(1) solitons, their interactions, resonances and bound states. Special issue on solitons in physics. *Phys. Scripta* 20 (1979), no. 3-4, 454-461. (Brian DeFacio) **80j:81017** 81C05 (35Q20, 58G35)
- Švabka, N. Ju.** Complex loading and certain problems of the bifurcation of the elastic-plastic process. *Prikl. Mat. Meh.* 41 (1977), no. 5, 935-942 (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 5, 961-969 (1979). (J. L. Nowinski) **80e:73030** 73E99
- Two forms of bifurcation of a deformation process in an elastoplastic solid under combined loading. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 8* (1979), 651-655, 688. (Author's summary) **80g:73034** 73E99 (73H10)
- Complex loading and some questions of the stability of construction materials. (Russian) *Prikl. Meh.* 15 (1979), no. 2, 6-34, 110. (Author's summary) **80j:73036** 73H99 (73K20)
- Svanidze, M. Z.** Potential type integrals on infinite manifolds. (Russian. Georgian and English summaries) *Sobčik. Akad. Nauk Gruzin. SSR* 93 (1979), no. 2, 305-308. (R. L. Cooke) **80k:31006** 31C99
- Svanidze, N. V.** Existence of invariant tori for a three-dimensional billiard, which are concentrated in the vicinity of a "closed geodesic on the boundary region". (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 4(202), 225-226. (D. Newton) **80k:58086** 58F35 (34C35)
- Švarc, A. S.** (with Romanov, V. N.; Frolov, I. V.) Spherically symmetric solitons. (Russian. English summary) *Teor. Mat. Fiz.* 37 (1978), no. 3, 305-318. (Authors' summary) **80b:81091** 81E99 (58G10)
- Instantons and fermions in the field of interaction. *Comm. Math. Phys.* 64 (1979), no. 3, 233-268. (From the introduction) **80h:81060** 81E15 (58G10, 58G25, 81G25)
- The partition function of a degenerate functional. *Comm. Math. Phys.* 67 (1979), no. 1, 1-16. (Author's summary) **80f:81091** 81E99 (58G10)
- Švarc, G. F.** See Schwarz, G. F.
- Švarcman, O. V.** (with Vinberg, E. B.) Riemann surfaces. (Russian) *Algebra, Topology, Geometry, Vol. 16* (Russian), pp. 191-245, 247 (errata insert), VINITI, Moscow, 1978. (Anatoly Libgaber) **80k:30047** 30F99 (14H99, 32G15, 32G20, 57N05)
- (with Bernstein, I. N.) Chevalley's theorem for complex crystallographic Coxeter groups. (Russian) *Funktsional. Anal. i Prilozhen.* 12 (1978), no. 4, 79-80. (P. Oriik) **80d:32007** 32B30 (20H15, 32C40)
- Švarcman, S. M.** (with Gavrilov, S. P.; Gitman, D. M.) Green's functions in an external electric field. *Jadernaja Fiz.* 29 (1979), no. 4, 1097-1110 (Russian); translated as *Soviet J. Nuclear Phys.* 29 (1979), no. 4, 567-572. (K. Wódkiewicz) **80k:81211** 81L05
- Švartn, S. M.** Cyclic sets. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 1, 189-203, 270. (József Pelikán) **80k:05021** 05A15
- Sve, C.** (with Miklowitz, Julius) Lamb's problem for an impulsive line load on a laminated composite. *Modern problems in elastic wave propagation (Proc. IUTAM Sympos., Northwestern Univ., Evanston, Ill., 1977)*, pp. 305-326, Wiley, New York, 1978. (J. Ignaczak) **80h:73023** 73D05
- Svec, Alois** On an integral formula. (Russian summary) *Časopis Pěst. Mat.* 103 (1978), no. 3, 303-307. (Dumitru Filipescu) **80a:53080** 53C65 (53C40)
- The sixtieth birthday of Prof. Karel Svoboda. (Czech) *Časopis Pěst. Mat.* 103 (1978), no. 4, 421-423. (Editors) **80a:01045** 01A70
- An integral formula for non-Codazzi tensors. *Czechoslovak Math. J.* 28(103) (1978), no. 3, 434-438. (J. R. Vanstone) **80a:53053** 53C20
- Contributions to the theory of infinitesimal II-isometries. *Math. Nachr.* 83 (1978), 73-82. (C.-C. Hsiung) **80h:53004** 53A05 (70B10)
- On ovoids in  $E^3$ . *Math. Nachr.* 83 (1978), 295-300. (George Stamou) **80e:53060** 53C45
- (with Afwat, Mohamed) Global differential geometry of hypersurfaces. (Czech and Russian summaries) *Rozprawy Československé Akad. Věd Rada Mat. Přírod. Věd* 88 (1978), no. 7, 75 pp. (P. Wintgen) **80g:53040** 53C40 (53B25)
- Svec, M.** Some problems concerning the functional differential equations. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977)*, pp. 405-414, Lecture Notes in Math., 703, Springer, Berlin, 1979. (S. D. Miluleva) **80g:34077** 34K10
- Švec, R. M.** (with Pidstrigac, Ja. S.) ★Термоупругость тонких оболочек. (Russian) [Thermoelasticity of thin shells] "Naukova Dumka", Kiev, 1978, 343 pp. (Vadim Komkov) **80d:73003** 73-02 (35Q99, 73J99, 73U05)
- Svec, V. F.** Stochastic equations for plasma particles. (Russian. English summary) *Teoret. Mat. Fiz.* 39 (1979), no. 2, 268-276. (Vladimir L. Savel'ev) **80k:82055** 82A45
- Svecov, V. I.** Optimization of multilevel organization of data. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 4, 24-28 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 4, 18-22 (1979). (Author's summary) **80h:68018** 68B15 (68H05)
- Štredenko, S. V.** (with Turku, H.) Interpolation of  $P$  sequences by  $H^2$  functions over a half-plane. *Math. Balkanica* 6 (1976), 273-280 (1978). (Knut Øyma) **80i:30056** 30D55 (30E05)
- Šteĵar, Vítězslav** Degrees of interpretability. *Comment. Math. Univ. Carolin.* 19 (1978), no. 4, 789-813. (A. Levy) **80k:03072** 03F25
- Stenson, Leif** (with Bjerhammar, Arne) The convergence of harmonic reduction to an internal sphere. *Bull. Géodésique* 53 (1979), no. 3, 247-257. (Pierre Bois) **80m:86007** 86A30 (60G10)
- Svetlichny, A. G.** Direct and inverse problems of electrodynamics. (Russian) *Problems in mathematical physics and numerical mathematics* (Russian), pp. 287-298, 328, "Nauka", Moscow, 1977. (Author's summary) **80e:78008** 78A25 (65P05)
- (with Eremin, Ju. A.) Some properties of a parametric system of basis functions of the projection method. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* 1978, no. 2, 66-69. (Ju. K. Dem'janović) **80a:65260** 65P05
- (with Il'inskii, A. S.) Direct and inverse problems of electrodynamics. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* 1978, no. 4, 3-11. (Authors' summary) **80e:78009** 78A25 (65J05)
- (with Gabov, S. A.) Applications of angular potential. Solution of problems of the diffraction of tide waves. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 7, 1271-1278, 1343. (M. M. Skriganov) **80i:55063** 35J25 (35C99)
- (with Eremin, Ju. A.; Il'inskii, A. S.) A method of nonorthogonal series in problems of electromagnetic wave diffraction. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 6, 1351-1354. (Alexander Alenicyan) **80m:78022** 78A45
- Svestka, Joseph A.** A continuous variable representation of the traveling salesman problem. *Math. Programming* 15 (1978), no. 2, 211-213. (Gerald Hammer) **80e:90062** 90B10
- Svetlichny, George** (with Otterson, Paul) Derivative dependent infinitesimal deformations of differentiable functions. *Contemporary developments in continuum mechanics and partial differential equations (Proc. Internat. Sympos., Inst. Mat., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 466-471, North-Holland Math. Studies, 30, North-Holland, Amsterdam, 1978. (P. Ver Eecke) **80i:58049** 58H05
- Svetlichnaja, N. V.** (with Ignat'ev, A. O.; Savchenko, O. Ja.) Stability in the critical case of  $n$  pairs of purely imaginary roots. (Russian) *Meh. Toerd. Tela* No. 11 (1979), 95-98, 120. (V. M. Popov) **80j:34057** 34D20 (70K30)
- Švitra, Donatas** Investigation of the Hutchinson equation. (Russian. Lithuanian and English summaries) *Differentsial'nye Uravnenija i Primenen.—Trudy Sem. Procestry Optimal. Upravlenija I Sekcija No. 20* (1978), 25-32, 54. (Author's summary) **80e:92043** 92A15
- Svoboda, Antonín** See Proceedings: IEEE Symposium on Computer Arithmetic, **80e:68001**
- Svoboda, Karel** Some global characterizations of the sphere in  $E^4$ . (Czech summary) *Časopis Pěst. Mat.* 103 (1978), no. 4, 391-399, 409. (David A. Hoffman) **80k:53008** 53A07
- Remark on surfaces in  $E^4$  satisfying certain relations between covariant derivatives of the mean and Gauss curvatures. *Comment. Math. Univ. Carolin.* 19 (1978), no. 4, 619-626. (Y. Katsurada) **80e:53003** 53A05 (53C40)
- On surfaces in  $E^3$  with constant Gauss curvature. *Comment. Math. Univ. Carolin.* 19 (1978), no. 4, 755-761. (Y. Katsurada) **80d:53039** 53C45 (53A05)
- See also Švec, Alois, **80i:01045**
- Svoboda, Linda J.** (with Hallam, Thomas G.; Gard, Thomas C.) Persistence and extinction in three species Lotka-Volterra competitive systems. *Math. Biosci.* 46 (1979), no. 1-2, 117-124. (Hal Leslie Smith) **80h:92012** 92A15 (34C05)
- Swaminathan, Haritharan** (with Algina, James) Scale freeness in factor analysis. *Psychometrika* 43 (1978), no. 4, 581-583. (Authors' summary) **80g:62038** 62H25
- Swamy, B. L. N.** (with Naik, N.; Misra, S. S.) A note on difference sets in Boolean algebras. *Math. Ed. (Sivan)* 12 (1978), no. 2, B35-B37. (Ph. Dwinger) **80d:06011** 06E99
- Swamy, M. N. S.** (with Ahmad, M. O.; Reddy, Harnatha C.; Ramachandran, V.) Cascade synthesis of a class of multivariable positive real functions. *IEEE Trans. Circuits and Systems* 25 (1978), no. 10, 871-878. (From the summary) **80a:93148** 93E10
- (with Chakrabarti, S.; Bhattacharyya, B. B.) On simultaneous diagonalization of a collection of Hermitian matrices. *Matrix Tensor Quart.* 29 (1978/79), no. 2, 35-54. (Frank J. Hall) **80e:15006** 15A21
- (with Ahmad, M. O.; Reddy, C. H.; Ramachandran, V.) A class of multivariable positive real functions realizable by resistively terminated lossless ladder networks. *IEEE Trans. Circuits and Systems* 26 (1979), no. 8, 659-662. (Authors' summary) **80h:94041** 94C05
- (with Ahmad, M. O.; Reddy, C. H.; Ramachandran, V.) Ladder realizations of multivariable positive real functions. *J. Franklin Inst.* 307 (1979), no. 2, 71-81. (Authors' summary) **80e:94016** 94C05
- (with Ahmad, M. O.; Reddy, C. H.; Ramachandran, V.) Partial derivative properties of multivariable cascaded networks. *J. Franklin Inst.* 307 (1979), no. 6, 315-329. (Authors' summary) **80g:94071** 94C05
- (with Karivaratharajan, P.; Reddy, Harnatha C.; Ramachandran, V.) Generation of two-dimensional digital functions without nonessential singularities of the second kind. *IEEE Trans. Acoust. Speech Signal Process.* 28 (1980), no. 2, 216-223. (Authors' summary) **80m:94008** 94A11
- Swamy, P. A. V. B.** (with Mehta, J. S.; Rappoport, P. N.) Two methods of evaluating Hoerl and Kennard's ridge regression. *Comm. Statist. A—Theory Methods* 7 (1978), no. 12, 1133-1155. (R. W. Farebrother) **80e:62052** 62J07
- See also Vinod, Hrishikesh D., **80h:62053**
- Swamy, S. R.** (with Kulkarni, V. N.) On the univalence of some analytic functions. II. *Indian J. Pure Appl. Math.* 9 (1978), no. 11, 1131-1137. (S. M. Shah) **80d:30007** 30C45
- Swan, George W.** Immunological surveillance and neoplastic development. Conference on Deterministic Differential Equations and Stochastic Processes Models for Biological Systems (San Cristobal, N.M., 1977). *Rocky Mountain J. Math.* 9 (1979), no. 1, 143-148. (Brian D. Sleeman) **80d:92010** 92A07
- Optimal control in some cancer chemotherapy problems. *Internat. J. Systems Sci.* 11 (1980), no. 2, 223-237. (Author's summary) **80m:92002** 92A07 (93C99)
- Swandic, J. R.** On the description of a scattering medium by the number of particles scattered. *Astrophys. and Space Sci.* 57 (1978), no. 1, 99-111. (Author's summary) **80d:81104** 81F10
- Swanepoel, J. W. H.** (with Geertsema, J. C.; Lombard, F.) On the asymptotic theory of Farrell's sequential confidence interval procedures. *South African Statist. J.* 12 (1978), no. 2, 117-143. (Lionel Weiss) **80a:62127** 62L12 (62G05)
- Swanson, C. A.** (with Heywood, John G.; Nussair, E. S.) On the zeros of solutions of elliptic inequalities in bounded domains. *J. Differential Equations* 28 (1978), no. 3, 345-353. (L. E. Payne) **80a:35006** 35B05
- (with Kreith, Kurt) Conjugate points for nonlinear differential equations. *Pacific J.*

- Math.* 75 (1978), no. 1, 171–184. (G. A. Bogar) **80m:34032** 34C10  
Wirtinger's inequality. *SIAM J. Math. Anal.* 9 (1978), no. 3, 484–491. (J. B. Butler, Jr.) **80a:35036** 35J25 (35B99)  
Semilinear second-order elliptic oscillation. *Canad. Math. Bull.* 22 (1979), no. 2, 139–157. (V. A. Kondrat'ev) **80a:35028** 35J15 (35B05)
- Swanson, Ellen** ★Mathematics into type. Copy editing and proofreading of mathematics for editorial assistants and authors. Revised edition. *American Mathematical Society, Providence, R.I.*, 1979. x + 90 pp. ISBN 0-8218-0053-1 (Editors) **80i:00003** 00A05
- Swanson, Lail** Loosely Bernoulli Cartesian products. *Proc. Amer. Math. Soc.* 73 (1979), no. 1, 73–78. (E. M. Klimko) **80e:28033** 28D20
- Swanson, Leonard G.** (with Hansen, Rodney T.) Number-theoretic characterization of the subgroups and factor groups of a finite cyclic group. *Internat. J. Math. Ed. Sci. Tech.* 10 (1979), no. 3, 455–460. (Authors' summary) **80b:20040** 20D20 (10A05)  
(with Hansen, Rodney T.) Unitary divisors. *Math. Mag.* 52 (1979), no. 4, 217–222. (Heiko Harborth) **80i:10004** 10A05
- Swanson, Mark S.** Functional methods in nonrelativistic field theories. *Phys. Rev. D* (3) 18 (1978), no. 8, 2821–2833. (H. S. Green) **80e:81082** 81E99 (81H05)  
Path integral derivation of the self-consistency condition. *Phys. Lett. B* 88 (1979), no. 1–2, 105–108. (Author's summary) **80i:81047** 81C35
- Swanson, R. C.** Fredholm intersection theory and elliptic boundary deformation problems. I. *J. Differential Equations* 28 (1978), no. 2, 189–201. (Themistocles M. Rassias) **80i:58024a** 58E99 (35J99)  
Fredholm intersection theory and elliptic boundary deformation problems. II. *J. Differential Equations* 28 (1978), no. 2, 202–219. (Themistocles M. Rassias) **80i:58024b** 58E99 (35J99)  
(with Chicone, Carmen C.) Equivalence and slice theory for symplectic forms on closed manifolds. *Proc. Amer. Math. Soc.* 73 (1979), no. 2, 265–270. (I. Vaisman) **80i:58015** 58D05 (58A10, 58D17)  
(with Chicone, Carmen C.) Anosov does not imply infinitesimally ergodic. *Proc. Amer. Math. Soc.* 75 (1979), no. 1, 169–170. (M. I. Brin) **80i:58038** 58F15 (28D99)
- Swardson, Mary Anne** A short proof of Kowalsky's hedgehog theorem. *Proc. Amer. Math. Soc.* 75 (1979), no. 1, 188. (Author's summary) **80b:54014** 54C25 (54A25)
- Swart, Edward Reinier** (with Allaire, Frank) A systematic approach to the determination of reducible configurations in the four-color conjecture. *J. Combin. Theory Ser. B* 25 (1978), no. 3, 339–362. (K. Appel) **80i:05041** 05C15
- de Swart, H. C. M.** (with van Dalen, D.; Doets, H. C.) ★Sets: naive, axiomatic and applied. A basic compendium with exercises for use in set theory for nonlogicians, working and teaching mathematicians and students. Translated from the Dutch. International Series in Pure and Applied Mathematics, 106. Pergamon Press, Oxford-New York-Toronto, Ont., 1978. xvii + 339 pp. ISBN 0-08-023047-4 (E. Mendelson) **80b:04001** 04-01 (03E25, 03E60)  
First steps in intuitionistic model theory: *J. Symbolic Logic* 43 (1978), no. 1, 3–12. (V. P. Orevkov) **80i:03059** 03F55 (03C99)
- Swart, Johan** (with Fourie, Jan) Banach ideals of  $p$ -compact operators. *Manuscripta Math.* 26 (1978/79), no. 4, 349–362. (O. I. Reinov) **80b:47059** 47D30
- Swartz, Blair** (with Dendy, Joel E., Jr.; Wendroff, Burton) Computing travelling wave solutions of a nonlinear heat equation. *Topics in numerical analysis, III* (Proc. Roy. Irish Acad. Conf., Trinity Coll., Dublin, 1976), pp. 447–463. Academic Press, London, 1977. (S. L. Kalla) **80i:80001** 80-04 (65P05)
- Swartz, Charles** Products of vector measures by means of Fubini's theorem. (Russian summary) *Math. Slovaca* 27 (1977), no. 4, 375–382. (Author's summary) **80i:28010** 28B05  
A generalized Orlicz-Pettis theorem and applications. *Math. Z.* 163 (1978), no. 3, 283–290. (J. J. Uhl, Jr.) **80m:28011** 28B05 (46G10)
- Swartz, Norman** (with Bradley, Raymond) ★Possible worlds. An introduction to logic and its philosophy. Hackett Publishing Co., Indianapolis, Ind., 1979. xxi + 391 pp. ISBN 0-915144-60-3, 0-915144-59-X (Stanley H. Stahl) **80m:03002** 03-01 (03A05, 03B45)
- Swartztrauber, Paul N.** A parallel algorithm for solving general tridiagonal equations. *Math. Comp.* 33 (1979), no. 145, 185–199. (Author's summary) **80b:65041** 65F05 (68C25)
- Swartup, G. A.** On a theorem of Johansson. *J. London Math. Soc.* (2) 18 (1978), no. 3, 560–562. (Gerhard X. Ritter) **80e:57007** 57N10 (57M25)  
An analogue of the Dror-Whitehead theorem. *J. London Math. Soc.* (2) 18 (1978), no. 3, 563–566. (Guido Mislin) **80i:55007** 55P10
- Swartup, Kanti** (with Garg, K. C.; Agrawal, S. C.) Complementary programming in fixed charge problems. *Acta Cienc. Indica* 4 (1978), no. 1, 66–73. (Chanchal Singh) **80a:90124** 90C30  
(with Bhatia, H. L.; Puri, M. C.) Time enumeration technique for time-cost trade-off in a transportation problem. *Cahiers Centre Études Rech. Opér.* 21 (1979), no. 1, 63–75. (Authors' summary) **80e:90061** 90C08  
(with Sharma, J. K.) Time-cost tradeoff in a multidimensional transportation problem. I. *Opsearch* 16 (1979), no. 1, 23–33. (Authors' summary) **80b:90099** 90C08
- Sweeney, Mark** (with Fulling, Stephen A.; Wald, Robert M.) Singularity structure of the two-point function quantum field theory in curved spacetime. *Comm. Math. Phys.* 63 (1978), no. 3, 257–264. (B. K. Nayak) **80i:81085** 81M05 (83C45)
- Sweet, Albert** Intended model theory. *Notre Dame J. Formal Logic* 20 (1979), no. 3, 575–592. (D. Monk) **80i:03050** 03C90 (03B60)
- Swenson, Robert J.** (with Havas, Peter) Relativistic thermodynamics of fluids. I. *Ann. Physics* 118 (1979), no. 2, 259–306. (Ian P. Grant) **80b:80003** 80A10 (53B50)
- Swetits, J. J.** A characterization of a class of barrelled sequence spaces. *Glasgow Math. J.* 19 (1978), no. 1, 27–31. (N. J. Kalton) **80i:46022** 46A45  
(with Wood, Bruce) Approximation by discrete operators. *J. Approx. Theory* 24 (1978), no. 4, 310–323. (Editors) **80d:41012** 41A35  
On summability and positive linear operators. *J. Approx. Theory* 25 (1979), no. 2, 186–188. (R. N. Mohapatra) **80e:41013** 41A36
- Swetz, Frank** The evolution of mathematics in ancient China. *Math. Mag.* 52 (1979), no. 1, 10–19. (R. C. Gupta) **80i:01003** 01A25
- Świątek, Halina** Problèmes de la régularité pour les équations fonctionnelles différentielles. *Ann. Sci. Math. Québec* 3 (1979), no. 1, 155–163. (K. Zima) **80b:35126** 35R10
- Świątkowski, T.** (with Koszela, B.; Wilczyński, Władysław) Classes of continuous real functions. *Real Anal. Exchange* 4 (1978/79), no. 2, 139–157. (F. Brooks) **80g:54018** 54C30 (26A15)  
See also *Handbook: Mathematics*, **80i:00007**
- Swieca, J. A.** (with Marino, E. C.) Non-integer topological number and infiniteness of action. *Nuclear Phys. B* 141 (1978), no. 1–2, 135–140. (Authors' summary) **80b:81075** 81E10 (57R20, 58G10)  
(with Rothe, K. D.) Path-integral representation for tunneling amplitudes in the Schwinger model. *Ann. Physics* 117 (1979), no. 2, 382–392. (Authors' summary) **80d:81030** 81C35  
(with Belvedere, L. V.; Rothe, K. D.; Schroer, B.) Generalized two-dimensional abelian gauge theories and confinement. *Nuclear Phys. B* 153 (1979), no. 1–2, 112–140. (F. R. Halpern) **80e:81094** 81G05
- Świącicka, Joanna** Small deformations of Brauer-Severi schemes. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 7, 591–593. (Lucie Bégueri) **80k:14022** 14D15
- Świerniak, Andrzej** Generalization of Peano's and Osgood's theorems on differential equations in a Banach space. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 30 (1979), 263–269. (M. Bertolino) **80i:34109** 34G20
- Swiggart, Peter** Domain restrictions in standard deductive logic. *Notre Dame J. Formal Logic* 20 (1979), no. 1, 115–129. (Stewart Shapiro) **80i:03015** 03A05
- Swinn, Randall T.** (with Delos, John B.) Semiclassical calculation of vibrational energy levels for nonseparable potentials. *Stochastic behavior in classical and quantum Hamiltonian systems* (Volta Memorial Conf., Como, 1977), pp. 306–315. *Lecture Notes in Phys.*, 93, Springer, Berlin, 1979. (Martin Kummer) **80k:81058** 81C99 (58F05, 58F14)  
(with Delos, John B.) Semiclassical calculations of vibrational energy levels for nonseparable systems using the Birkhoff-Gustavson normal form. *J. Chem. Phys.* 71 (1979), no. 4, 1706–1717. (From the summary) **80m:81039** 81C99 (35J10, 81G55)
- Swimmer, A.** (with Sandler, Todd) The properties and generation of homothetic production functions: a synthesis. *J. Econom. Theory* 18 (1978), no. 2, 349–361. (Diethard Pallaschke) **80e:90020** 90A11 (90B30)
- pol-Świrszcz, Anna** See *Pol-Świrszcz, Anna*
- Switzer, Robert M.** Postnikov towers associated with complex 2-plane and symplectic line bundles. *Math. Z.* 168 (1979), no. 1, 87–103. (Michael Eggar) **80k:55056** 55R50 (55A45, 81E10)  
Complex 2-plane bundles over complex projective space. *Math. Z.* 168 (1979), no. 3, 275–287. (P. E. Newstead) **80i:55022** 55R25 (32L05)
- Syčev, V. V.** (with Golubinskii, A. I.) Some conservation properties of the rotational flows of a gas. (Russian) *Dokl. Akad. Nauk SSSR* 237 (1977), no. 4, 798–799. (Simona Poppi) **80i:76036** 76N15
- Sydæster, Knut** ★Matematisk analyse. Bind II. (Norwegian) [Mathematical analysis. Vol. II] Second edition. Scandinavian University Books. Universitetsforlaget, Oslo, 1978. xi + 420 pp. ISBN 82-00-02419-9 (Editors) **80e:00004** 00A05 (26-01)
- Syed, Z. H.** (with Rae, A.) Sylow subgroups in a pair of locally finite groups. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 9, 288–291. (M. J. Tomkinson) **80b:20040** 20E25
- Sylla, Edith Dudley** The a posteriori foundations of natural science. Some medieval commentaries on Aristotle's *Physics*, Book I, Chapters 1 and 2. *Synthese* 40 (1979), no. 1, 147–187. (H. L. L. Busard) **80k:01017** 01A35 (03-03)
- Sylvester, Garret S.** Weakly coupled Gibbs measures. *Z. Wahrsch. Verw. Gebiete* 50 (1979), no. 1, 97–118. (Jozef Kalas) **80m:28007** 28A35 (60K35, 82A05)
- Sym, Antoni** (with Coronas, James) Lie-group explanation of geometric interpretations of solitons. *Phys. Rev. Lett.* 42 (1979), no. 17, 1099–1102. (G. L. Lamb, Jr.) **80d:58074** 58H05 (22E05)
- Symanzik, K.** Regularized quantum field theory. *New developments in quantum field theory and statistical mechanics* (Proc. Cargèse Summer Inst., Cargèse, 1976), pp. 265–278. NATO Adv. Study Inst. Ser., Ser. B: Physics, 26, Plenum, New York, 1977. (Editors) **80b:81007** 81B05 (81E10)
- Symes, William W.** An inverse hyperbolic boundary value problem. *Transactions of the Twenty-Fourth Conference of Army Mathematicians* (Univ. Virginia, Charlottesville, Va., 1978), pp. 167–172. ARO Rep., 79.1, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Author's summary) **80c:35101** 35R30 (35L05)  
An integral representation for eigenfunctions of linear ordinary differential operators. *J. Math. Anal. Appl.* 70 (1979), no. 1, 101–110. (M. M. Skriganov) **80b:34030** 34B25  
Relations among generalized Korteweg-de Vries systems. *J. Math. Phys.* 20 (1979), no. 4, 721–725. (Author's summary) **80g:35118** 35Q20 (58F07)
- Symon, Keith R.** (with Lewis, H. Ralph) Linearized analysis of inhomogeneous plasma equilibria: general theory. *J. Math. Phys.* 20 (1979), no. 3, 413–436. (From the summary) **80b:82045a** 82A45 (35Q99)  
(with Schwarzeimer, James L.) Variational nature of eigenvalue problems with a parameter. *J. Math. Phys.* 20 (1979), no. 6, 979–983. (J. Hersch) **80e:49035** 49G05 (82A45)  
(with Lewis, H. Ralph) Erratum: "Linearized analysis of inhomogeneous plasma equilibria: general theory" (*J. Math. Phys.* 20 (1979), no. 3, 413–436). *J. Math. Phys.* 20 (1979), no. 11, 2372. (From the summary) **80b:82045b** 82A45
- Syngé, J. L.** (with Schild, Alfred E.) ★Tensor calculus. Reprinted from 1949 original. Dover Publications, Inc., New York, 1978. ix + 324 pp. ISBN 0-486-63612-7 (Editors) **80b:53001** 53-01 (01A75)
- Synnatschke, J.** Einige verbandstheoretische Aussagen über den natürlichen partiell isometrischen Operator von  $L^2(a, b)$  auf  $l^2$  und über einige Integraltransformationen in  $L^2(a, b)$ . *Wiss. Z. Karl-Marx-Univ. Leipzig Math.-Natur. Reihe* 27 (1978), no. 3, 271–285. (A. C. Zaenen) **80a:47059** 47B55 (47B38)
- Syroid, I. P.** See *Syroid, I. P.*
- Syros, C.** Matter condensation in nuclei and black holes. (Greek summary) *Prakti. Akad. Athinon* 50 (1975), 254–261 (1976). (C. J. S. Clarke) **80i:82009** 82A15 (81G35)  
The linear Boltzmann equation properties and solutions. *Phys. Rep.* 45 (1978), no. 4, 211–300. (Nina B. Maslova) **80c:82051** 82A70 (45L99, 47G05)
- Syrov, V. V.** (with Belickii, R. I.) Optimal coding of microcommands in the representation



- of micro-operations by elementary conjunctions. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 5, 30-33. (I. E. Strazdžis) **80a:94051** 94C10
- Syrovatskii, S. I. A general analysis of the problem of plasma flow near the magnetic zero line. (Russian) *Trudy Fiz. Inst. Lebedev* 110 (1979), 5-32, 163 (errata insert). (Author's summary) **80i:82035** 82A45
- Syrovat, V. A. Some examples of invariant solutions of equations of fluid mechanics. (Russian) *Izv. Akad. Nauk SSSR Meh. Zhidk. Gaza* 1978, no. 5, 10-19. (Author's introduction) **80d:76032** 76D99 (35Q99)
- Syuk, Ja. P. Groups with complemented abelian subgroups of type  $(p, p)$ . (Russian) *Structures of groups and properties of their subgroups (Russian)*, pp. 63-79, 152, *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (B. K. Durakov) **80b:20034** 20D10 (20F24)
- Syuk, R. ★ Random processes. A first look. With a foreword by J. Keilson. Statistics: Textbooks and Monographs, 29. Marcel Dekker, Inc., New York-Basel, 1979. xvii + 290 pp. ISBN 0-8247-6893-0 (Peter Purdue) **80b:60002** 60-01 (with Yadin, M.) Randomization of intensities in a Markov chain. *Adv. in Appl. Probab.* 11 (1979), no. 2, 397-421. (R. L. Tweedie) **80f:60069** 60J35
- Energy of Markov chains. *Adv. in Appl. Probab.* 11 (1979), no. 3, 542-575. (Yoichi Ōshima) **80g:60068** 60J10 (60J45)
- Syuk, S. A. Finite groups with primary centralizers of four-subgroups. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 5, 1132-1150, 1184. (Ė. M. Pal'čik) **80c:20019** 20D06
- A problem of R. Baer. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 3, 679-681, 696. (N. D. Podufalov) **80j:20027** 20D40
- Syuk, Maciej M. On characterizations of cycle graphs. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 395-398, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Author's summary) **80a:05074** 05C38
- Outerplanar graphs: characterizations, testing, coding, and counting. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 8, 675-684. (Narsingh Deo) **80a:05130** 05C38 (68C25)
- On the structure of cycles in a graph. *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 3-4, 241-246. (Author's summary) **80i:05063** 05C38
- (with Arczyński, Mirosław; Borowiecki, Mirosław) On Hallian digraphs, permanents and transversals. *Colloq. Math.* 41 (1979/80), no. 1, 141-145. (R. A. Brualdi) **80k:15010** 15A15 (05A15, 05C20)
- Characterizations of outerplanar graphs. *Discrete Math.* 26 (1979), no. 1, 47-53. (F. Harary) **80a:05050** 05C10 (68E10)
- Sytaja, G. N. Asymptotic behavior of the measure of small spheres for Gaussian processes that are equivalent to the Brownian process. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist.* No. 19 (1978), 128-133, 160. (N. N. Vahanija (Vakhania)) **80a:60043** 60G15
- Szabados, J. (with Erdős, Paul) On the integral of the Lebesgue function of interpolation. *Acta Math. Acad. Sci. Hungar.* 32 (1978), no. 1-2, 191-195. (N. Passell) **80a:41002** 41A05
- Szabłowski, Witold ★ Turbulente Scherströmungen. Freie Turbulenz. Schriftenreihe des Zentralinstituts für Mathematik und Mechanik, 27. Akademie-Verlag, Berlin, 1979. xvii + 222 pp. (From the text) **80g:76025** 76F05 (76N15)
- Szabłowski, Paweł J. Some remarks concerning the dual control problem. *Differential games and control theory (Proc. Third Kingston Conf., Part A, Univ. Rhode Island, Kingston, R.I., 1978)*, pp. 197-221, *Lecture Notes in Pure and Appl. Math.*, 44, Dekker, New York, 1979. (Jean-Pierre Lepeltier) **80j:93088** 93C99
- Szabó, Árpád ★ The beginnings of Greek mathematics. Translated from the German by A. M. Ungar. Synthese Historical Library, 17. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. 358 pp. ISBN 90-277-0819-3 (Editors) **80b:01001** 01A20
- Szabo, B. A. Some recent developments in finite element analysis. *Comput. Math. Appl.* 5 (1979), no. 2, 99-115. (Author's summary) **80c:73055** 73K99 (65N30)
- Szabó, György (with Szász, Árpád) Net convergences and their induced topologies. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 1, 123-128. (Harold Reiter) **80a:54004** 54A20
- Szabo, M. E. ★ Algebra of proofs. Studies in Logic and the Foundations of Mathematics, 88. North-Holland Publishing Co., Amsterdam-New York, 1978. xii + 297 pp. ISBN 0-7204-2286-8 (Carlo Cellucci) **80b:03097** 03F55 (18B99)
- Szabo, N. Continuous symmetry breaking in closed intervals of the temperature axis and the Ising-, XY- and Heisenberg models. *Helv. Phys. Acta* 52 (1979), no. 1, 113-128. (Author's summary) **80g:82043** 82A67
- Paramagnons and magnons of the quantum Heisenberg model and the modular Hilbert algebras. *Helv. Phys. Acta* 52 (1979), no. 1, 129-143. (Author's summary) **80d:82055** 82A55 (46L60)
- See also Sarbach, Stéphane; et al., **80m:82023**
- Szafrański, Bolesław A method of first integrals in turbulent diffusion. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 8, 701-706. (Clarence M. Ablow) **80a:35108** 35Q20 (35R60)
- (with Capinski, M.; Woźniak, M.) Equivalence of two definitions of statistical solution of the heat equation. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* No. 21 (1979), 71-79. (L. Cattabriga) **80j:35043** 35K05
- Szafrański, F. H. Apropos of Professor Masani's talk. *Probability theory on vector spaces (Proc. Conf., Trzebieżowice, 1977)*, pp. 245-249, *Lecture Notes in Math.*, 656, Springer, Berlin, 1978. (R. Shonkwiler) **80g:47005** 47A20 (60G10)
- Note on a general dilation theorem. *Ann. Polon. Math.* 36 (1979), no. 1, 43-47. (S. Kurepa) **80b:47008** 47A20
- Szalai, I. On the generalized absolute Cesàro summability of Fourier series. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 817-826, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (Shri Nivas Bhatt) **80d:42006** 42A28
- Szatkowski, A. Subspaces without the approximation property. *Israel J. Math.* 30 (1978), no. 1-2, 123-129. (T. Figiel) **80a:46032** 46B20
- Szantai, T. (with Prékopa, A.) Flood control reservoir system design using stochastic programming. *Mathematical programming in use. Math. Programming Stud.* No. 9 (1978), 138-151. (Authors' summary) **80c:90151** 90C50 (90C15)
- (with Prékopa, A.) On optimal regulation of a storage level with application to the water level regulation of a lake. *European J. Oper. Res.* 3 (1979), no. 3, 175-189. (Authors' summary) **80f:90149** 90C50 (90B15)
- Szarek, Stanisław Jerzy On Kashin's almost Euclidean orthogonal decomposition of  $l_1^n$ . (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 8, 691-694. (Yehoram Gordon) **80i:46020** 46C05
- Szász, Domokos Correlation inequalities for non-purely-ferromagnetic systems. *J. Statist. Phys.* 19 (1978), no. 5, 453-459. (R. L. Ingraham) **80d:82024** 82A05
- Szász, Ferenc Andor (with Lajos, Sándor) On  $(m, n)$ -ideals in associative rings. *Publ. Math. Debrecen* 25 (1978), no. 3-4, 265-273. (W. E. Baxter) **80g:16038** 16A66
- (with Hué, Tran Trong) A sufficient covering condition for a left duo ring to be nilpotent. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 1, 179-182. (C. R. Hajarnavis) **80m:16007** 16A22
- Szász, G. (with Lajos, Sándor) On characterizations of certain classes of semigroups. *Publ. Math. Debrecen* 25 (1978), no. 3-4, 225-227. (T. E. Hall) **80c:20091** 20M12
- Szatkowski, Andrzej Remark on: "Explicit topological formulation of Lagrangian and Hamiltonian equations for nonlinear networks" (IEEE Trans. Circuits and Systems CAS-21 (1974), 277-286) by L. O. Chua and J. D. McPherson. *IEEE Trans. Circuits and Systems* 26 (1979), no. 5, 358-360. (K. Jacobs) **80d:94031** 94C05
- (with Gruszczyński, Walerian) Variational methods for the analysis of electrical circuits. (Polish. English. French. German and Russian summaries) *Rozprawy Elektrotech.* 25 (1979), no. 2, 527-541. (Vadim Komkov) **80e:93023** 93A99 (49C15, 94C05)
- Szatowski, Ted H. Explicit solutions, one iteration convergence and averaging in the multivariate normal estimation problem for pattern means and covariances. *Ann. Inst. Statist. Math.* 30 (1978), no. 1, 81-88. (I. Olkin) **80a:62074** 62H12
- Asymptotic nonnull distributions for likelihood ratio statistics in the multivariate normal patterned mean and covariance matrix testing problem. *Ann. Statist.* 7 (1979), no. 4, 823-837. (Mir M. Ali) **80i:62046** 62H10
- Szatowski, Wojciech A version of the Harris-Spitzer "random constant velocity" model for infinite systems of particles. *Studia Math.* 63 (1978), no. 2, 171-187. (T. M. Liggett) **80b:60136** 60K35
- Száz, Árpád (with Komócsi, Sándor) On the multiplier extensions of admissible semitopological vector modules with direct sum decompositions. *Comment. Math. Univ. St. Paul.* 27 (1978/79), no. 2, 81-90. (E. Lowen-Colebunders) **80j:44011** 44A40
- Periodic generalized functions. *Publ. Math. Debrecen* 25 (1978), no. 3-4, 229-235. (L. S. Dube) **80g:46037** 46F10
- (with Szabó, György) Net convergences and their induced topologies. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 1, 123-128. (Harold Reiter) **80a:54004** 54A20
- Traditional transformations of the convolution calculus in an abstract setting. *Glas. Mat. Ser. III* 14(34) (1979), no. 1, 165-173. (E. Gesztesy) **80a:44014** 44A40
- Szacarba, Robert H. (with Corwin, Lawrence J.) ★ Calculus in vector spaces. Monographs and Textbooks in Pure and Applied Math., 52. Marcel Dekker, Inc., New York-Basel, 1979. x + 782 pp. ISBN 0-8247-6832-9 (James Foran) **80c:26001** 26-01 (15-01, 26B12)
- (with Dwyer, William G.) Sur l'homotopie des groupes de difféomorphismes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 7, A417-A419. (Authors' summary) **80j:57028** 57R50 (58D05)
- Szacpaniak, B. (with Lulek, B.; Lulek, T.) Coupling coefficients for cubic groups. I.  $3/T$  symbols for the double octahedral group. *Acta Phys. Polon. A* 54 (1978), no. 5, 545-559. (Nigel B. Backhouse) **80i:81073a** 81G50 (22E70)
- Szacpaniak, Jerzy On some properties of  $x$ -convex sets and  $x$ -convex functions. *Funct. Approx. Comment. Math.* 7 (1979), 3-7. (D. Preiss) **80j:26010** 26B25
- Szacpaniak, Bonifacy (with Błaszczyk, Bronisława; Kula, Mirosław; Śladek, Andrzej; Szczepaniak, Lucyna; Szymiczek, Kazimierz) ★ Zbiór zadań z teorii grup. (Polish) [A collection of problems on group theory] Edited and with a foreword by Szymiczek. *Uniwersitet Śląski, Katowice*, 1979. 148 pp. (Paul Jambor) **80c:20001** 20-01
- Szacpaniak, Lucyna Quadratic forms over Springer fields. *Colloq. Math.* 40 (1978/79), no. 1, 31-37. (Daniel B. Shapiro) **80k:10023** 10C03 (10C01)
- (with Błaszczyk, Bronisława; Kula, Mirosław; Śladek, Andrzej; Szczepaniak, Bonifacy; Szymiczek, Kazimierz) ★ Zbiór zadań z teorii grup. (Polish) [A collection of problems on group theory] Edited and with a foreword by Szymiczek. *Uniwersitet Śląski, Katowice*, 1979. 148 pp. (Paul Jambor) **80c:20001** 20-01
- Szacpaniakiewicz, Eugeniusz (with Kolodziej, Henryk) Certain classes of correlation functions of almost stationary quasi-isotropic random fields. (Polish. English summary) *Zeszyty Nauk. Wyz. Szkoły Ped. w Opolu Mat.* 20 (1978), *Algebra, Zastos. Mat.*, 169-177. (Authors' summary) **80c:60052** 60G12
- (with Wnuk, Henryk) Moments of certain random variables. (Polish. English summary) *Zeszyty Nauk. Wyz. Szkoły Ped. w Opolu Mat.* 20 (1978), *Algebra, Zastos. Mat.*, 179-193. (Editors) **80c:60053** 60G12
- A certain class of almost stationary quasi-isotropic random fields. (Polish. English summary) *Zeszyty Nauk. Wyz. Szkoły Ped. w Opolu Mat.* 20 (1978), *Algebra, Zastos. Mat.*, 209-223. (Authors' summary) **80c:60054** 60G12
- Szacpaniak, Ryszard (with Grysa, Krzysztof) A plane quasistatic problem of thermomodification for an elastic circular cylinder. (Polish. Russian and English summaries) *Mech. Teori. Stos.* 17 (1979), no. 2, 169-187. (Authors' summary) **80d:73120** 73U05
- Szacarba, L. W. (with Epstein, Richard L.) Relatedness and interpretability. *Philos. Stud.* 36 (1979), no. 2, 225-231. (P. Štěpánek) **80a:03028** 03B60
- Szaceta, W. Factorization of the distribution function of waiting time. (Polish summary) *Zastos. Mat.* 16, no. 3, 395-403 (1979). (Douglas P. Kennedy) **80c:60091** 60K25
- Szacurek, Jan Some approach to the one-dimensional Stephan problems (direct and inverse). (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 2, 215-222. (A. D. Solomon) **80b:80008** 80A20
- Szebehely, Viktor G. General considerations of stability in celestial mechanics. *Instabilities in dynamical systems (Proc. NATO Ado. Study Inst., Corina d'Ampezzo, 1978)*, pp. 61-66, *NATO Ado. Study Inst. Ser., Ser. C: Math. and Phys. Sci.*, 47, Reidel, Dordrecht, 1979. (Robert L. Devaney) **80m:70016** 70F15 (58F40)
- Stability of inner planetary systems. (German summary) *Z. Angew. Math. Phys.* 30

- (1979), no. 2, 364-369. (D. Schmidt) **80i:70008** 70F07  
(with Evans, R. T.) On the capture of the Moon. *Celestial Mech.* **21** (1980), no. 3, 259-264. (Authors' summary) **80m:70015** 70F15  
See also *Instabilities in dynamical systems*, **80i:70002**
- Szefer, Gidon** (with Mikulski, Leszek) Optimal design of rotating discs using Pontrjagin's maximum principle. (Polish. Russian and English summaries) *Mech. Teoret. Stos.* **17** (1979), no. 1, 35-47. (From the summary) **80d:73105** 73K99 (49B99)
- Szegő, G. P.** See *Towards global optimisation*, **80i:49002**
- Szegő, K.** (with Preparata, G.) Baryon structure in quark geometrodynamics. (Italian and Russian summaries) *Nuovo Cimento A* (11) **47** (1978), no. 3, 303-323. (Authors' summary) **80a:81101** 81G10 (22E70)
- Székely, Gábor** (with Tusnády, Gábor) Generalized Fibonacci numbers and the number of "pure heads". (Hungarian. English summary) *Mat. Lapok* **27** (1976), no. 1-2, 147-151 (1978). (Péter Kiss) **80j:10016** 10A35 (10H25)  
Algebraic dimension of semigroups with application to invariant measures. *Semigroup Forum* **17** (1979), no. 2, 185-187. (Anne C. Baker) **80i:22008** 22A20 (28C10, 43A05)
- Székelyhidi, László** Remark on a paper of M. A. McKiernan: "On vanishing  $n$ th ordered differences and Hamel-bases" [Ann. Polon. Math. **19** (1967), 331-336; MR **36** #4183]. *Ann. Polon. Math.* **36** (1979), no. 3, 245-247. (A. Haimovici) **80h:39011** 39B40 (20K99)
- Szekeres, George** (with Richmond, L. Bruce) The Taylor coefficients of certain infinite products. *Acta Sci. Math. (Szeged)* **40** (1978), no. 3-4, 347-369. (E. Grosswald) **80j:10046** 10I10 (10A45)  
(with Erdős, Paul) Some number theoretic problems on binomial coefficients. *Austral. Math. Soc. Gaz.* **5** (1978), no. 3, 97-99. (H. London) **80e:10010** 10A25 (05A10)  
Major arcs in the four cubes problem. *J. Austral. Math. Soc. Ser. A* **25** (1978), no. 4, 423-437. (Ernst Heppner) **80a:10066** 10J10
- Szekeres, Peter** The mathematical foundations of dimensional analysis and the question of fundamental units. *Internat. J. Theoret. Phys.* **17** (1978), no. 12, 957-974. (Author's summary) **80k:70004** 70A05 (81B05)
- Szeleg, D.** (with Mróz, Z.) Optimal design of elastic beams with unspecified support conditions. (German and Russian summaries) *Z. Angew. Math. Mech.* **58** (1978), no. 11, 501-510. (From the summary) **80a:73056** 73K99 (00A89)
- Szele, Andrzej** (with Jakubowski, Ryszard) Functional graphs as an extension of Petri nets. II. Topological and algebraic interpretation of marking processes. (Polish and Russian summaries) *Podstawy Sterowania* **7** (1977), no. 1, 51-58. (Authors' summary) **80j:68009a** 68E10 (68B20, 68D90)  
(with Jakubowski, Ryszard) Applications of formal languages and fuzzy automata in problem solving. (Polish and Russian summaries) *Podstawy Sterowania* **7** (1977), no. 1, 69-91. (Masaharu Mizumoto) **80i:68081** 68G20 (94D05)  
(with Jakubowski, Ryszard) Quasilinguistic representation of systems and its application. (Polish and Russian summaries) *Podstawy Sterowania* **7** (1977), no. 4, 337-349. (Immo O. Kerner) **80j:68047** 68D90 (68B10, 68F10)  
(with Jakubowski, Ryszard) Functional graphs as an extension of Petri nets. III. Safeness and deadlock of marked functional graphs. (Polish and Russian summaries) *Podstawy Sterowania* **7** (1977), no. 4, 351-358. (Authors' summary) **80j:68089b** 68E10 (68B20, 68D90)
- Szemerédi, Endre** (with Ruzsa, I. Z.) Triple systems with no six points carrying three triangles. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 939-945. *Colloq. Math. Soc. János Bolyai*, **18**, North-Holland, Amsterdam, 1978. (W. G. Brown) **80c:05116** 05C99 (05B30)  
(with Bollobás, Béla; Erdős, Paul; Simonovits, Miklós) Extremal graphs without large forbidden subgraphs. Advances in graph theory (Cambridge Combinatorial Conf., Trinity Coll., Cambridge, 1977). *Ann. Discrete Math.* **3** (1978), 29-41. (Stefan A. Burr) **80a:05119** 05C35  
(with Ajtai, Miklós; Komlós, János) There is no fast single hashing algorithm. *Inform. Process. Lett.* **7** (1978), no. 6, 270-273. (Eberhard Lüdde) **80c:68112** 68H05 (68C25)
- Szendrei, A.** On weakly commuting operations. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 373-380. Heyn, Klagenfurt, 1979. (A. Yaquib) **80g:08009** 08A40
- Szendrei, Mária B.** On subband-parcelling congruences of orthodox semigroups. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 613-627. *Colloq. Math. Soc. János Bolyai*, **20**, North-Holland, Amsterdam, 1979. (D. R. LaTorre) **80i:20064** 20M05  
On the structure of orthodox semigroups. *J. Algebra* **56** (1979), no. 1, 71-90. (M. Friedberg) **80e:20078** 20M10
- Szeptycki, Paweł** Domains of integral transformations on general measure spaces. *Math. Ann.* **242** (1979), no. 3, 267-271. (A. C. Zaenen) **80h:47058** 47G05 (42A38)
- Szeto, George** On weakly biregular algebras. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* **26** (1978), no. 9-10, 775-780. (Lindsay N. Childs) **80h:16012** 16A30  
On separable extensions of group rings and quaternion rings. *Internat. J. Math. Math. Sci.* **1** (1978), no. 4, 433-438. (B. R. McDonald) **80c:16010** 16A26  
p.p. rings and reduced rings. *Czechoslovak Math. J.* **29(104)** (1979), no. 1, 53-56. (W. V. Vasconcelos) **80b:16006** 16A12
- Szidrovsky, Ferenc** On the connection between certain methods of game theory. (Hungarian. English summary) *Alkalmaz. Mat. Lapok* **3** (1977), no. 3-4, 399-403 (1978). (Author's summary) **80e:90140** 90D12  
(with Yakowitz, Sidney) ★ Principles and procedures of numerical analysis. *Mathematical Concepts and Methods in Science and Engineering*, **14**. Plenum Press, New York-London, 1978. xii + 331 pp. ISBN 0-306-40087-1 (John Todd) **80b:65002** 65-01  
(with Yakowitz, Sidney; Krimmel, J. E.) Weighted Monte Carlo integration. *SIAM J. Numer. Anal.* **15** (1978), no. 6, 1289-1300. (Istvan Deak) **80b:65008** 65C05
- On the generalization of Nash's cooperative solution concept. (Hungarian. English and Russian summaries) *Szigma—Mat.-Közgazdasági Folyóirat* **11** (1978), no. 1-2, 69-74. **80a:90171** 90D12
- Szilágyi, M.** (with Jölesz, F.) A possible new model of neurons and neural processes based on the quantum-mechanical theory of measurement. *Acta Cybernet.* **4** (1978/79), no. 2, 221-239. (Authors' summary) **80c:92010** 92A09
- Szilárd, Károly** On ordinary first-order differential equations in normal form whose right-hand sides are periodic functions of the independent variable. (Hungarian) *Mat. Lapok* **26** (1975), no. 1-2, 117-123 (1977). **80k:34062** 34C25
- Szilléry, E.** Statistical estimation of functions of finite probability distributions. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 259-265. Reidel, Dordrecht, 1978. (Ibrahim A. Ahmad) **80k:62059** 62G05 (94A17)
- Szkutnik, Włodzisław** (ε, α)-confidence set of solutions of a linear stochastic programming problem. (Polish. Russian and English summaries) *Przeegląd Statyst.* **25** (1978), no. 3, 441-449 (1979). (Author's summary) **80d:90062** 90C15
- Szlenk, Wiesław** On  $l^p$  dynamical systems. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* **26** (1978), no. 2, 99-103. (R. K. Thomas) **80j:28026** 28D05 (54H20)
- Sz. Nagy, Béla** Nevanlinna class functions of operators. *Proceedings of the Rolf Nevanlinna Symposium on Complex Analysis (Math. Res. Inst., Univ. Istanbul, Silivri, 1976)*, pp. 59-70. *Publ. Math. Res. Inst. Istanbul, 7, Univ. Istanbul, Istanbul*, 1978. (R. G. Douglas) **80h:47015** 47A45 (47A60)  
(with Berocovic, H.; Foias, Ciprian; Kérchy, L.) Compléments à l'étude des opérateurs de classe  $C_p$ . IV. *Acta Sci. Math. (Szeged)* **41** (1979), no. 1-2, 29-31. (R. G. Douglas) **80d:47015** 47A45
- Sznitko, Wanda** Remarks on a discontinuous Hilbert boundary problem. *Demonstratio Math.* **12** (1979), no. 1, 289-294. (P. Ju. Alekna) **80k:30062** 30E25
- Szokalsni, Endre** Hyperflächen mit Riemannscher Massbestimmung im Finslerschen Raum. II. *Publ. Math. Debrecen* **25** (1978), no. 3-4, 203-210. (M. C. Chaki) **80a:53039** 53B40 (53B20)
- Szolgay, P.** (with Palotás, L. M.) Zu Fragen der Synchronisation nichtlinearer Schwingungssysteme. *VII. Internationale Konferenz über nichtlineare Schwingungen (Berlin, 1975)*, Band II, 2, pp. 201-209. *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977, 6, Akademie-Verlag, Berlin, 1978. (L. Erbe) **80k:34046** 34C15 (70K20)
- Szűcs, M.** (with Gergely, T.) On the incompleteness of proving partial correctness. *Acta Cybernet.* **4** (1978/79), no. 1, 45-57. (A. Pluškėvičienė) **80c:68029** 68B10
- Szpikowski, Stanisław** (with Gózdź, Andrzej) The complete base of the symmetric representation of the  $O(5) \otimes SU(1,1)$  group. (Polish and Russian summaries) *Bull. Lubl. Towarz. Nauk. Mat. Fiz. Chem.* **20** (1978), no. 2, 151-154. (M. K. F. Wong) **80k:81178** 81G30 (22E70)
- Szpirglas, Jacques** Sur l'équivalence d'équations différentielles stochastiques à valeurs mesures intervenant dans le filtrage markovien non linéaire. *Ann. Inst. H. Poincaré Sect. B (N.S.)* **14** (1978), no. 1, 33-59. (Ju. M. Kabanov) **80m:60054** 60G35 (60H15)  
(with Mazziotto, Gérard) Modèle général de filtrage non linéaire et équations différentielles stochastiques associées. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 22, A1067-A1070. (Authors' summary) **80b:60061** 60G35 (93E11)  
(with Körözlő, Hayri; Mazziotto, Gérard) Équations du filtrage non linéaire pour des processus à deux indices. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 13, A891-A893. (Authors' summary) **80b:60055** 60G35  
(with Mazziotto, Gérard) Calcul stochastique pour des semi-martingales de Poisson à deux paramètres. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 20, A953-A956. (Authors' summary) **80c:60072** 60H05 (60G35, 60G44)  
(with Mazziotto, Gérard) Équations du filtrage non linéaire pour un processus de Poisson mélangé à deux paramètres. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 3, A229-A232. (Authors' summary) **80k:60052** 60G35 (94A12)
- Szpiro, Lucien** (with Flexor, Marguerite) Un théorème de structure locale pour les complexes parfaits. *Algebraic geometry (Proc. Sympos., Univ. Tromsø, Tromsø, 1977)*, pp. 236-244. *Lecture Notes in Math.*, **687**, Springer, Berlin, 1978. (G. Horrocks) **80k:14026** 14F05 (81E99)
- Szarek, Michał** Kählerian deformations of some complex structures. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* **26** (1978), no. 11, 875-878 (1979). (J. A. Morrow) **80g:32040** 32G13 (14J40, 32J25)
- Szroeter, Jerzy** Generalized variance-ratio tests for serial correlation in multivariate regression models. *J. Econometrics* **8** (1978), no. 1, 47-59. (Author's summary) **80g:62036** 62H15 (62J05, 62P20)
- Sztajnc, Jerzy** Necessary conditions for existence of extremum for controls with bounded variation. (Polish summary) *Bull. Soc. Sci. Lett. Łódź* **28** (1978), no. 12, 13 pp. (Abraham Boyarsky) **80g:93040** 93C15 (49B10)
- Sztechman, Tomasz** (with Bychawski, Zbigniew) On functional description method for turbulence of nonlinear rheological fluids. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **26** (1978), no. 12, 1069-1079. (Authors' summary) **80d:76042** 76F05
- Sztryba, Małgorzata** On the boundary forces in a solvable integral model of nonlocal elastic half-space. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **26** (1978), no. 6, 537-543. (Authors' summary) **80a:73063** 73S99 (45H05)  
(with Rogula, Dominik) Fundamental one-dimensional solutions in nonlocal elasticity. *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **26** (1978), no. 10, 417-423. (Dominic G. B. Edelen) **80b:73009** 73B99
- Szűcs, A.** Analogue of the Thom space for mappings with singularity of type  $\Sigma^1$ . (Russian) *Mat. Sb. (N.S.)* **108(150)** (1979), no. 3, 433-456, 478. (P. S. Landweber) **80k:57064** 57R90 (57R42, 58C27)
- Szuffa, Stanisław** On the existence of solutions of ordinary differential equations in Banach spaces. (Italian summary) *Boll. Un. Mat. Ital. A* (5) **15** (1978), no. 3, 535-544. (Angelo Favini) **80d:34092** 34G20  
The generic property of existence of fixed points of nonlinear mappings in function spaces. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* **26** (1978), no. 8, 711-714. (L. P. Bucci) **80c:47052** 47H10  
(with Orlicz, Władysław) On the convergence of successive approximations for nonlinear equations in function spaces. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979), no. 2, 153-156. (Ferenc Fenyes) **80k:47066** 47H10
- Szulga, Jerzy** Boundedness and convergence of Banach lattice valued submartingales. *Probability theory on vector spaces (Proc. Conf., Trzebieżewice, 1977)*, pp. 251-256.



- Lecture Notes in Math.*, 656, Springer, Berlin, 1978. (S. D. Chatterji) **80d:60063** 60G42
- Srnja, Teofil** (with Gnot, Stanislaw; Matej, Henryk) An accurate test for testing the Hardy-Weinberg equilibrium hypothesis. (Polish) *Mat. Stos.* (3) **15** (1979), 99-105. **80j:92005** 92A10 (62F03)
- Szarek, Michał** Specializations of hypersurfaces of degrees 2, 3 in  $P^n$ . (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* **26** (1978), no. 11, 863-868 (1979). (Daniel Comenetz) **80h:14006** 14D20 (14J10)
- Szusz, P.** On singularities of power-series. *J. Approx. Theory* **27** (1979), no. 4, 372-378. (G. Piranian) **80k:30005** 30B10
- Szwarc, Włodzisław** Permutation flow-shop theory revisited. *Naval Res. Logist. Quart.* **25** (1978), no. 3, 557-570. (Gerald Hammer) **80b:90085** 90B35
- The critical path approach in the flow-shop problem. *Opsearch* **16** (1979), no. 2-3, 98-102. (Author's summary) **80m:90059** 90B35
- Szyblew, L.** (with Hernández, E. S.; Plastino, A.) Self-consistent pseudopotentials in the thermodynamic limit. I. The correlation field. *Phys. Rev. C* (3) **20** (1979), no. 4, 1572-1577. (Authors' summary) **80j:82007** 82A05
- Szygenda, Stephen A.** (with Jea, Yu-Huei) Mappings and algorithms for gate modeling in a digital simulation environment. *IEEE Trans. Circuits and Systems* **26** (1979), no. 5, 304-315. (Tatsuo Higuchi) **80f:94038** 94C10 (68J05)
- Szymanski, J.** (with Ruszczyński, Andrzej) Convergence analysis for two-level algorithms of mathematical programming. Point-to-set maps and mathematical programming. *Math. Programming Stud.* No. 10 (1979), 158-171. (Norihiko Adachi) **80d:90091** 90C99
- Szymańska-Bartman, Magdalena** Orthogonality and orthocomplementation in partially ordered sets. *Demonstratio Math.* **12** (1979), no. 2, 529-542. (R. Pizak) **80j:06012** 06C15 (03G12, 81B10)
- Szymański, Andrzej** Some Baire category type theorems for  $U(\omega_1)$ . *Comment. Math. Univ. Carolin.* **20** (1979), no. 3, 519-528. (A. Kanamori) **80i:03060** 03E50 (54D35)
- Szymanski, T. G.** (with Hunt, Harry B., III) Corrigendum: "Lower bounds and reductions between grammar problems" (J. Assoc. Comput. Mach. **25** (1978), no. 1, 32-51). *J. Assoc. Comput. Mach.* **25** (1978), no. 4, 687-688. (Ju. G. Karpov) **80b:68087** 68F05 (68C30)
- Szymański, Wacław** Antisymmetry and contractive representations of function algebras. *Proc. Amer. Math. Soc.* **72** (1978), no. 2, 319-326. (H. S. Bear) **80a:46028** 46J25
- Erratum to: "Antisymmetry and contractive representations of function algebras" [*Proc. Amer. Math. Soc.* **72** (1978), no. 2, 319-326; MR **80a:46028**]. *Proc. Amer. Math. Soc.* **76** (1979), no. 2, 358-359. (H. S. Bear) **80k:46059** 46J10 (46L99)
- Szymczek, Kazimierz** (with Błaszczak, Bronisław; Kula, Mieczysław; Śladek, Andrzej; Szczepanik, Bonifacy; Szczepanik, Lucyna) ★Zbiór zadań z teorii grup. (Polish) [A collection of problems on group theory] Edited and with a foreword by Szymczek. *Uniwersitet Śląski, Katowice*, 1979. 148 pp. (Paul Jambor) **80k:20001** 20-01
- Szymura, Jerzy** Optimization of the production line schedule. (Polish. English and Russian summaries) *Podstawy Sterowania* **9** (1979), no. 2, 177-188. (Author's summary) **80g:90060** 90B30 (90B35)
- Szynał, Anna** (with Szynał, Jan) On some problems concerning subordination and majorization of functions. *Demonstratio Math.* **11** (1978), no. 2, 331-350. (John G. Milcetic) **80j:30023** 30C45 (30C80)
- Szynał, D.** (with Helba-Grabowska, H.) An almost sure invariance principle for the partial sums of infima of independent random variables. *Ann. Probab.* **7** (1979), no. 6, 1036-1045. (Paul Deheuvels) **80k:60039** 60F17 (60F15)
- (with Rychlik, Z.) On the rate of approximation in the random-sum central limit theorem. (Russian summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 3, 614-620. (L. Hahn) **80h:60038** 60F05
- Szynał, Jan** (with Waniurski, Józef) Some problems for linearly invariant families. (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska Sect. A* **30** (1976), 91-102 (1978). (Authors' summary) **80c:30017** 30C55
- (with Szynał, Anna) On some problems concerning subordination and majorization of functions. *Demonstratio Math.* **11** (1978), no. 2, 331-350. (John G. Milcetic) **80j:30023** 30C45 (30C80)
- nasir ad-din at-Tusi** See Nasir ad-Din at-Tusi
- martinez T., Wilfrido** See Martinez T., Wilfrido
- Tabadze, G. U.** (with Mdzinarišvili, V. V.) Restrictions imposed on the control strategy in nonlinear stochastic systems. (Russian. Georgian and English summaries) *Sakharth. SSR Meen. Akad. Moambe* **90** (1978), no. 2, 449-452. (O. G. Nakonečnij) **80c:93136** 93E20
- Tabak, Daniel** (with Brady, H. Nelson; Womack, Baxter F.) Error minimization in multiple-connected subsystems. *IEEE Trans. Automat. Control* **25** (1980), no. 1, 108-110. (Authors' summary) **80m:93007** 93A15
- Tabakov, Martin** A formal system without well-formed formulas. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **8** (1979), no. 1, 27-29. (Editors) **80d:03010** 03B05
- Tabarrok, B.** (with Olyuyomi, M. A.) A generalized energy approach to the optimum design of plates and skeletal structures. *Comput. & Structures* **10** (1979), no. 1-2, 269-275. (Authors' summary) **80b:73038** 73K10 (49B99)
- (with Dost, S.) Application of Hamilton's principle to large deformation and flow problems. *Trans. ASME Ser. E J. Appl. Mech.* **46** (1979), no. 2, 285-290. (N. Gass) **80c:73003** 73B10 (49H05, 73G99)
- Tabata, Yoshio** (with Sekita, Yasuyoshi) A health status index model using a fuzzy approach. *European J. Oper. Res.* **3** (1979), no. 1, 40-49. (V. D. Dimitrov) **80d:92009** 92A07
- (with Namekata, Tsuneyuki; Nishida, Toshio) A sequential allocation problem with two kinds of targets. (Japanese summary) *J. Oper. Res. Soc. Japan* **22** (1979), no. 1, 16-28. (Richard F. Serfozo) **80c:90146** 90C39 (90D20)
- A note on idle time policy with repair. (Japanese summary) *J. Oper. Res. Soc. Japan* **22** (1979), no. 3, 169-184. (Author's summary) **80h:90078** 90B25
- Tabbert, Eckhard** (with Porath, Günter) Das Tschebyscheffsche Iterationsverfahren für lineare Volterra Integralgleichungen zweiter Art. *Beiträge Numer. Math.* **7** (1979), 83-96. (Charles Saltzer) **80c:65156** 65R20
- Taberska, Paulina** See Pych-Taberska, Paulina
- Taberski, Roman** Trigonometric approximation in the spaces  $L^p$  ( $1 < p < \infty$ ). Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* **2** (1979), 315-328. (V. V. Žuk) **80m:42004** 42A10
- Tabitz, G. S.** Construction of the solution of a two-point singular boundary value problem by the finite-difference method. (Russian. Georgian and English summaries) *Sakharth. SSR Meen. Akad. Moambe* **90** (1978), no. 2, 301-304. (K. Moszyński) **80b:65114** 65L10
- Tabisz, K.** (with Gonczewicz, J.; Marcinkowska, H.; Okrasinski, W.) On the percolation of water from a cylindrical reservoir into the surrounding soil. (Polish summary) *Zastos. Mat.* **16** (1978/79), no. 2, 249-261. (E. Ungureanu-David) **80c:76053** 76S05
- Tábocs, Plácido** (with Hale, Jack K.) Interaction of damping and forcing in a second order equation. *Nonlinear Anal.* **2** (1978), no. 1, 77-84. (Stefan Mirică) **80b:34041** 34C15 (58F15)
- Tabor, J.** Time scale transformation equation. *Aequationes Math.* **18** (1978), no. 3, 286-288. (K. Lajkó) **80c:39004** 39B50
- Tabor, Michael** The role of periodic orbits in semiclassical quantization. *Stochastic behavior in classical and quantum Hamiltonian systems (Volta Memorial Conf., Como, 1977)*, pp. 293-298. *Lecture Notes in Phys.*, **93**, Springer, Berlin, 1979. (Martin Kummer) **80k:81059** 81C99 (58F06)
- Tachibana, Shun-ichi** On the proper space of  $\Delta$  for  $m$ -forms in  $2m$  dimensional conformally flat Riemannian manifolds. *Natur. Sci. Rep. Ochanomizu Univ.* **29** (1978), no. 2, 111-115. (Shūichi Tanno) **80b:53032** 53C20
- (with Ogue, Koichi) Les variétés riemanniennes dont l'opérateur de courbure restreint est positif sont des sphères d'homologie réelle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 1, A29-A30. (Bang-yen Chen) **80b:53043** 53C20
- Tachikawa, Hiroyuki** (with Ohtake, Koichiro) Colocalization and localization in abelian categories. *J. Algebra* **56** (1979), no. 1, 1-23. (B. Stenström) **80c:16005** 18E35
- Tachya, M.** General method for calculating the escape probability in diffusion-controlled reactions. *J. Chem. Phys.* **69** (1978), no. 6, 2375-2376. (Ole J. Heilmann) **80c:80013** 80A30
- Tacon, D. G.** Two characterizations of power compact operators. *Proc. Amer. Math. Soc.* **73** (1979), no. 3, 356-360. (W. A. J. Luxemburg) **80d:47031** 47B05 (03H05)
- Tada, Yukio** (with Seguchi, Yasuyuki) Shape determination problems of structures by inverse variational principle. The finite element formulation. *Acta Tech. ČSAV* **24** (1978), no. 2, 139-148. (Hwa-Shan Ho) **80d:73099** 73K25 (49A99, 65N30)
- Tadikamalla, Pandu R.** Applications of the Weibull distribution in inventory control. *J. Oper. Res. Soc.* **29** (1978), no. 1, 77-83. (R. Jagannathan) **80a:90054** 90B05
- Tadmor, Eitan** (with Goldberg, Moshe) Scheme-independent stability criteria for difference approximations of hyperbolic initial-boundary value problems. I. *Math. Comp.* **32** (1978), no. 144, 1097-1107. (H.-O. Kreiss) **80a:65196** 65M10
- Tadumadze, T. A.** (with Haratišvili, G. L.) Nonlinear optimal control systems with variable lags. (Russian) *Mat. Sb. (N.S.)* **107(149)** (1978), no. 4, 613-633, 640. (K. B. Mansimov) **80c:93048** 93C10
- Tadžiev, A.** An asymptotic expansion for the distribution of the time of absorption of a semi-Markov process. The case of several ergodic subsets. (Russian) *Izv. Akad. Nauk Turkm. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* **1978**, no. 2, 12-18. (I. V. Romanovskii) **80a:60115** 60K15
- Tafel, Werner** (with Voigt, Jürgen; Weidmann, Joachim) The singular sequence problem. *Acta Sci. Math. (Szeged)* **40** (1978), no. 3-4, 383-388. (Harro Heuser) **80a:47008** 47A10 (47B15)
- Taffara, L.** (with Anni, R.; Renna, L.) Unphysical reflection phenomena involved in the numerical calculation of heavy-ion scattering cross-sections. (Italian and Russian summaries) *Nuovo Cimento A* (11) **53** (1979), no. 4, 383-395. (Authors' summary) **80c:81155** 81F99
- Taffin, Erik** Classical V-A theory and nonconservation of the dynamical parity. *Rep. Math. Phys.* **14** (1978), no. 3, 351-375. (John M. Chadam) **80b:81165** 81G15 (58G35)
- Taganov, G. I.** (with Dudoladov, I. V.) Application of results of analysis of transient vortex flows of ideal fluids to description of the turbulent mixing layer. Third All-Union Seminar on Turbulent Flows, Part II. *Fluid Mech.—Soviet Res.* **7** (1978), no. 2, 10-23 (1979). (Ph. Mathieu) **80c:76029** 76F99
- Tagawa, Masa-yoshi** Geometry of Kählerian manifolds related by the spectrum for exterior 1-forms and 2-forms. *TRU Math.* **15** (1979), no. 1, 41-46. (Shūichi Tanno) **80k:58101** 58G25 (53C55)
- Tagawa, Shōjirō** Optimierung mit mengenwertigen Abbildungen. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978), Section I*, pp. 619-629. *Operations Research Verfahren*, **31**, Hain, Meisenheim, 1979. (Author's introduction) **80f:49012** 49A50
- Tagiev, F. A.** (with Gahramanov, P. F.; Kjazimov, T. G.) Numerical solution of the Tricomi problem by the finite difference method. (Russian) *Azerbaij. Gos. Univ. Učen. Zap.* **1978**, no. 6, 44-50. (Authors' summary) **80g:65109** 65N20
- Tagiev, M. G.** A necessary and sufficient condition for the strong extremum in a degenerate problem of the calculus of variations. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 4(208), 211-212. (L. G. Chambers) **80b:49016** 49B36 (93C15)
- Tagieva, Z. A.** (with Mamedov, A. M.) The approximate solution of multidimensional linear integral equations in a subclass of analytic functions. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1978**, no. 5, 76-80. (A. Ramm) **80c:45014** 45L10
- Tagirov, Ė. A.** (with Il'in, S. B.) Equation of motion of a scalar field point source in general relativity. (Russian. English summary) *Teoret. Mat. Fiz.* **37** (1978), no. 1, 74-83. (Ja. A. Smorodinskii) **80c:83009** 83C10 (53B50)
- (with Todorov, I. T.) A geometric approach to the solution of conformal invariant nonlinear field equations. *Acta Phys. Austriaca* **51** (1979), no. 2, 135-154. (Jules Beckers) **80c:81039** 81D25 (53C10, 58G35)
- Tagirov, T. S.** Properties of various kinds of analyticity for certain classes of complex infinite-dimensional spaces. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 5(192), 145-147. (Theodore S. Bolis) **80d:46084** 46G20 (32A99, 58B12)
- Tagi-Zade, A. T.** Entropy properties of operations of amenable groups. (Russian) *Functional analysis and its applications*, No. 3 (Russian), pp. 169-183, "Ėlm", Baku, 1978. (B. S. Pickel') **80f:28026** 28D20 (22D40, 54C70, 54H20)
- Entropy characteristics of amenable groups. (Russian. Azerbaijani and English

- summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 8, 11–14. (Helmut Boreck) **80d:22009** 22D40 (54H20)
- The functional equation  $Y(f(x)) = e^{f(x)}Y(x)$ . (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1978, no. 2, 93–95. (K. Lajko) **80c:39007** 39B70 (28D05)
- Change of time in special flows. (Russian) *Mat. Zametki* 25 (1979), no. 5, 725–732, 799. (V. Drobot) **80h:28029** 28D10
- Taguchi, Yukio (with Tanaka, Azuma; Yamamoto, Kunio) Haag's theorem and dimensional regularization. *Phys. Lett. B* 90 (1980), no. 4, 422–423. (Authors' summary) **80m:81067** 81E99
- Taha, M. O. Periodic solutions to classical field equations. Special issue on solitons in physics. *Phys. Scripta* 20 (1979), no. 3–4, 447–453. (R. M. Dreizler) **80i:81038** 81E10 (35C99)
- Tahara, Ken-ichi On dimension subgroups. (Japanese) *Sūgaku* 30 (1978), no. 4, 301–312. (Hsin-Yang Yeh) **80h:20050** 20F26
- (with Sandling, Robert) Augmentation quotients of group rings and symmetric powers. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 2, 247–252. (Gerald O. Looney) **80h:20014** 20C07
- et Taher Muhammed Muhammed, Ibrahim See Muhammed, Ibrahim et Taher Muhammed
- Taharoui, R. (with Aubert, G.) Théorèmes d'existence pour des problèmes du calcul des variations du type:  $\inf \int_0^1 f(x, u(x)) dx$  et  $\inf \int_0^1 f(x, u(x), u'(x)) dx$ . *J. Differential Equations* 33 (1979), no. 1, 1–15. (Carlo Sbordone) **80i:49013** 49A34
- Tahmidjan, L. A. (with Zaharov, V. E.) Equivalence of a nonlinear Schrödinger equation and a Heisenberg ferromagnet equation. (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 1, 26–35. (Authors' summary) **80d:82026** 82A05
- Tahvildade, L. N. (with Oleinik, O. A.; Isifjan, G. A.) Estimates of the solutions of a biharmonic equation in the neighborhood of irregular points on the boundary or at infinity. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 3(201), 181–182. (Cornelius O. Horgan) **80h:35057** 35J40 (35B45)
- te lyong Tai See Le Lyong Tai
- Tai, Chin-Yung See Tai, Yung Chiu
- Tai, Kuo Chung (with Fischer, C. N.; Milton, D. R.) Immediate error detection in strong LL(1) parsers. *Inform. Process. Lett.* 8 (1979), no. 5, 261–266. (From the text) **80f:68097** 68F25
- The tree-to-tree correction problem. *J. Assoc. Comput. Mach.* 26 (1979), no. 3, 422–433. (Author's summary) **80e:68124** 68C25 (68E10)
- Tai, M. L. Stochastic model of self-assembly of segments with breaks. *Problemy Peredaci Informacii* 15 (1979), no. 1, 74–84. (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 1, 56–64. (Author's summary) **80j:93014** 93A15
- Tai, Y.-S. (with Resnikoff, H. L.) On the structure of a graded ring of automorphic forms on the 2-dimensional complex ball. *Math. Ann.* 238 (1978), no. 2, 97–117. (Hiroshi Saito) **80h:10037** 10D20 (32N10)
- Tai, Yung Chiu (with Zimmer, William J.) An optimality of Beattie's continuous sampling plan. *J. Nat. Chiao Tung Univ.* 6 (1979), 61–69. (W. Uhlmann) **80i:62073** 62N10 (62L10)
- Talani, Geraldine (with Hill, C. Denison) Families of analytic discs in  $C^n$  with boundaries on a prescribed CR submanifold. *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* 5 (1978), no. 2, 327–380. (Eric Bedford) **80c:32023** 32F30
- Talbotson, Mitchell H. See Besov, O. V.; et al., **80f:46030**
- Talmanov, A. D. The topologization of countable algebras. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 2, 284–286. (P. Kratochvil) **80d:08003** 08A05
- Topologizable groups. II. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 5, 1201–1203, 1216. (W. T. van Est) **80c:22001** 22A05
- Taira, Kazunaki Sur le problème de la dérivée oblique. I. *J. Math. Pures Appl.* (9) 57 (1978), no. 4, 379–395. (J. Kačur) **80d:35047** 35J25
- Tajirjan, V. I. Weight spectra of some classes of cyclic codes over GF(q). *Problemy Peredaci Informacii* 14 (1978), no. 3, 35–39. (Russian); translated as *Problems Inform. Transmission* 14 (1978), no. 3, 181–185 (1979). (F. J. MacWilliams) **80h:94034** 94B15
- Talrov, Š. M. Dual problems of linear programming in ordered spaces. (Russian. Tajiki summary) *Izv. Akad. Nauk Tadžik. SSR Otdel. Fiz.-Mat. i Geol.-Hum. Nauk* 1978, no. 4(70), 95–97. (J. Abraham) **80g:90115** 90C48
- Talrjan, V. I. See Tajirjan, V. I.
- Tait, R. J. Additional pseudosimilarity solutions of the heat equation in the presence of moving boundaries. *Quart. Appl. Math.* 37 (1979/80), no. 3, 313–324. (L. I. Rubinstein) **80j:35045** 35K05 (35R35)
- Tajima, T. (with Leboeuf, J. N.; Dawson, J. M.) A magnetohydrodynamic particle code for fluid simulation of plasmas. *J. Comput. Phys.* 31 (1979), no. 3, 379–408. (Authors' summary) **80h:76044** 76W05
- Takahashi, Takehiko Covariant wave equations of two spinning particles harmonically bound. *Progr. Theoret. Phys.* 61 (1979), no. 4, 1235–1250. (G. R. Alcock) **80j:81040** 81D25
- Takahashi, A. Operator  $e^{-\Delta}$ . *Mat. Vesnik* 2(15)(30) (1978), no. 1, 31–37. (R. A. Struble) **80j:44015** 44A40
- Takács, Lajos On fluctuations of sums of random variables. *Studies in probability and ergodic theory*, pp. 45–93, *Advances in Math., Suppl. Studies*, 2, Academic Press, New York, 1978. (M. S. Sgibnev) **80g:60069** 60J15 (46J10, 60G50, 60K15)
- An increasing continuous singular function. *Amer. Math. Monthly* 85 (1978), no. 1, 35–37. (D. C. Benson) **80f:26005** 26A30
- On generalized Dedekind sums. *J. Number Theory* 11 (1979), no. 2, 264–272. (E. Grosswald) **80j:10019** 10A40 (10A32)
- (with Letac, Gérard) Random walks on an  $m$ -dimensional cube. *J. Reine Angew. Math.* 310 (1979), 187–195. (D. J. Daley) **80h:60089** 60J15
- On an urn problem of Paul and Tatiana Ehrenfest. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 1, 127–130. (I. Vincze) **80c:60097** 60J15 (60C05)
- Fluctuation problems for Bernoulli trials. *SIAM Rev.* 21 (1979), no. 2, 222–228. (S. G. Mohanty) **80e:60019** 60C05 (60J15)
- Takada, Y. A family of minimax estimators in some multiple regression problems. *Ann. Statist.* 7 (1979), no. 5, 1144–1147. (Pi-Erh Lin) **80h:62008** 62C20 (62J07)
- Takagi, Isamu Stability of bifurcating solutions of the Gierer-Meinhardt systems. *Tōhoku Math. J. (2)* 31 (1979), no. 2, 221–246. (V. Lakshmikantham) **80f:35068** 35K99 (92A05)
- Takagi, Shigoo (with Ōya, Shinichi; Suzuki, Hisao; Shimodaira, Kazuo; Hagino, Kōgi) Memories of the days when the Society was founded. (Japanese) Special issue on the 20th anniversary of Sūgaku Kenkyū. *Sūgaku Kenkyū* No. 80 (1979), 76–88. (K. Inoue) **80k:01008** 01A27 (01A60)
- Takagi, Shigeyuki A study of sangaku (mathematical votive picture tablets) in Gifu prefecture. I. (Japanese. English summary) *Bull. Gifu College Ed. No. 2* (1975), 62–72 (1977). (S. Hitotumatu) **80d:01007a** 01A27
- A study of sangaku (mathematical votive picture tablets) in Gifu prefecture. II. (Japanese. English summary) *Ann. Gifu College Ed. No. 3* (1976), 57–68 (1977). (S. Hitotumatu) **80d:01007b** 01A27
- A study of sangaku (mathematical votive picture tablets) found in Gifu prefecture. III. (Japanese. English summary) *Ann. Gifu College Ed. No. 4* (1977), 73–120 (1978). (S. Hitotumatu) **80d:01007c** 01A27
- A study of sangaku (mathematical votive picture tablets) found in Gifu prefecture. IV. (Japanese. English summary) *Ann. Gifu College Ed. No. 5* (1978), 37–46 (1979). (S. Hitotumatu) **80d:01007d** 01A27
- Takagi, Shunsuke The buckling pressure of an elastic plate floating on water and stressed uniformly along the periphery of an internal hole. *Transactions of the Twenty-Second Conference of Army Mathematicians (Waterliet Arsenal, Waterliet, N.Y., 1976)*, pp. 357–417, *ARO Rep.*, 77-1, U. S. Army Res. Office, Research Triangle Park, N.C., 1977. (B. A. Bondarenko) **80c:73052** 73K10 (35Q99)
- Takahara, Yasuhiko (with Mesarović, M. D.) ★Общая теория систем: математические основы. (Russian) [General systems theory: mathematical foundations] Translated from the English by E. L. Nappelbaum. Edited by S. V. Emel'janov. "Mir", Moscow, 1978. 311 pp. (Editors) **80a:93004** 93-02
- (with Ikeshoji, Hideomi) Characterization of the causality of general dynamic systems. *Internat. J. Systems Sci.* 9 (1978), no. 6, 639–648. (Guy Jumarie) **80h:93007** 93A10
- (with Nakano, Bunpei; Kijima, Kyoichi) Characterization of the satisfactory decision principle. (Japanese summary) *J. Oper. Res. Soc. Japan* 1978, no. 3, 347–370. (From the summary) **80a:90008** 90A05 (90D35)
- (with Nakano, Bunpei; Kijima, Kyoichi) Characterization of the linear weighted sum decision principle. *Inform. Sci.* 19 (1979), no. 1, 199–228. (M. S. Šul'man) **80j:90009** 90A05
- Takahashi, Hideo (with Sasao, Seiya) Highly connected Poincaré complexes. *Kodai Math. J.* 2 (1979), no. 2, 139–147. (Norman Levitt) **80c:57035** 57P10
- Takahashi, Jun-ichi (with Kawamura, Ryohkichi; Matsuyama, Keisuke) On multicollinearity. *Rep. Univ. Electro-Comm.* 29 (1978/79), no. 2, 241–250. (Authors' summary) **80c:62092** 62P20
- Takahashi, Moto-o An alternative proof of Birman-Hilden-Viro's theorem. *Tsukuba J. Math.* 2 (1978), 27–34. (J. S. Birman) **80e:57009** 57N10 (57M10)
- Takahashi, Rinya Note on  $K$ -point separation measurement. *Ann. Inst. Statist. Math.* 30 (1978), no. 1, 177–179. (From the summary) **80c:62092** 62H30
- Takahashi, Shigeru A version of the central limit theorem for martingales. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 5, 163–166. (Don McLeish) **80h:60040** 60F05
- Takahashi, Shin-ichi (with Sasaki, Yoshinari; Hamada, Nozomu) Criteria for relative stability and aperiodic damping based on systems with complex coefficients. *Systems-Comput.-Controls* 9 (1978), no. 1, 62–68 (1979). (From the summary) **80j:93106** 93D99
- (with Matsumoto, Naoki) On the realizability of state equations with RC 3-terminal network. *IEEE Trans. Circuits and Systems* 27 (1980), no. 1, 53–57. (Authors' summary) **80m:94076** 94C05
- Takahashi, Tadayasu Semigroups of nonlinear operators and invariant sets. *Hiroshima Math. J.* 10 (1980), no. 1, 55–67. (J. A. Goldstein) **80m:47067** 47H20
- Takahashi, Takao (with Narita, Fumio; Toki, Yasunori; Yamagata, Masahiro) On some relation of curvature between Brieskorn manifolds and standard sphere. *Sci. Rep. Hiroaki Univ.* 26 (1979), no. 1, 1–6. (R. E. Stong) **80j:53048** 53C25 (57R15)
- Takahashi, Wataru (with Sakamaki, Kazuo) Systems of convex inequalities and their applications. *J. Math. Anal. Appl.* 70 (1979), no. 2, 445–459. (Y. I. Kannai) **80j:46075** 46G99 (15A51, 46A55)
- (with Hirano, Norimichi) Nonlinear ergodic theorems for nonexpansive mappings in Hilbert spaces. *Kodai Math. J.* 2 (1979), no. 1, 11–25. (Heinrich Steinlein) **80j:47064** 47H09 (47H10, 47H20)
- Takahashi, Yasuji Partially admissible shifts on linear topological spaces. *Hokkaido Math. J.* 8 (1979), no. 2, 150–166. (D. J. H. Garling) **80m:60011** 60B11 (28C20, 46G99)
- Takahashi, Yasushi Generating current and dynamical rearrangement of symmetry. *The Ta-You Wu Festschrift: Science of matter*, pp. 75–88, *Gordon & Breach, New York*, 1978. (Benjamin Plybon) **80j:70002** 70D10
- (with Wadati, Miki; Matsumoto, H.; Umezawa, H.) Quantum field theory of crystals and dislocations. *Fortschr. Phys.* 26 (1978), no. 6, 357–396. (P. M. van den Broek) **80a:82037** 82A60 (35Q99)
- Point splitting technique and canonical formalism. (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 3, 392–404. (V. N. Šuško) **80c:81051** 81D15 (45K05)
- (with Kobayashi, Masanori) Origin of the Gribov ambiguity. *Phys. Lett. B* 78 (1978), no. 2-3, 241–242. (R. Delbourgo) **80b:81062** 81D25 (53C05, 58E30)
- (with Stuart, C. I. J. M.; Umezawa, H.) Mixed-system brain dynamics: neural memory as a macroscopic ordered state. *Found. Phys.* 9 (1979), no. 3-4, 301–327. (Authors' summary) **80c:92014** 92A09
- Takahasi, Hidetosi (with Nodera, Takasi) Variants of the conjugate gradient algorithm. *Keio Math. Sem. Rep. No. 3* (1978), 63–68. (I. Fennell Burns) **80d:65044** 65F10
- Takahashi, Koiti (with Barankin, Edward W.) Betweenness for real vectors and lines. I. Basic generalities. *Ann. Inst. Statist. Math.* 30 (1978), no. 1, 125–162. (J. Kist) **80c:06005** 06A15 (04A05)
- Takahashi, Shin-ei A remark on Archbold's result. II. *Bull. Fac. Sci. Ibaraki Univ. Ser. A* No. 11 (1979), 47–49. (François Combes) **80e:46039** 46L05
- Continuous linear functionals on order-related  $C^*$ -subalgebras. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 3, 465–467. (J. D. Maitland Wright) **80h:46107** 46L30 (46L05)
- Dixmier's representation theorem of central double centralizers on Banach algebras.



- Trans. Amer. Math. Soc.* **253** (1979), 229–236. (S. Sankaran) **80j:46078** 46H15
- Takahata, Hiroshi** An application of the Strassen law of the iterated logarithm to density estimations. *Bull. Tokyo Gakuuei Univ.* (4) **31** (1979), 45–50. (P. Révész) **80m:60043** 60F15 (62G05)
- Takai, Hiroshi** (with Kishimoto, Akitaka) Some remarks on  $C^*$ -dynamical systems with a compact abelian group. *Publ. Res. Inst. Math. Sci.* **14** (1978), no. 2, 383–397. (Trond Digernes) **80k:46077** 46L55
- (with Kishimoto, Akitaka) The Calkin algebra is not asymptotically abelian. *Bull. London Math. Soc.* **11** (1979), no. 1, 27–32. (G. K. Pedersen) **80h:46092** 46L05 (47D25)
- (with Evans, David E.) Simplicity of crossed products of GCR algebras by abelian groups. *Math. Ann.* **243** (1979), no. 1, 55–62. (Maurice J. Dupré) **80m:46099** 46L55
- Takamizawa, Kazuhiko** (with Nishizeki, Takao; Saito, Nobuji) Computational complexities of obtaining programs with minimum number of GO TO statements from flow charts. *Systems-Comput.-Controls* **8** (1977), no. 2, 11–18 (1978). (Steven S. Muchnick) **80c:68032** 68C25 (68B05)
- Takanami, Itsumi** (with Inoue, Katsushi) A note on closure properties of the classes of sets accepted by tape-bounded two-dimensional Turing machines. *Inform. Sci.* **15** (1978), no. 2, 143–158. (Authors' summary) **80f:68059a** 68C40 (03D10)
- (with Inoue, Katsushi) Cyclic closure properties of automata on a two-dimensional tape. *Inform. Sci.* **15** (1978), no. 3, 229–242. (Authors' summary) **80c:68144** 68D20
- (with Inoue, Katsushi) A note on cyclic closure operations. *Inform. Process. Lett.* **8** (1979), no. 1, 15–16. (Kenneth B. Salomon) **80j:68067** 68F10
- (with Inoue, Katsushi) A note on bottom-up pyramid acceptors. *Inform. Process. Lett.* **8** (1979), no. 1, 34–37. (Sorin Istrail) **80c:68042** 68D20 (68F10)
- (with Inoue, Katsushi) Three-way tape-bounded two-dimensional Turing machines. *Inform. Sci.* **17** (1979), no. 3, 195–220. (Authors' summary) **80c:68134** 68C40 (03D10)
- (with Inoue, Katsushi) On-line  $n$ -bounded multicounter automata. *Inform. Sci.* **17** (1979), no. 3, 239–251. (Authors' summary) **80c:68153** 68D35
- (with Inoue, Katsushi) Closure properties of three-way and four-way tape-bounded two-dimensional Turing machines. *Inform. Sci.* **18** (1979), no. 3, 247–265. (Authors' summary) **80f:68059b** 68C40 (03D10)
- (with Inoue, Katsushi) Three-way two-dimensional multicounter automata. *Inform. Sci.* **19** (1979), no. 1, 1–20. (W. Bucher) **80k:68061** 68F10 (68D05)
- (with Inoue, Katsushi) A note on deterministic three-way tape-bounded two-dimensional Turing machines. *Inform. Sci.* **20** (1980), no. 1, 41–55. (Authors' summary) **80f:68039** 68C40 (68D05)
- Takano, Hiroshi** (with Suzuki, Masuo; Sogo, Kiyoshi; Matsuba, Ikuo; Ikeda, Hiroshi; Chikama, Terumi) Real-space renormalization group approach to critical dynamics. Migdal approximation and other new methods. *Progr. Theoret. Phys.* **61** (1979), no. 3, 864–880. (Authors' summary) **80c:82022** 82A25
- Takano, Kiyochi** A reduction theorem for a linear Pfaffian system with regular singular points. *Arch. Math. (Basel)* **31** (1978/79), no. 3, 310–316. (V. A. Golubeva) **80i:58005** 58A17 (32B30, 33A30, 34A20, 35A30)
- Takaoka, Tadano** A definition of measures over language space. *J. Comput. System Sci.* **17** (1978), no. 3, 376–387. (H. P. Edmundson) **80h:68066** 68F05 (94A17)
- Takagi, Eiichi** See Group theoretical methods in physics. **80i:81002**
- Takata, Masaru** (with Fukata, Satoru) On sampling period sensitivities of the optimal stationary sampled-data linear regulator. *Internat. J. Control* **29** (1979), no. 1, 145–158. (Authors' summary) **80c:93038** 93B35
- Takatsu, Shinzo** (with Matsuda, Takehiko) Characterization of satisficing decision criterion. *Inform. Sci.* **17** (1979), no. 2, 131–151. (Ernst-Wilhelm Zachow) **80f:90174** 90D35
- (with Matsuda, Takehiko) Algebraic properties of satisficing decision criterion. *Inform. Sci.* **17** (1979), no. 3, 221–237. (Dennis J. Packard) **80f:90005** 90A05
- Takayama, Akira** Sensitivity analysis in economic theory. *Metroeconomica* **29** (1977), no. 1–3, 9–37. (From the text) **80i:90042** 90A16 (90A15)
- Takayama, Noriyuki** Poverty, income inequality, and their measures: Professor Sen's axiomatic approach reconsidered. *Econometrica* **47** (1979), no. 3, 747–759. (Dale K. Osborne) **80f:90032** 90A15
- Takeda, Hiroshi** (with Sato, Mitsuo; Abe, Kenichi) Asymptotic properties of Markovian decision processes with unknown parameters using Bayesian approach. *Systems-Comput.-Controls* **9** (1978), no. 1, 1–8 (1979). (Authors' summary) **80c:90122** 90C40
- (with Ishihara, Tadashi; Abe, Kenichi) Some properties of solutions to linear-exponential-Gaussian problems. *IEEE Trans. Automat. Control* **24** (1979), no. 2, 345–346. (Authors' summary) **80c:93106** 93D15
- Takeda, Tatsuo** (with Toi, Kazuo; Tsunematsu, Toshihide) Application of nonlinear optimization algorithms to the problems in plasma physics and thermonuclear fusion research. *Computing methods in applied sciences and engineering (Proc. Third Internat. Sympos., Versailles, 1977), II*, pp. 329–343. *Lecture Notes in Phys.*, **91**, Springer, Berlin, 1979. (From the introduction) **80g:93028** 93B30 (65R20, 76W05)
- Takemitsu, Nobumasa** On the similarity of the wake of the steady flow around a circular cylinder. *J. Phys. Soc. Japan* **48** (1980), no. 1, 306–311. (William H. H. Banks) **80k:76036** 76D25
- Takemoto, Hideo** On the algebraic reduction theory for countable direct summand  $C^*$ -algebras of separable  $C^*$ -algebras.  $C^*$ -algebras and applications to physics (Proc. Second Japan-USA Sem., Los Angeles, Calif., 1977), pp. 189–192. *Lecture Notes in Math.*, **650**, Springer, Berlin, 1978. (Jean-Marie Schwartz) **80j:46098** 46L05
- Takenaka, Yoshiko** A Boolean proof of Richardson's theorem of graph theory. *Inform. and Control* **39** (1978), no. 1, 1–13. (Korolani Gilezan) **80c:68079** 68E10 (05C25, 94C10)
- (with Handa, Hideo) On the spectrum of a graph. *Keio Engrg. Rep.* **31** (1978), no. 9, 99–105. (Norman Biggs) **80a:05143** 05C50
- Takeno, Hyōtiro** On the theory of plane symmetric space-times. *I. Tensor (N.S.)* **32** (1978), no. 1, 77–84. (Shin-ichi Kitamura) **80a:83055** 83C99 (53B30)
- Takens, Floris** Some remarks on Souriau's theory of elementary systems. *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977), Vol. II (Portuguese)*, pp. 593–598. *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Richard C. Churchill) **80k:70024** 70H05 (58F05)
- Singularities of vectorfields and bifurcations. *Proceedings of the Tenth Brazilian Colloquium (Poços de Caldas, 1975), Vol. II (Portuguese)*, pp. 541–546. *Cons. Nac. Desenvolvimento Ci. Tec., Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Editors) **80c:58033** 58F14 (34C05, 57R25, 58C27)
- (with Newhouse, Sheldon; Ruelle, David) Occurrence of strange Axiom A attractors near quasiperiodic flows on  $T^m$ ,  $m \geq 3$ . *Comm. Math. Phys.* **64** (1978/79), no. 1, 35–40. (Shigehiro Ushiki) **80f:58029** 58F13
- Global phenomena in bifurcations of dynamical systems with simple recurrence. *Jahresber. Deutsch. Math.-Verein.* **81** (1978/79), no. 2, 87–96. (M. I. Brin) **80f:58034** 58F14 (34C35, 34D30, 58F10)
- Symmetries, conservation laws and symplectic structures; elementary systems. *Proceedings, Bicentennial Congress Wiskundig Genootschap (Vrije Univ., Amsterdam, 1978), Part II*, pp. 375–389. *Math. Centre Tracts*, **101**, Math. Centrum, Amsterdam, 1979. (Demeter Krupka) **80j:58038** 58F05 (70H05)
- Takeo, Fukiho** On a pole of the resolvent of positive operators. *Natur. Sci. Rep. Ochanomizu Univ.* **29** (1978), no. 1, 55–59. (Glenn R. Luecke) **80m:47060** 47B55
- On the peripheral spectrum of operators. *Natur. Sci. Rep. Ochanomizu Univ.* **29** (1978), no. 2, 129–135. (R. G. Bartle) **80c:47004** 47A10
- Takenaki, Masamichi** Introduction to the flow of weights on factors of type III. *Mathematical problems in theoretical physics (Proc. Internat. Conf., Univ. Rome, Rome, 1977)*, pp. 134–144. *Lecture Notes in Phys.*, **80**, Springer, Berlin, 1978. (Ola Bratteli) **80k:46078** 46L35
- Taketa, Kiyosi** Über die Struktur der auflösbaren Gruppen, als die der mehrstufigen metabelschen Gruppen. *Proc. Fac. Sci. Tokai Univ.* **13** (1978), 19–38. (Bruce W. King) **80a:20028a** 20D10
- Über die monomialen Gruppen. VII. Über die Gruppen, deren Darstellungen sich sämtlich auf monomiale Gestalt transformieren lassen. *Proc. Fac. Sci. Tokai Univ.* **14** (1979), 35–42. (L. Dornhoff) **80g:20011** 20C15 (20D10)
- Errata: "Über die Struktur der auflösbaren Gruppen, als die der mehrstufigen metabelschen Gruppen" (Proc. Fac. Sci. Tokai Univ. **13** (1978), 19–38). *Proc. Fac. Sci. Tokai Univ.* **14** (1979), 42–43. (Editors) **80a:20028b** 20D10
- Takeuchi, Akihito** Comparison of Estes' learning theory and Tsetlin's model. *Inform. Sci.* **14** (1978), no. 1, 1–13. (Author's summary) **80c:68216** 68G05
- Evolutionary automata—comparison of automaton behavior and Restle's learning model. *Inform. Sci.* **20** (1980), no. 2, 91–99. (Author's summary) **80k:68039** 68D27 (92A25)
- Takeuchi, Kei** (with Akahira, Masafumi) Third order asymptotic efficiency of maximum likelihood estimator for multiparameter exponential case. *Rep. Univ. Electro-Comm.* **28** (1977/78), no. 2, 271–293. (Authors' summary) **80c:62047** 62F12
- (with Akahira, Masafumi) Asymptotic optimality of the generalized Bayes estimator. *Rep. Univ. Electro-Comm.* **29** (1978/79), no. 1, 37–45. (A. N. Philippou) **80c:62023** 62F12
- Takeuchi, Mamoru** On a theorem of Brownawell. *Bull. Fac. Sci. Ibaraki Univ. Ser. A* **No. 11** (1979), 51–55. (A. J. Zajtá) **80k:10043** 10F37
- Takeuchi, Masaru** Homogeneous Kähler submanifolds in complex projective spaces. *Japan. J. Math. (N.S.)* **4** (1978), no. 1, 171–219. (A. L. Oniščik) **80i:32059** 32M10 (53C30, 53C55)
- On conjugate loci and cut loci of compact symmetric spaces. I. *Tsukuba J. Math.* **2** (1978), 35–68. (Bang-yeon Chen) **80d:53033** 53C35
- On conjugate loci and cut loci of compact symmetric spaces. II. *Tsukuba J. Math.* **3** (1979), no. 1, 1–29. (Bang-yeon Chen) **80k:53082** 53C35 (57T20, 58A35)
- Takeuchi, Mitsuhiko** Formal groups and Hopf algebras. (Japanese) *Sūgaku* **29** (1977), no. 4, 309–321 (1978). (T. Kamabayashi) **80k:14048** 14L15 (14L05, 16A24)
- Faithfully flat descent of abelian categories. *Comm. Algebra* **7** (1979), no. 11, 1133–1179. (James Hein) **80f:18010** 18E99
- Takeuchi, Yasuhiro** (with Adachi, Norihiko; Tokumaru, Hidekatsu) Global stability of ecosystems of the generalized Volterra type. *Math. Biosci.* **42** (1978), no. 1–2, 119–136. (Authors' summary) **80i:92019** 92A15
- Takeuchi, Yoshiki** (with Akashi, Hajime) Optimal control of linear stochastic systems with jump disturbances. (Japanese. English summary) *Systems and Control* **23** (1979), no. 7, 405–413. (Authors' summary) **80c:93131** 93E20
- Takeuchi, Yu** Construction of nonstandard numbers from the rationals. (Spanish) *Bol. Mat.* **11** (1977), no. 4–6, 185–207. (L. D. Kugler) **80k:03096** 03H20
- A notion of filters. (Spanish) *Bol. Mat.* **12** (1978), no. 4–6, 223–233. (O. T. Alas) **80f:54003** 54A20
- Takeuti, Gaisi** Gödel numbers of product spaces. *Higher set theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1977)*, pp. 461–471. *Lecture Notes in Math.*, **669**, Springer, Berlin, 1978. (P. Štěpánek) **80c:03066** 03E65 (03E50)
- A transfer principle in harmonic analysis. *J. Symbolic Logic* **44** (1979), no. 3, 417–440. (W. A. J. Luxemburg) **80h:03077** 03E75 (03E40, 03H20, 22D05)
- Takibaev, N. Z.** (with Kiržnic, D. A.; Krjukov, G. Ju.) A new approach in quantum theory and its application to low and high energy nuclear physics. (Russian. English summary) *Fiz. Elementar. Častic i Atom. Jadra* **10** (1979), no. 4, 741–783. (V. E. Kuzmichev) **80j:81087** 81G35
- Takigawa, N.** (with Lee, Shyh Yuan) A wave propagation matrix method in semiclassical theory. *Nuclear Phys. A* **308** (1978), no. 1–2, 189–209. (Authors' summary) **80c:81109** 81F30 (34E20)
- Takijima, Kunio** (with Tomaru, Tadashi) Local properties of quotient analytic spaces. *Proc. Amer. Math. Soc.* **72** (1978), no. 3, 461–467. (O. Riemenschneider) **80k:32011** 32C40 (32G11)
- Takizawa, Ei Ii** On the generalized sampling theorem, generalized frequency, and generalized band-limited spectrum function. (German and Russian summaries) *Z. Angew. Math. Mech.* **59** (1979), no. 1, 15–26. (L. L. Campbell) **80c:94005** 94A12
- Takizawa, Kiyoshi** E-unitary  $\mathfrak{N}$ -unipotent semigroups. *Bull. Tokyo Gakuuei Univ.* (4) **30** (1978), 21–33. (D. R. LaTorre) **80j:20069** 20M10 (06A12)
- Taku, V. D.** Cubic invariants of a multidimensional differential system with quadratic nonlinearities. (Russian) *Studies in functional analysis and differential equations (Russian)*, pp. 20–31, 76, "Shtiinca", Kishinev, 1978. (F. Neuman) **80k:34010** 34A25 (34C20)
- Hyperplanes of symmetry of a system of differential equations. (Russian)

- Differential'nye Uravneniya* 14 (1978), no. 7, 1332-1334, 1344. (Author's summary) 80k:34054 34C20
- Takwale, R. G.** (with Risbud, A. A.) Boundary effects on Čerenkov radiation in an alternating electric field. *J. Phys. A* 13 (1980), no. 2, 535-555. (From the summary) 80k:78017 78A35
- ben-Tal, A.** See Ben-Tal, A.
- Tal, Jacob** (with Yeh, Yern; Rushforth, Craig K.) A state-space formulation of the causal linear filtering problem in sampled-data systems. *Inform. Sci.* 14 (1978), no. 1, 75-87. (Tohru Katayama) 80c:93124 93E11 (94A05)
- Talagrand, Michel** Ensembles  $\mathcal{K}$ -analytiques et fonctions croissantes de compacts. *Séminaire Choquet, 17e année (1977/78), Initiation à l'analyse, Fasc. 2, Comm. No. 1, 2 pp.*, Secrétariat Math., Paris, 1978. (V. Ficker) 80d:28009 28A05
- Une classe d'espaces de Banach qui admettent des quotients séparables. *Séminaire Choquet, 17e année (1977/78), Initiation à l'analyse, Fasc. 2, Comm. No. 2, 1 p.*, Secrétariat Math., Paris, 1978. (Editors) 80d:46034 46B20
- Solution d'une question de H. Weizsäcker. *Séminaire Choquet, 17e année (1977/78), Initiation à l'analyse, Fasc. 2, Comm. No. 3, 2 pp.*, Secrétariat Math., Paris, 1978. (Peter Dodds) 80d:46081 46G15 (28A51)
- Les boules peuvent-elles engendrer la tribu borélienne d'un espace métrisable non séparable? *Séminaire Choquet, 17e année (1977/78), Initiation à l'analyse, Fasc. 2, Comm. No. 5, 2 pp.*, Secrétariat Math., Paris, 1978. (V. Ficker) 80d:28010 28A05 (54H05)
- Algèbres d'ensembles sur lesquelles toutes les mesures  $\sigma$ -additives sont bornées. *Séminaire Choquet, 17e année (1977/78), Initiation à l'analyse, Fasc. 2, Comm. No. 6, 3 pp.*, Secrétariat Math., Paris, 1978. (V. Ficker) 80d:28016 28A12
- (with Ghoussoub, Nassif) A generalized Chacon's inequality and order convergence of processes. *Séminaire Choquet, 17e année (1977/78), Initiation à l'analyse, Fasc. 2, Comm. No. 13, 4 pp.*, Secrétariat Math., Paris, 1978. (Authors' summary) 80d:60064 60G44
- Une remarque sur les espaces de Banach réticulés. *Séminaire Choquet, 17e année (1977/78), Initiation à l'analyse, Fasc. 2, Comm. No. 14, 2 pp.*, Secrétariat Math., Paris, 1978. (Peter Dodds) 80d:46036 46B30
- Espaces de Banach faiblement  $\mathcal{K}$ -analytiques. *Séminaire sur la Géométrie des Espaces de Banach (1977-1978), Exp. No. 12-13, 10 pp.*, École Polytech., Palaiseau, 1978. (N. J. Kalton) 80c:46032 46B20
- (with Bourgain, Jean; Fremlin, David H.) Pointwise compact sets of Baire-measurable functions. *Amer. J. Math.* 100 (1978), no. 4, 845-886. (James Chew) 80b:54017 54C50
- Capacités invariantes extrémales. (English summary) *Ann. Inst. Fourier (Grenoble)* 28 (1978), no. 4, 79-146, x. (W. R. Derrick) 80d:31002 31A15
- Comparaison des boréliens d'un espace de Banach pour les topologies fortes et faibles. *Indiana Univ. Math. J.* 27 (1978), no. 6, 1001-1004. (S. D. Chatterji) 80d:46033 46B20 (28C99)
- (with Fremlin, David H.) On the representation of increasing linear functionals on Riesz spaces by measures. *Mathematika* 25 (1978), no. 2, 213-215. (W. A. J. Luxemburg) 80c:28009 28C05 (46A40)
- Est-ce que  $l^\infty$  est un espace mesurable? (English summary) *Bull. Sci. Math.* (2) 103 (1979), no. 3, 255-258. (D. W. Bressler) 80k:03056 03E35 (46B99, 54A35)
- Sur les convexes compacts dont l'ensemble des points extrémaux est  $\mathcal{K}$ -analytique. *Bull. Soc. Math. France* 107 (1979), no. 1, 49-53. (John E. Jayne) 80j:46023 46A55
- Deux exemples de fonctions convexes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 8, A461-A464. (I. Namioka) 80d:46076 46G05
- (with Ghoussoub, Nassif) Convergence faible des potentiels de Doob vectoriels. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 11, A599-A602. (Authors' summary) 80d:60100 60J45 (31D05)
- Sur la propriété de Radon-Nikodým dans les espaces de Banach réticulés. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 19, A907-A910. (Author's summary) 80d:46017 46B30
- Utilisation de l'hypothèse du continu pour la construction d'espaces compacts. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 2, A83-A85. (Author's summary) 80c:46035 46E27
- Géométrie des simplexes de moyennes invariantes. *J. Funct. Anal.* 34 (1979), no. 2, 304-337. (Joseph Max Rosenblatt) 80k:43002 43A07
- Barycentres de sous-mesures pathologiques. *Math. Ann.* 242 (1979), no. 2, 97-102. (J. P. R. Christensen) 80g:43002 43A05 (28C10)
- (with Ghoussoub, Nassif) Order density and the Radon-Nikodým property in Banach lattices. *Math. Ann.* 243 (1979), no. 3, 217-225. (Jerry A. Johnson) 80j:46036 46B30 (46B22)
- (with Fremlin, David H.) A decomposition theorem for additive set-functions, with applications to Pettis integrals and ergodic means. *Math. Z.* 168 (1979), no. 2, 117-142. (K. Jacobs) 80k:28004 28A10 (28B05, 28C10, 46G10)
- Deux généralisations d'un théorème de I. Namioka. *Pacific J. Math.* 81 (1979), no. 1, 239-251. (S. A. Naimpally) 80k:54018 54C05 (46B99)
- Talashadze, M. V.** A method for the nonparametric estimation of a stationary process. (Russian. Georgian and English summaries) *Sovetsk. Akad. Nauk Gruz. SSR* 92 (1978), no. 2, 293-296. (Author's summary) 80f:60043 60G35
- Talasila, N. V.** Periodic solutions of a system of differential equations of the form  $dx/dt = A(t)x + F(t, x)$ . (Russian) *Differential'nye Uravneniya (Ryazan) No. 11* (1978), 166-173. (G. Bojadziev) 80a:34046 34C25
- Figà-Talamanca, Alessandro** See Figà-Talamanca, Alessandro
- Talasila, D.** On the convergence of a mixed finite element approximation for cylindrical shells. (German and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 9, 431-436. (Author's summary) 80m:73060 73L99 (65N30)
- Talbot, A.** The accurate numerical inversion of Laplace transforms. *J. Inst. Math. Appl.* 23 (1979), no. 1, 97-120. (Author's summary) 80c:65244 65R10
- Talbot, C. J.** (with Everson, J.) Erratum: "Morse theory on timelike and causal curves" (General Relativity and Gravitation 7 (1976), no. 7, 609-621). *Gen. Relativity Gravitation* 9 (1978), no. 11, 1047. (Editors) 80b:58026 58E10 (83C99)
- Talenti, Giorgio** On ill-posed problems. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 1, 1-29. (Maria Cinquini-Cibrario) 80c:35065 35R25
- (with Tesi, A.) Remarks on the asymptotical behaviour of solutions to some nonlinear parabolic equations. *Rend. Sem. Mat. Univ. Padova* 59 (1978), 57-66 (1979). (E. Podolak) 80b:35015 35B40 (35K55)
- Tallaferra, Steven** Asymptotic behavior of solutions of  $y'' = \varphi(t)y^\lambda$ . *J. Math. Anal. Appl.* 66 (1978), no. 1, 95-134. (W. Wasow) 80d:34040 34C11
- On the positive solutions of  $y'' + \varphi(t)y^{-\lambda} = 0$ . *Nonlinear Anal.* 2 (1978), no. 4, 437-446. (J. S. W. Wong) 80d:34041 34C11
- (with Nachman, A.) Mass transfer in boundary layers for power law fluids. *Proc. Roy. Soc. London Ser. A* 365 (1979), no. 1722, 313-326. (William H. H. Banks) 80c:76001 76A05 (35Q20)
- Talkner, Peter** (with Grabert, Hermann; Hänggi, Peter) Is quantum mechanics equivalent to a classical stochastic process? *Phys. Rev. A* (3) 19 (1979), no. 6, 2440-2445. (Authors' summary) 80d:81005 81B10 (35Q99)
- Tall, Franklin D.** Applications of a generalized Martin's axiom. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 2, 103-106. (Keith Devlin) 80b:03087 03E60 (54A35, 54H05)
- (with Broverman, S.; Ginsburg, John; Kunen, Kenneth) Topologies determined by  $\sigma$ -ideals on  $\omega_1$ . *Canad. J. Math.* 30 (1978), no. 6, 1306-1312. (Hans-Christian Reichel) 80k:54004 54A25 (04A20)
- Le Tallrec, Patrick** See Le Tallrec, Patrick
- Tally, William** On the convergence of optimal linear combination procedures. *Comput. Math. Appl.* 4 (1978), no. 2, 149-152. (James E. Gentle) 80c:62076 62H30 (65K99)
- A convergence criterion for optimal linear combination procedures. *Comput. Math. Appl.* 5 (1979), no. 1, 21-24. (C. G. Khatri) 80g:62042 62H30
- Talman, A. J. J.** (with Doshi, Bharat T.; van der Duyn Schouten, F. A.) A production-inventory control model with a mixture of back-orders and lost-sales. *Management Sci.* 24 (1977/78), no. 10, 1078-1086. (Steven Nahmias) 80c:90047 90B05
- (with van der Laan, G.) A restart algorithm without an artificial level for computing fixed points on unbounded regions. *Functional differential equations and approximation of fixed points (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978), pp. 247-256, Lecture Notes in Math., 730, Springer, Berlin, 1979. (From the introduction) 80b:65033 65H05 (90C30)*
- (with van der Laan, G.) A restart algorithm for computing fixed points without an extra dimension. *Math. Programming* 17 (1979), no. 1, 74-84. (Authors' summary) 80c:90128 90C99
- Talman, James D.** Numerical Fourier and Bessel transforms in logarithmic variables. *J. Comput. Phys.* 29 (1978), no. 1, 35-48. (Author's summary) 80b:65278 65T05
- Talmi, Igal** (with Ginocchio, Joseph N.) On the correspondence between fermion and boson states and operators. *Nuclear Phys. A* 337 (1980), no. 3, 431-444. (Authors' summary) 80m:81102 81G30
- Talmoudi, Fauzia Lazami** Sur les nombres de  $S \cap [1, 2]$ . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 285 (1977), no. 16, A969-A971. (Author's summary) 80c:12003 12A15
- Sur les nombres de  $S \cap [1, 2]$ . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 10, A739-A741. (Author's summary) 80a:12004 12A15
- Talmy, V.** See Kompaneec, A. S., 80b:70002a and Kompaneec, A. S., 80b:70002b
- Talpalaru, Pavel** Growth properties of difference equations. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 24(28) (1978), no. 3-4, 65-70. (G. R. Sell) 80j:39006 39A11
- Talukdar, B.** (with Das, U.) Combined variable-phase-off-shell scattering theory. *Z. Phys. A* 291 (1979), no. 2, 103-105. (Authors' summary) 80b:81070 81F99
- Talwalker, Sh.** A note on the characterization of the multivariate normal distribution. *Metrika* 26 (1979), no. 1, 25-30. (Lennart Bondesson) 80c:60029 60E07 (62H05)
- Talwar, Sudha** (with Singh, Surjeet) Modules over bounded hereditary Noetherian prime rings. *Arch. Math. (Basel)* 32 (1979), no. 2, 134-142. (J. C. Robson) 80g:16008 16A14
- Tam, Bit Shun** On indecomposable subcones. *Linear Algebra Appl.* 22 (1978), 33-40. (J. G. Horne) 80d:15035 15A99
- Tam, D. S. F.** (with Ariaratnam, S. T.) Random vibration and stability of a linear parametrically excited oscillator. (German and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 2, 79-84. (Authors' summary) 80b:70031 70J25 (34F05)
- Tam, K. K.** Construction of upper and lower solutions for a problem in combustion theory. *J. Math. Anal. Appl.* 69 (1979), no. 1, 131-145. (From the introduction) 80b:80005 80A25 (35Q20, 65P05)
- Tam, Kwok Kee** (with Kiang, David) The relativistic Boltzmann equation and the equations of magnetohydrodynamics with radiative reaction. *Progr. Theoret. Phys.* 62 (1979), no. 5, 1245-1252. (Authors' summary) 80k:82081 82A70 (76W05)
- Tamaki, Jeanne K.** (with Hu, T. C.; Kleitman, Daniel J.) Binary trees optimum under various criteria. *SIAM J. Appl. Math.* 37 (1979), no. 2, 246-256. (Itsuo Takanami) 80k:68049 68E10 (68H05, 90B40)
- Tamaki, Mitsushi** A secretary problem with double choices. (Japanese summary) *J. Oper. Res. Soc. Japan* 22 (1979), no. 4, 257-265. (S. M. Samuels) 80m:60056 60G40 (62L15)
- OLA policy and the best choice problem with random number of objects. *Math. Japon.* 24 (1979/80), no. 4, 451-457. (Author's summary) 80m:62079 62L15 (90D35)
- Ta Man** A generalization of spectral sequences. (Romanian. French summary) *Stud. Cerc. Mat.* 30 (1978), no. 6, 671-716. (Jack Weinstein) 80g:18012 18G40 (55T05)
- Tamano, Ken-ichi** (with Yajima, Yukinobu) On total paracompactness and total metacompactness. *Fund. Math.* 105 (1979/80), no. 1, 73-78. (J. E. Vaughan) 80k:54032 54D18 (54E99)
- Tamari, Dov** (with Huguet, Danièle) La structure polyédrale des complexes de parenthésages. *J. Combin. Inform. System Sci.* 3 (1978), no. 2, 69-81. (M. Stăneanu) 80b:05016 05B35 (06B25)
- bellani Tamburini, Maria Chiara** See Bellani Tamburini, Maria Chiara
- Tamhane, Ajit C.** Inference based on regression estimator in double sampling. *Biometrika* 65 (1978), no. 2, 419-427. (K. R. Shah) 80d:62058 62J99 (62F03)
- (with Bechhofer, Robert E.) A two-stage minimax procedure with screening for selecting the largest normal mean. II. An improved PCS lower bound and associated tables. *Comm. Statist. A—Theory Methods* 8 (1979), no. 4, 337-358. (Joseph A. Yahav) 80g:62014 62F07



- A comparison of procedures for multiple comparisons of means with unequal variances. *J. Amer. Statist. Assoc.* 74 (1979), no. 366, part 1, 471-480. (Juliet Popper Shaffer) **80b:62056** 62J15
- Tamhankar, M. V. (with Ismail, Mourad E.-H.) A combinatorial approach to some positivity problems. *SIAM J. Math. Anal.* 10 (1979), no. 3, 478-485. (R. A. Askey) **80c:05016** 05A20 (33A65)
- Tamir, Arle (with Megiddo, Nimrod) An  $O(n \log n)$  algorithm for a class of matching problems. *SIAM J. Comput.* 7 (1978), no. 2, 154-157. (Sukhamay Kundu) **80d:68042** 68C05 (68C25, 68E10)
- Rates of convergence of a one-dimensional search based on interpolating polynomials. *J. Optim. Theory Appl.* 27 (1979), no. 2, 187-203. (Wolfgang Wetterling) **80b:65043** 65K10 (90C30)
- Tamru, Ebu Čebyšev type inequalities for the solution of  $E$ -models of nonlinear stochastic programming. (Russian) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* 27 (1978), no. 4, 448-450. (J. Mockus) **80d:90063** 90C15
- Minimization of a probability function. (Russian. English and Estonian summaries) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* 28 (1979), no. 1, 17-24, 93. (A. G. Žilinskas) **80e:65071** 65K10
- Tammer, Klaus Allgemeine Lösungsbegriffe für stochastische Optimierungsprobleme mit festem Restriktionsbereich. (Russian, English and French summaries) *Wiss. Z. Humboldt-Universität Berlin Math.-Natur. Reihe* 26 (1977), no. 5, 595-602. (Author's summary) **80c:90117** 90C15
- Relations between stochastic and parametric programming for decision problems with a random objective function. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 4, 523-535. (Peter Kall) **80b:90114** 90C15
- Über die Menge der Kuhn-Tucker Punkte zu einem konvexen quadratischen Optimierungsproblem. *Z. Angew. Math. Mech.* 59 (1979), no. 4, 211-212. (Wolfgang Wetterling) **80c:90073** 90C20 (90C33)
- Tammet, H. F. Generalization of the Langevin method for the solution of inverse problems. (Russian. English summary) *Tartu Riikl. Üli. Toimetised No. 479* (1979), 7-9, 22. (Author's summary) **80f:65147** 65R20
- Tammi, Olli On optimized inequalities in connection with coefficient bodies of bounded univalent functions. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 1, 45-52. (L. A. Aksent'ev) **80f:30012** 30C50 (30C70)
- Tamrazov, P. M. Structural and approximational properties of functions in the complex domain. *Linear spaces and approximation* (Proc. Conf., Math. Res. Inst., Oberwolfach, 1977), pp. 503-514, *Internat. Schriftenreihe Numer. Math.*, 40, Birkhäuser, Basel, 1978. (Horst Tietz) **80a:30044** 30E10
- (with Bilil, V. I.) Moduli of smoothness and polynomial approximations of functions in quasi-conformal domains. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 4 Moduli Gladkost. v Zadač. Teor. Funkcij* (1978), 3-9. (V. P. Havin) **80d:30014** 30C60 (30E10)
- (with Bilil, V. I.) Moduli of smoothness and polynomial approximations of functions in quasiconformal domains. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 3, 513-516. (A. V. Bratišev) **80b:30029** 30E10 (30C60)
- Tamshu, R. E. (with Leonov, A. I.; Miropol'skij, Ju. Z.) Nonlinear stationary internal and surface waves in shallow seas. (Russian summary) *Tellus* 31 (1979), no. 2, 150-160. (K. K. Puri) **80f:76011** 76B25
- Tamshu, Mark A note on conservative extensions. *Southeast Asian Bull. Math.* 2 (1978), no. 1, 53-54. (Perry Smith) **80d:03033** 03C65
- Tamulinas, B. The design of scheduling rules for queueing systems. (Russian. English and Latvian summaries) *Statist. Problemy Upravljenija—Trudy Sem. Processy Optimal. Upravlenija V Sektora* No. 33 (1979), 91-112, 114. (Author's summary) **80d:90047** 90B35 (90B22)
- Tamura, Hideo Local energy decays for wave equations with time-dependent coefficients. *Nagoya Math. J.* 71 (1978), 107-123. (V. M. Maksimov) **80c:35058** 35L05 (35B40)
- On the decay of the local energy for wave equations with a moving obstacle. *Nagoya Math. J.* 71 (1978), 125-147. (V. M. Maksimov) **80c:35059** 35L05 (35B40)
- Tamura, K. (with Miura, S.) Necessary and sufficient conditions for local and global nondominated solutions in decision problems with multi-objectives. *J. Optim. Theory Appl.* 28 (1979), no. 4, 501-523. (Pierre Loridan) **80j:90101** 90C31
- Tamura, Takayuki Errata: "Notes on translational hulls of completely 0-simple semigroups" [Proceedings of the First Symposium on Semigroups (Shimane Univ., Matsue, 1977), pp. 73-83, Shimane Univ., Matsue, 1977; MR 57 #16438]. *Proceedings of the 2nd Symposium on Semigroups* (Tokyo Gakugei Univ., Tokyo, 1978), p. 80, Tokyo Gakugei Univ., Tokyo, 1978. (Editors) **80k:20063** 20M10
- Recent results and problems on commutative Archimedean semigroups. *Proceedings of the 2nd Symposium on Semigroups* (Tokyo Gakugei Univ., Tokyo, 1978), pp. 69-79, Tokyo Gakugei Univ., Tokyo, 1978. (From the text) **80i:20050** 20M14 (06F05)
- (with Gale, David) Maximal cancellative subsemigroups and sub-Archimedeaness. *Algebraic theory of semigroups* (Proc. Sixth Algebraic Conf., Szeged, 1976), pp. 147-154, *Colloq. Math. Soc. János Bolyai*, 20, North-Holland, Amsterdam, 1979. (M. K. Sen) **80i:20034** 20M10 (06F05)
- Tamura, Takeshi A study on the mechanism of consolidation. *Mem. Fac. Engrg. Kyoto Univ.* 41 (1979), no. 4, 518-535. (Author's summary) **80m:76074** 76S05
- do hong Tan See Do Hong Tan
- ho khac Tan See Ho Khac Tan
- ngo duk Tan See Ngo Duk Tan
- vo van Tan See Vo Van Tan
- Tan, Eng Tjioe See Ch'én, Yung Ch'iu
- Tan, H. M. Patterns in square numbers. *Southeast Asian Bull. Math.* 2 (1978), no. 1, 37-38. (Editors) **80g:10015** 10A30
- Tan, Harry H. (with Leighton, William J., III) Capacity region of degraded broadcast channels with feedback. *Inform. Sci.* 13 (1977), no. 2, 167-177. (Authors' summary) **80g:94048** 94A40
- (with Leighton, William J., III) Trellis coding for degraded broadcast channels. *Inform. and Control* 39 (1978), no. 2, 119-134. (John Karlof) **80d:94012** 94A24 (94B35)
- Tan, K. T. An easy Nim type game. *Menemui Mat.* 1 (1979), no. 1, 30-34. (S. Brent Morris) **80i:90106** 90D05
- Tan, Keng Teh A note on semiprimary group rings. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 3-4, 261. (Ralph W. Wilkerson) **80b:16009** 16A26
- Tan, Kok Keong (with Lee, Cheng-Ming) On Fan's extensions of Browder's fixed point theorems for multi-valued inward mappings. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 2, 169-174. (Simeon Reich) **80b:47076** 47H10 (54H25)
- (with Janas, Ludvik; Ko, Hwei Mei) Edelstein's contractivity and attractors. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 339-344. (L. P. Belluce) **80b:54084** 54H25 (54E35)
- Tan, P. (with Sherif, A.) On structural predictive distribution with type II progressively censored Weibull data. (German, French and Russian summaries) *Statist. Hefte (N.F.)* 19 (1978), no. 4, 247-255. (J. F. Lawless) **80d:62092** 62N05 (62F15)
- Tan, S. K. Group objects in a category with finite products. *Math. Medley* 6 (1978), no. 3, 113-116. (From the introduction) **80d:18010** 18D35
- Tan, Sevim The general discrete transversality condition. II. (Turkish summary) *J. Pure Appl. Sci.* 10 (1977), no. 3, 245-248 (1979). (Author's summary) **80b:49021** 49C05
- Tan, Tey On the lattice of sublattices of a modular lattice. *Nanta Math.* 11 (1978), no. 1, 17-21. (Ralph Freese) **80b:06011** 06C05
- (with Ho, Y. S.; Koh, K. M.) On sequences associated with 2-BD-graphs. *Bull. Malaysian Math. Soc. 2* (1) (1978), 43-48. (Ralph Faudree) **80a:05164** 05C99
- (with Koh, K. M.; Rogers, D. G.) Two theorems on graceful trees. *Discrete Math.* 25 (1979), no. 2, 141-148. (Gary S. Bloom) **80c:05050** 05C05
- Tan, Wal Yuan On the distributions of sums of squares in unbalanced random effect models. (French and Italian summaries) *Statistica (Bologna)* 37 (1977), no. 4, 439-462. (Editors) **80f:62071a** 62J15
- Some aspects of distribution theories in quantitative genetics. I. Some general results. (German summary) *Biometrical J.* 20 (1978), no. 7-8, 779-793. (Howard B. Stauffer) **80d:92018** 92A10
- On the distribution of the sample covariance matrix from a mixture of normal densities. *South African Statist. J.* 12 (1978), no. 1, 47-55. (I. Olkin) **80a:62073** 62H10
- Erratum: "On the distributions of sums of squares in unbalanced random effect models" (*Statistica (Bologna)* 37 (1977), no. 4, 439-462). (Italian) With an English translation. *Statistica (Bologna)* 38 (1978), no. 1, 59-67. (Editors) **80f:62071b** 62J15
- On the quadratic estimation of covariance matrices in MANOVA random effect models. (French and Italian summaries) *Statistica (Bologna)* 38 (1978), no. 4, 449-458. (J. Kleffe) **80j:62070** 62J10 (62H12)
- (with Wong, S. P.) On the effects of departure from normality on the  $F$ -ratios in a nested random effect model by mixture of normals. (German summary) *Biometrical J.* 21 (1979), no. 3, 199-211. (M. Atiqullah) **80b:62051** 62F35 (62J10)
- Tan, Wei Han (with Wang, Run Wen; Ding, Li Ming) Thermal convection instabilities of spherically symmetric plasmas. (Chinese. English summary) *Kexue Tongbao* 24 (1979), no. 16, 727-730. (Authors' summary) **80b:82030** 82A45 (80A20)
- Tanabe, Hiroki On some unilateral problem of elliptic and parabolic type. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 7, 194-196. (J. Kačur) **80d:35033** 35D10 (49A29)
- Tanabe, Kunio Differential geometric methods in nonlinear programming. *Applied nonlinear analysis* (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978), pp. 707-719, Academic Press, New York, 1979. (Andrew R. Conn) **80b:90033** 90C30 (49D37)
- Continuous Newton-Raphson method for solving an underdetermined system of nonlinear equations. *Nonlinear Anal.* 3 (1979), no. 4, 495-503. (Marian Fabian) **80i:58010** 58C15 (65H10)
- Tanabe, Yukio New exact Einstein-Maxwell fields for a massless charge. *Gen. Relativity Gravitation* 10 (1979), no. 2, 125-128. (Ion D. Teodorescu) **80i:83029** 83C50 (53B50, 78A25)
- Generation of the Lewis solutions from the Weyl solutions. *J. Math. Phys.* 20 (1979), no. 7, 1486-1489. (Author's summary) **80c:83005** 83C05
- Tanavev, V. S. The optimal separation of a finite set into subsets. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 1, 26-28, 92. (Jaroslav Morávek) **80b:68060** 68C25 (05A17)
- Optimal decomposition of a partially ordered set into chains. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 5, 389-391, 475. (V. N. Salii) **80m:06003** 06A10 (05A17)
- Tanaka, Akio (with Noguchi, Shoichi) Topological properties of continuous neural networks with analog neurons. *Systems-Comput. Controls* 9 (1978), no. 1, 9-18 (1979). (From the summary) **80j:94054** 94C99 (45G10, 68G10, 92A07)
- Tanaka, Azuma (with Taguchi, Yukio; Yamamoto, Kunio) Haag's theorem and dimensional regularization. *Phys. Lett. B* 90 (1980), no. 4, 422-423. (Authors' summary) **80i:81067** 81E99
- Tanaka, Hatsuakazu (with Matsuo, Hiroshi; Kaneko, Seiko) Efficient encoding of sources with memory. *IEEE Trans. Inform. Theory* 25 (1979), no. 2, 221-225. (Authors' summary) **80b:94019** 94A29 (68B15)
- Tanaka, Hiroshi Probabilistic treatment of the Boltzmann equation of Maxwellian molecules. *Z. Wahrsch. Verw. Gebiete* 46 (1978/79), no. 1, 67-105. (G. Papanicolaou) **80b:60083** 60H10 (45K05, 82A70)
- Stochastic differential equations with reflecting boundary condition in convex regions. *Hiroshima Math. J.* 9 (1979), no. 1, 163-177. (Walter A. Rosenkrantz) **80b:60075** 60H10 (60J60)
- Tanaka, Jun-ichi Some remarks on simply invariant subspaces on compact abelian groups. *J. Math. Soc. Japan* 30 (1978), no. 3, 475-482. (Paul S. Muhly) **80b:43005** 43A17 (46Jxx)
- A note on Helson's existence theorem. *Proc. Amer. Math. Soc.* 69 (1978), no. 1, 87-90. (K. Yale) **80b:46061** 46J10 (30H05)
- Tanaka, K. (with Horie, T.; Sekiya, T.) Mean temperature field variations in heterogeneous media. (German summary) *Acta Mech.* 32 (1979), no. 1-3, 153-164. (Authors' summary) **80c:73070** 73U05
- Tanaka, Kaoru (with Michiwaki, Yoshimasa; Kobayashi, Tatsuhiko; Oyama, Makoto) On the cycloids in the old Japanese mathematics. *Karachi Math. Assoc. Riazii (Sowenir)*

- 1978, 32-41. (S. Hitotumatu) **80f:01004** 01A27 (51-03)  
(with Oyama, Makoto; Hamada, Toshio; Izuka, Masaki; Ōtake, Shigeo; Kobayashi, Tatsuhiko; Tanaka, Mitsuru; Michiaki, Yoshimasa) Elliptic problems occurring in "sangaku". (Japanese) *Sūgakushi Kenkyū* No. 78 (1978), 1-85. (S. Hitotumatu) **80c:01001** 01A27 (51-03)
- Tanaka, Kenkichi** (with Homma, Hisafumi) Continuous time noncooperative  $n$ -person Markov games. *Bull. Math. Statist.* **10** (1978/79), no. 1-2, 93-105. (Authors' summary) **80g:90130** 90D20  
(with Homma, Hisafumi) On the learning algorithm of 2-person zero-sum game. *Sci. Rep. Niigata Univ. Ser. A No. 16* (1979), 15-22. (From the introduction) **80g:90125** 90D05
- Tanaka, Kokichi** (with Ogawa, Hitoshi; Kitahashi, Tadairo) Minimum deduction process by D graph deduction. *Systems-Comput.-Controls* **8** (1977), no. 6, 1-8 (1979). (Authors' summary) **80g:68119** 68G15 (03B35, 68E10)  
(with Ogawa, Hitoshi; Kitahashi, Tadairo) Formal deduction based on a directed AND/OR graph and its completeness. *Systems-Comput.-Controls* **8** (1977), no. 6, 9-16 (1979). (Authors' summary) **80g:68120** 68G15 (03B35, 68E10)  
(with Aoki, Kyoto) Interactive systems and their abilities. *Systems-Comput.-Controls* **9** (1978), no. 1, 37-45 (1979). (From the summary) **80j:68079** 68G99 (93A10)
- Tanaka, Minoru** Experiments concerning the distribution of squarefree numbers. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 3, 101-105. (Editors) **80j:10001** 10-04 (10H15)
- Tanaka, Mitsuru** (with Ōyama, Makoto; Hamada, Toshio; Izuka, Masaki; Ōtake, Shigeo; Kobayashi, Tatsuhiko; Tanaka, Kaoru; Michiaki, Yoshimasa) Elliptic problems occurring in "sangaku". (Japanese) *Sūgakushi Kenkyū* No. 78 (1978), 1-85. (S. Hitotumatu) **80c:01001** 01A27 (51-03)
- Tanaka, Noboru** (with Kaneda, Eiji) Rigidity for isometric imbeddings. *J. Math. Kyoto Univ.* **18** (1978), no. 1, 1-70. (H. Goldschmidt) **80a:53062** 53C40 (58H05)  
On the equivalence problems associated with simple graded Lie algebras. *Hokkaido Math. J.* **8** (1979), no. 1, 23-84. (L. Kolář) **80a:53034** 53C10 (58H05)
- Tanaka, Sen-ichi** (with Ikeda, Hideo) On the general solutions of the difference equations  $y(x+1) = \prod_{j=1}^n (y(x))^{a_j} f_j(x, y(x))$ . II. *Math. Rep. Toyoama Univ.* **2** (1979), 69-85. (Sheldon P. Gordon) **80j:39003** 39A10
- Tanaka, Shōtarō** (with Iséki, Kiyoshi) An introduction to the theory of BCK-algebras. *Math. Japon.* **23** (1978/79), no. 1, 1-26. (S. Comer) **80a:03081** 03G25 (06D99)
- Tanaka, Sueo** (with Park, Yong Jin) A new approach for network overall reliability analysis. *Electron. Comm. Japan* **60** (1977), no. 10, 1-8. (Authors' summary) **80g:68010** 68A05
- Tanaka, Yoshio** Some necessary conditions for products of  $k$ -spaces. *Bull. Tokyo Gakugei Univ.* **41** (1978), 1-16. (A. I. Baškirov) **80a:54045** 54D50  
A characterization for the product of closed images of metric spaces to be a  $k$ -space. *Proc. Amer. Math. Soc.* **74** (1979), no. 1, 166-170. (E. Michael) **80a:54028** 54D50
- Tanaka, Yutaka** (with Asano, Chooichiro) A generalized method of optimal scaling for partially ordered categories. *Res. Inst. Fund. Inform. Sci. Res. Rep. No. 76* (1977), 25 pp. (From the introduction) **80i:65043a** 65F35 (18B10, 65K10)  
Some generalized methods of optimal scaling and their asymptotic theories: the case of multiple responses-multiple factors. *Ann. Inst. Statist. Math.* **30** (1978), no. 2, 329-348. (Alain Pousse) **80c:62039** 62H20 (62H25)  
(with Asano, Chooichiro) On some basic properties of optimal scaling for ordered categories. *Res. Inst. Fund. Inform. Sci. Res. Rep. No. 84* (1978), 16 pp. (From the introduction) **80i:65043b** 65F35 (18B10, 65K10)  
(with Asano, Chooichiro; Kodake, Kiyofumi) Application of nonlinear programming techniques to optimal scaling for ordered categories. *Res. Inst. Fund. Inform. Sci. Res. Rep. No. 85* (1978), 22 pp. (From the introduction) **80j:90100** 90C30 (62-07)  
(with Asano, Chooichiro; Kubota, Nobuko) A generalized method of optimal scaling for multiple responses with ordered categories. *Res. Inst. Fund. Inform. Sci. Res. Rep. No. 86* (1978), 17 pp. (From the introduction) **80i:65043c** 65F35 (18B10, 65K10)  
(with Asano, Chooichiro; Ito, Masahiro) A Monte Carlo investigation on the methods of optimal scaling. *Res. Inst. Fund. Inform. Sci. Res. Rep. No. 87* (1978), 25 pp. (From the text) **80i:65001** 65C05
- Tanaka, V. P.** (with Ivanov, V. K.; Vasin, V. V.) ★Теория линейных некорректных задач и ее приложения. (Russian) [Theory of linear ill-posed problems and its applications] "Nauka", Moscow, 1978. 206 pp. (A. V. Džirkariani) **80i:65062** 65J10 (47A50)  
Approximate solution of implicit operator equations of the first kind by the regularization method. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* **1978**, no. 11(198), 98-103. (Boro Döring) **80c:65060** 65J15 (47H17)  
(with Korjunov, V. A.) Determination of the energy spectrum of a Bose system by thermodynamic functions. (Russian) *Ž. Vyšisl. Mat. i Mat. Fiz.* **18** (1978), no. 6, 1500-1515, 1629. (Authors' summary) **80d:82016** 82A05 (65J05)
- Tanasi, Corrado** Geometric probability of "Buffon" type on the unit sphere. (Italian. French summary) *Boll. Un. Mat. Ital. A (5)* **16** (1979), no. 2, 335-340. (M. Stoka) **80h:60023** 60D05 (53C65)
- Tanfer, I. V.** (with Melits, V. Ju.) Structural algorithmic algebras and parallel computations. (Russian) *Akad. Nauk Ukrain. SSR, Inst. Kibernet. Preprint No. 11* (1977), 26 pp. (Publisher's description) **80a:68023** 68B15 (68C05)  
(with Melits, V. Ju.) Representation of a parallel algorithm of Stone in structural-algorithmic algebras. (Russian) *Questions in the construction of programming systems (Russian)*, pp. 79-89. *Inst. Kibernet. Akad. Nauk Ukrain. SSR, Kiev*, 1978. (Authors' summary) **80g:65029** 65F05  
(with Melits, V. Ju.) Representation of the algorithm for solving a system of equations with a three-diagonal matrix in a structural algorithmic algebra. *Kibernetika (Kiev)* **1979**, no. 1, 98-105 (Russian); translated as *Cybernetics* **15** (1979), no. 1, 113-122. (From the text) **80j:68026** 68C05 (68B15)
- Tăndăreanu, Nicolae** Pushdown automata and deterministic linear languages. (Romanian. English summary) *Stud. Cerc. Mat.* **31** (1979), no. 3, 359-364. (D. Simovici) **80j:68068** 68F10
- Tandit, B. V.** Boundary properties of functions from weighted spaces. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 3, 492-506, 573. (W. R. Madych) **80h:46046** 46E35
- Tandon, J. N.** (with Rajaram, R.; Kalra, G. L.) Stability of a collisionless contact discontinuity. *Astrophys. and Space Sci.* **67** (1980), no. 1, 137-145. (Authors' summary) **80m:85004** 85A20 (82A45)
- Tandori, Károly** Bemerkung zu einem Satz von W. Orlicz. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* **1** (1978), 301-313. (A. Peyerimhoff) **80f:42018** 42C05  
Bemerkung zu einem Satz von G. Alexits und A. Sharma. *Acta Math. Acad. Sci. Hungar.* **33** (1979), no. 3-4, 391-394. (A. Sharma) **80a:40002** 40A30 (42C15)
- Taneja, Indar Jeet** A joint characterization of Shannon's entropy and entropy of type  $\beta$  through a functional equation. *J. Math. Sci.* **10** (1975), 69-74 (1976). (Author's summary) **80g:94035** 94A17 (39B40)  
On a characterization of unified measure in information theory. *Inform. Sci.* **13** (1977), no. 3, 229-237. (Author's summary) **80g:94036** 94A17  
On the information improvement due to 2 and  $N$  revisions. *Inform. Sci.* **18** (1979), no. 3, 223-233. (Ram Autar) **80k:94022** 94A17 (39B40)  
(with Gupta, H. C.) On axiomatic characterization of information-theoretic measure type  $(\frac{p}{q})$ . *Kybernetika (Prague)* **15** (1979), no. 3, 204-214. (Ram Autar) **80k:94021** 94A17
- Taneja, Vidya S.** (with Aroian, Leo A.; Cornwell, Larry W.) Mathematical forms of the distribution of the product of two normal variables. *Comm. Statist. A—Theory Methods* **7** (1978), no. 2, 165-172. (Authors' summary) **80a:62068** 62H10  
(with Janardan, K. G.) Characterization of the Weibull distribution by properties of order statistics. *Biometrical J.* **21** (1979), no. 1, 3-9. (Barry C. Arnold) **80m:62014** 62E10
- Nguyen Tang** See **Nguyen Tang**
- Tang, A.** (with Sciore, E.) Admissible coherent c.p.o.'s. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978)*, pp. 440-456. *Lecture Notes in Comput. Sci.*, 62, Springer, Berlin, 1978. (Henner Kröger) **80d:68106** 68F20  
(with Sciore, E.) Computability theory in admissible domains. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 95-104. *ACM, New York*, 1978. (Giuseppe Longo) **80j:68056** 68C30 (03D05, 68B10)
- Chain properties in  $P\omega$ . *Theoret. Comput. Sci.* **9** (1979), no. 2, 153-172. (Carlo Montanero) **80j:68009** 68B05 (06B99)
- Tang, C. Y.** (with Allenby, R. B. J. T.; Boler, J.; Evans, B.; Moser, L. E.) Frattini subgroups of 3-manifold groups. *Trans. Amer. Math. Soc.* **247** (1979), 275-300. (L. Neuwirth) **80h:57001** 57M05 (20F34)  
(with Allenby, R. B. J. T.; Moser, L. E.) The residual finiteness of certain one-relator groups. *Proc. Amer. Math. Soc.* **78** (1980), no. 1, 8-10. (A. H. Rhemtulla) **80k:20032** 20E26 (20F05)
- Tang, Cha Mei** (with Orszag, Steven A.) Two-dimensional turbulence on the surface of a sphere. *J. Fluid Mech.* **87** (1978), no. 2, 305-319. (J. D. Atkinson) **80b:76018** 76F05 (65N99)
- Tang, Hsiang Sheng** (with Chu, Danny D.) Another proof on a theorem of Lyndon and Schützenberger in a free monoid. *Soochow J. Math.* **4** (1978), 143-146. (D. Simovici) **80a:20070** 20M05
- Tang, Hsiung** The index of an entire function related to a Bessel function. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 8, 1235-1242. (K. N. Srivastava) **80a:30026** 30D15
- Tang, Wang** (with Michel, Anthony N.; Miller, Richard K.) Lyapunov stability of interconnected systems: decomposition into strongly connected subsystems. Special issue on the mathematical foundations of system theory. *IEEE Trans. Circuits and Systems* **25** (1978), no. 9, 799-809. (From the summary) **80c:93009** 93A15 (93D05)
- Tang, Y. S.** (with Yau, S. S.) Generation of shortest test sequences for detecting individual faults of sequential circuits. *Comput. J.* **22** (1979), no. 2, 169-172. (Authors' summary) **80g:94109** 94C15
- Tangian, A. S.** Model of the manifestation of consumer preference. (Russian) *Ekonom. i Mat. Metody* **15** (1979), no. 1, 128-134. (B. G. Mirkin) **80j:90011** 90A06
- Tangora, Martin C.** Generating Curtis tables. *Algebraic topology (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 243-253. *Lecture Notes in Math.*, 673, Springer, Berlin, 1978. (Donald M. Davis) **80d:55023** 55T15  
Some remarks on the lambda algebras. *Geometric applications of homotopy theory (Proc. Conf., Evanston, Ill., 1977)*, II, pp. 476-487. *Lecture Notes in Math.*, 658, Springer, Berlin, 1978. (Donald M. Davis) **80d:55024** 55T15
- Tani, Atsui** On the asymptotic behavior for the solution of one model of one-dimensional compressible viscous fluid flow. *Keio Math. Sem. Rep. No. 3* (1978), 69-76. (From the introduction) **80e:76037** 76N10 (35B40)
- Taniguchi, Kenichi** (with Hagihara, Kenichi; Ito, Minoru; Kasami, Tadao) Decision problems for multivalued dependencies in relational databases. *SIAM J. Comput.* **8** (1979), no. 2, 247-264. (Authors' summary) **80c:68021** 68C05 (68B15)
- Taniguchi, Masahiko** Abelian differentials whose squares have closed trajectories on compact Riemann surfaces. *Japan. J. Math. (N.S.)* **4** (1978), no. 2, 417-443. (H. Wu) **80g:30028** 30F30
- Taniguchi, Masanobu** On estimation of parameters of Gaussian stationary processes. *J. Appl. Probab.* **16** (1979), no. 3, 575-591. (A. Ja. Dorogovcev) **80i:62081** 62M15
- Taniguchi, Masaru** Mixed problem for wave equation in the domain with a corner. *Funkcial. Ekvac.* **21** (1978), no. 3, 249-259. (S. P. Gavelja) **80i:35109** 35L05
- Taniguchi, Takeo** A graph-theoretic study of the minimum fill-in problem for sparse matrix method. *Mem. School Engrg. Okayama Univ.* **13** (1979), 239-248. (Author's summary) **80c:65098** 65F30
- Taniguchi, Yoshiharu** (with Ikeda, Akira) Spectra and eigenforms of the Laplacian on  $S^d$  and  $P^n(\mathbb{C})$ . *Osaka J. Math.* **15** (1978), no. 3, 515-546. (Harold Donnelly) **80b:53037** 53C35 (22E45)
- Tanikawa, Masao** The spectrum of the Laplacian and smooth deformation of the Riemannian metric. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 4, 125-127. (D. G. Ebin) **80a:58045** 58G25
- Tanimoto, Shinji** Maximal vectors in linear spaces and extremum problems. *Math. Japon.* **23** (1978/79), no. 5, 517-524. (Siegfried Schaible) **80c:90109** 90C31



- Tanaka, Steven L.** (with Itai, Alon; Rodeh, Michael) Some matching problems for bipartite graphs. *J. Assoc. Comput. Mach.* 25 (1978), no. 4, 517-525. (Jaroslav Morávek) 80b:68052 68C25 (68E10)
- Tanaka, Tetsuzoh** (with Sawaragi, Yoshikazu) Stability of the solution set in problems of finding cone extreme points. (Japanese. English summary) *Systems and Control* 22 (1978), no. 11, 693-700. (From the summary) 80a:49049 49B99
- (with Sawaragi, Yoshikazu) Duality theory in multiobjective programming. *J. Optim. Theory Appl.* 27 (1979), no. 4, 509-529. (I. M. Stancu-Minasian) 80f:90130 90C31
- Tanaka, Toshiya** (with Kodama, Yuji) Higher order approximation in the reductive perturbation method. I. The weakly dispersive system. *J. Phys. Soc. Japan* 45 (1978), no. 1, 298-310. (Authors' summary) 80a:76005a 76B15 (35Q99)
- (with Hasegawa, Akira; Imamura, Tsutomu; Mima, Kunioki) Stationary spectrum of pseudo-three-dimensional electrostatic turbulence in magnetized plasmas. *J. Phys. Soc. Japan* 45 (1978), no. 3, 1005-1010. (B. Buti) 80c:78010 78A35 (76F05)
- (with Doi, Masaaki; Kambe, Ryouichi; Imamura, Tsutomu) Two-time correlation function of the time-dependent ideal random function. *J. Phys. Soc. Japan* 46 (1979), no. 3, 1016-1021. (Authors' summary) 80b:82013 82A15
- (with Kodama, Yuji) Higher order approximation in the reductive perturbation method. III. The weakly dissipative system. *J. Phys. Soc. Japan* 47 (1979), no. 5, 1706-1716. (Authors' summary) 80i:35160 35Q20 (35A35, 76B15)
- (with Kodama, Yuji) Higher order corrections to the soliton-velocity and the linear dispersion relation. Special issue on solitons in physics. *Phys. Scripta* 20 (1979), no. 3-4, 486-489. (Authors' summary) 80b:76051 76X05 (35Q20, 81C99)
- Tanaka, James W., Jr.** The H. G. Wells quote on statistics: a question of accuracy. (German and Spanish summaries) *Historia Math.* 6 (1979), no. 1, 30-33. (I. J. Good) 80e:01021 01A60 (62-03)
- Tanaka, S. G.** Algebraic cycles on abelian varieties. (Russian) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* 42 (1978), no. 3, 667-696. (Michiel Hazewinkel) 80b:14020 14K15 (14C30)
- Tannenbaum, Allen** Irreducible components of the Chow scheme of space curves. *Math. Z.* 162 (1978), no. 3, 287-294. (D. Gallarati) 80c:14018 14H10 (14C05)
- On the geometric genera of projective curves. *Math. Ann.* 240 (1979), no. 3, 213-221. (Joseph Harris) 80i:14022 14H45
- Tanno, Shikichi** On a lower bound of the second eigenvalue of the Laplacian on an Einstein space. *Colloq. Math.* 39 (1978), no. 2, 285-288. (J. R. Vanstone) 80b:53035 53C25 (58G25)
- Some differential equations on Riemannian manifolds. *J. Math. Soc. Japan* 30 (1978), no. 3, 509-531. (P. G. Walczak) 80d:53029 53C20 (58G99)
- The first eigenvalue of the Laplacian on spheres. *Tōhoku Math. J. (2)* 31 (1979), no. 2, 179-185. (R. S. Millman) 80g:58050 58G25 (53C20)
- Tany, Stephen M.** (with Zuker, M.) Analytic methods applied to a sequence of binomial coefficients. *Discrete Math.* 24 (1978), no. 3, 299-310. (Volker Strehl) 80a:05008 05A10
- Tanović-Miller, Naza** On the inclusion relations for absolute summability. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* No. 16 (1976), 103-115. (Authors' summary) 80c:40005 40F05
- On strong summability. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 14(34) (1979), no. 1, 87-97. (F. P. Cass) 80a:40004 40F05 (40C99, 40G05)
- do Tan Si See Do Tan Si**
- Tanataranta, Savad** (with Thomas, John B.) Truncated sequential probability ratio test. *Inform. Sci.* 13 (1977), no. 3, 283-300. (B. K. Ghosh) 80j:62078 62L10
- Tantary, O. A.** (with Mashhour, A. S.) Pairwise-Aull and Thron axioms. (Arabic summary) *Bull. Fac. Sci. Assiut Univ.* 3 (1974), no. 1, 341-350 (1978). (C. E. Aull) 80d:54038 54E55
- (with Mashhour, A. S.) A note on pairwise-normality. (Arabic summary) *Bull. Fac. Sci. Assiut Univ.* 3 (1974), no. 1, 351-356 (1978). (C. E. Aull) 80d:54037 54E55
- Tanur, Judith M.** See *Encyclopedia: Statistics*, 80b:62001a and *Encyclopedia: Statistics*, 80b:62001b
- Tani Cattabianchi, Luigi** The contributions of Mauro Picone to rational ballistics. (Italian. English summary) *Riv. Mat. Univ. Parma* (4) 3 (1977), 357-389 (1978). (Editors) 80a:01046 01A70
- On some generalizations of a formula of Levi-Civita on impulsive deformations. (Italian. English summary) *Riv. Mat. Univ. Parma* (4) 4 (1978), 459-474 (1979). (Authors' summary) 80c:70003 70D05
- Tao, L. N.** The Stefan problem with arbitrary initial and boundary conditions. *Quart. Appl. Math.* 36 (1978/79), no. 3, 223-233. (Mario Primicerio) 80b:80003 80A10 (35K20)
- On the material time derivative of arbitrary order. *Quart. Appl. Math.* 36 (1978/79), no. 3, 323-324. (Authors' summary) 80b:26017 26B05 (76B99)
- The analyticity of solutions of the Stefan problem. *Arch. Rational Mech. Anal.* 72 (1979/80), no. 3, 285-301. (W. F. Ames) 80i:35184 35R35 (35K05)
- The general solution and its analyticity for growth or dissolution of a gas bubble. *J. Chem. Phys.* 71 (1979), no. 8, 3455-3461. (Authors' summary) 80i:80010 80A30
- Free boundary problems with radiation boundary conditions. *Quart. Appl. Math.* 37 (1979/80), no. 1, 1-10. (V. Djuriković) 80f:35021 35C10 (35R35)
- On solidification problems including the density jump at the moving boundary. *Quart. J. Mech. Appl. Math.* 32 (1979), no. 2, 175-185. (From the summary) 80b:80006 80A25 (35C99)
- Tapero, T. B.** Metric invariants of a pair of planes in infinite-dimensional spaces. (Russian) *Modern geometry (Russian)*, pp. 103-113, *Leningrad. Gos. Ped. Inst., Leningrad*, 1978. (N. Tijs) 80c:47034 47B50 (46C99, 58Bxx)
- Ta Phuoc Loc** (with Daube, Olivier) Étude numérique d'écoulements instationnaires de fluide visqueux incompressible autour de corps profilés par une méthode combinée d'ordre  $O(h^2)$  et  $O(h^4)$ . (English summary) *J. Mécanique* 17 (1978), no. 5, 651-678. (A. Pozzi) 80b:76012 76D05 (65P05)
- Tapl, U.** (with Maheshwari, S. N.) On feebly  $R_0$ -spaces. *An. Univ. Timișoara Ser. Științ. Mat.* 16 (1978), no. 2, 173-177 (1979). (C. W. Patty) 80m:54030 54D10
- (with Maheshwari, S. N.) Connectedness of a stronger type in topological spaces. *Nanta Math.* 12 (1979), no. 1, 102-109. (O. T. Alas) 80j:54013 54D05
- Tapia, Richard A.** (with Thompson, James R.) ★Nonparametric probability density estimation. Johns Hopkins Series in the Mathematical Sciences, 1. *Johns Hopkins University Press, Baltimore, Md.*, 1978. xi+176 pp. ISBN 0-8018-2031-6 (Bradford R. Crain) 80j:62042 62G05
- Quasi-Newton methods for equality constrained optimization: equivalence of existing methods and a new implementation. *Nonlinear programming, 3 (Proc. Sympos., Special Interest Group Math. Programming, Univ. Wisconsin, Madison, Wis., 1977)*, pp. 125-164, *Academic Press, New York*, 1978. (Albert Buckley) 80a:90128 90C30
- (with Byrd, R. H.; Thompson, James R.) Optimal smoothing of direct estimates of the power spectrum. Optimization in statistics. *Comm. Statist. B—Simulation Comput.* 7 (1978), no. 4, 335-344. (G. Tusnady) 80d:62089 62M15
- Tapia-Recillas, Horacio** Subgroups of finite index of a class of abelian varieties. *Bol. Soc. Mat. Mexicana* (2) 22 (1977), no. 2, 64-68. (Loren D. Olson) 80b:14036 14K15
- Tapiero, Charles S.** A stochastic model of sales response to advertising. *Metroeconomica* 29 (1977), no. 1-3, 159-167. (Authors' summary) 80a:90047 90A16
- Time, dynamics and the process of management modeling. *Applied optimal control*, pp. 7-31, *Studies in the Management Sci., 9, North-Holland, Amsterdam*, 1978. (From the introduction) 80b:90041 90A16
- (with Venezia, Itzhak) A mean variance approach to the optimal machine maintenance and replacement problem. *J. Oper. Res. Soc.* 30 (1979), no. 5, 457-466. (Masanori Kodama) 80b:90079 90B25
- Capacity expansion of a deteriorating facility under uncertainty. (French summary) *RAIRO Rech. Opér.* 13 (1979), no. 1, iii, 55-66. (Authors' summary) 80c:90072 90B25
- Tappe, Jürgen** On the blocks of certain subgroups of monomial groups. II. *Arch. Math. (Basel)* 33 (1979/80), no. 1, 18-22. (G. D. James) 80m:20011 20C30
- Tappert, F. D.** Laser fusion. *Mathematical aspects of production and distribution of energy (Proc. Sympos., San Antonio, Tex., 1976)*, pp. 55-74, *Proc. Sympos. Appl. Math., XXI, Amer. Math. Soc., Providence, R.I.*, 1977. (From the summary) 80c:78085 78A25 (35Q99)
- Tar, László** A generalized model for a Latin square design. (Hungarian. English summary) *Alkalmaz. Mat. Lapok* 3 (1977), no. 3-4, 355-378 (1978). (Authors' summary) 80g:62056 62K10 (62J10)
- Taraldur, E.** (with Thompson, H. B.) On Ky Fan's minimax principle. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 2, 220-226. (A. A. Fonarev) 80a:47006 47H05
- A remark on coincidence degree theory. (Italian summary) *Boll. Un. Mat. Ital. A (5)* 16 (1979), no. 3, 582-587. (V. V. Obuhovskii) 80a:47076 47H15 (55M20)
- (with Husain, Taqdir) On the existence of Nash equilibrium points. *J. Austral. Math. Soc. Ser. A* 27 (1979), no. 2, 203-208. (Authors' summary) 80d:90094 90D12
- (with Teo, Suat Khoh) On the existence of solutions of the equation  $Lx \in Nx$  and a coincidence degree theory. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 2, 139-173. (J. Daneš) 80a:47062 47H15 (55M20, 58C30)
- Taranenko, V. E.** (with Bolotnikov, Ju. V.; Sačkov, V. N.) Some classes of random variables on cyclic permutations. (Russian) *Mat. Sb. (N.S.)* 108(159) (1979), no. 1, 91-104, 144. (G. I. Ivčenko) 80c:60016 60C05 (05A05)
- Tarama, Sigeo** Le problème de Cauchy pour une classe des systèmes faiblement hyperboliques. *Comm. Partial Differential Equations* 4 (1979), no. 7, 809-825. (Maria Cinquini-Cibrario) 80b:35085 35L45
- Taran, M. D.** (with Gasilov, V. A.; Goloviznin, V. M.; Tilkin, V. F.; Tjurina, N. N.; Favorskii, A. P.; Sačkov, M. Ju.) Application of Newton's method for the solution of difference equations in hydrodynamics. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 100* (1978), 41 pp. (Authors' summary) 80b:76007 76D05 (65P05)
- (with Bogdanova, M. S.; Kučerov, A. B.; Nikolaev, E. S.; Tilkin, V. F.; Favorskii, A. P.; Šapošnikova, S. A.; Sačkov, M. Ju.) Some implicit iteration methods. Analysis and comparison. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 115* (1978), 35 pp. (Authors' summary) 80c:65117 65J05
- (with Taran, T. V.; Favorskii, A. P.) Algorithm for numerical simulation of hydrodynamical flows by means of particles of finite size. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 114* (1979), 37 pp. (Authors' summary) 80m:76033 76D05 (65N99)
- (with Favorskii, A. P.) Numerical solution of a two-dimensional heat transfer equation with highly variable coefficients. (Russian) *Z. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 1069-1073, 1086. (Authors' summary) 80i:65138 65P05
- Taran, T. V.** (with Taran, M. D.; Favorskii, A. P.) Algorithm for numerical simulation of hydrodynamical flows by means of particles of finite size. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 114* (1979), 37 pp. (Authors' summary) 80m:76033 76D05 (65N99)
- Tarashenko, S. N.** (with Pavlov, K. B.; Pokrovskii, L. D.) The stationary flow of an inviscid heat conducting gas. (Russian) *Z. Vychisl. Mat. i Mat. Fiz.* 18 (1978), no. 5, 1329-1335, 1360. (Authors' summary) 80b:76070 76N15
- Taranov, A. Ju.** (with Razumov, A. V.) Dipole interaction of an oscillator with a scalar field. (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 3, 355-363. (Authors' summary) 80b:81034 81C12 (47A55)
- Tarashovskii, M. R.** Two algorithms for the solution of the equivalence problem in algorithmic algebra. (Russian) *Questions of systems programming (Russian)*, pp. 11-27, *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1977. (M. I. Dehtjar) 80d:68061 68C30 (68B05)
- Tarapov, I. E.** (with Borisenko, A. I.) ★Vector and tensor analysis with applications. Translated from the Russian and edited by Richard A. Silverman. Corrected reprint of the 1968 edition. *Dover Publications, Inc., New York*, 1979. x+257 pp. ISBN 0-486-63833-2 (Editors) 80a:15020 15A72
- Tarapova, E. I.** A Sturm-Liouville boundary value problem with nonlinear boundary conditions. I. (Russian) *Teor. Funktsii Funktsional. Anal. i Prilozhen.* No. 31 (1979), 157-160, 169. (Authors' summary) 80i:34036 34B25
- Tarata, V. M.** Ordered quasigroups. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* 1979, no. 1, 82-86. (Miklós Csikós) 80i:90014 06F05 (20N05)
- Tarashenko, F. P.** (with Dmitriev, Yu. G.) On the use of a priori information in estimated linear functionals of distribution. (Russian summary) *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* 7 (1978), no. 6, 459-469. (A. L. Rukhin) 80a:62050 62G05

- Tarasenko, G. S.** (with Rastrigin, L. A.; Ripa, K. K.) ★Адаптация случайного поиска. (Russian) [Adaptation of random search] "Zinatne", Riga, 1978. 242 pp. (D. M. Sudakov) **80b:93059** 93E99 (90B40)
- Investigation of relaxation algorithms of random search of general type. (Russian) Adaptation problems in technical systems. *Problemy Slučain. Poiska* No. 7 (1978), 67-96, 317. (A. G. Žilinskis) **80a:65137** 65K05
- Taras'ev, G. S.** (with Adamov, V. I.; Teličko, G. N.) A variational method for the construction of models of thin rods. (Russian) *Prikl. Meh.* 14 (1978), no. 8, 95-101. (Vadim Komkov) **80b:73065** 73C20
- Taraskin, A. F.** Relationship between Shannon and Fisher information in a diffusion process. *Problemy Peredachi Informacii* 15 (1979), no. 1, 14-26 (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 1, 9-18. (Author's summary) **80j:94013** 94A17
- Tarasov, B. V.** Some semigroup rings with zero divisors. (Russian) Ring-theoretical constructions. *Mat. Issled.* No. 49 (1979), 128-148, 163. (Uno Kaljulaid) **80b:20070** 20M25
- Subalgebras of a free associative algebra. (Russian) *Mat. Zametki* 26 (1979), no. 2, 161-171, 316. (Hubert Grassmann) **80a:16005** 16A06 (20M25)
- Tarasov, O. V.** (with Dittes, F. M.; Kubyšin, Ju. A.) Four-loop approximation in the  $\phi^4$  model. (Russian. English summary) *Teoret. Mat. Fiz.* 37 (1978), no. 1, 66-73. (S. V. Temko) **80a:81032** 81C30 (00A89)
- (with Vladimirov, A. A.; Kazakov, D. I.) Calculation of critical exponents by quantum field theory methods. *Ž. Eksper. Teoret. Fiz.* 77 (1979), no. 3, 1035-1045 (Russian); translated as *Soviet Phys. JETP* 50 (1979), no. 3, 521-526. (Authors' summary) **80m:82024** 82A25 (81E15)
- (with Kazakov, D. I.; Širkov, D. V.) Analytic extension of results of the perturbation theory model  $g \geq 1$  into the domain  $g \geq 1$ . (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 1, 15-25. (From the summary) **80c:81066** 81E10
- Tarasov, R. P.** Errata: "Ray equations for arbitrarily curved cylinders with refractive index varying according to the cross section, and some cases of their integration" (*Ž. Vyčisl. Mat. i Mat. Fiz.* 16 (1976), no. 6, 1539-1550). (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 1, 264. (Editors) **80c:78016** 78A40 (35C99)
- (with Kucál, S. A.) Direct and inverse problems of perturbation propagation in a directional medium, and their approximate solution. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 5, 1178-1187, 1356. (L. G. Chambers) **80m:78009** 78A25 (47D45)
- Tarasov, V. G.** (with Nižnik, L. P.) An inverse problem of scattering for a one-velocity transfer equation. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 6, 1307-1310. (A. G. Gibbs) **80b:85010** 85A25 (45K05, 47A40, 82A70)
- Tarasov, V. N.** (with Vasil'ev, L. V.) A method for solving minimax problems. (Russian) *Optimizacija* No. 19(36) (1977), 53-57, 154. (Jürgen Guddat) **80g:65077** 65K10 (90C99)
- Tarasov, V. V.** Some properties of circuits from unreliable functional elements. (Russian) *Diskret. Analiz* No. 31 *Metody Diskret. Anal. o Teorii Upravljajusčih Sistem* (1977), 81-89, 92. (R. Shirladze) **80g:94092** 94C10
- Tarasona, V. P.** Optimal strategies for seeking the domain of the greatest values for a certain class of functions. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 4, 886-896, 1067. (V. F. Dem'janov) **80d:65063** 65K10 (90C99)
- Tarazaga, Pablo** (with Marchi, Ezio) About  $(k, n)$  stochastic matrices. *Linear Algebra Appl.* 26 (1979), 15-30. (Adolf Rhodius) **80f:15026** 15A51 (15A99)
- Tarazona Ferrer, D.** ★Homología respecto a una variedad de álgebras de Lie. (Spanish) [Homology with respect to a variety of Lie algebras] *Álgebra*, 23. *Universidad de Santiago de Compostela, Departamento de Álgebra y Fundamentos*, Santiago de Compostela, 1978. i+138 pp. ISBN 84-7191-047-0 (V. A. Artamonov) **80c:17013** 17B56 (18G99)
- Tardy, Plácido** See Bottazzini, Umberto. **80g:01012**
- Targhetta, M. L.** (with Cubeddu, C.) Empirical Bayesian estimation of the mean value of a Laplace distribution. (Italian. English summary) *Boll. Un. Mat. Ital.* A (5) 15 (1978), no. 3, 592-600. (J. Tiago de Oliveira) **80c:62043** 62F15
- (with Cubeddu, C.) On two problems of empirical Bayesian estimation. (Italian. English summary) *Rend. Sem. Fac. Sci. Univ. Cagliari* 48 (1978), no. 1-2, 69-79. (Adolfo Gili) **80a:62014** 62C12
- Tarilevicius, V. I.** (with Čobanjan, S. A.) A counter-example concerning CLT in Banach spaces. *Probability theory on vector spaces* (Proc. Conf., Trzebiezowice, 1977), pp. 25-30. *Lecture Notes in Math.*, 656, Springer, Berlin, 1978. (Werner Linde) **80d:60015** 60B12
- (with Gorgadze, Z. G.; Čobanjan, S. A.) Gaussian covariances in Banach sublattices of the space  $L_2(T, \mathbb{R})$ . (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 3, 528-531. (Werner Linde) **80a:60042** 60G15 (60B05)
- Tarini, M.** (with Sandovici, Profira; Enghis, Pavel) Espaces  $A_2$ -récurrents. *Mathematica (Cluj)* 16(39) (1974), no. 2, 299-303 (1977). (Bernard Rouxel) **80d:53012** 53B05
- Carl Friedrich Gauss (1777-1855) as a precursor of the topology. *Papers from the National Colloquium on Geometry and Topology* (Univ. Timișoara, Timișoara, 1977), pp. 243-248. *Univ. Timișoara, Timișoara*, 1977. (Esther Portnoy) **80m:01037** 01A70 (55-03)
- Sur les invariants de G. Călugăreanu. *Mathematica (Cluj)* 19(42) (1977), no. 2, 217-222 (1978). (Author's introduction) **80f:53005** 53A05 (57M25)
- Tarig, N.** (with Debever, Robert; McLennaghan, R. G.) Riemannian-Maxwellian invertible structures in general relativity. *Gen. Relativity Gravitation* 10 (1979), no. 10, 853-879. (J. D. Zund) **80b:83015** 83C40 (53C10, 83C20)
- Tarjan, Robert Endre** (with Brown, Mark R.) A representation for linear lists with movable fingers. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing* (San Diego, Calif., 1978), pp. 19-29. *ACM, New York*, 1978. (Armin Cremers) **80f:68109** 68H05 (68B15)
- (with Paul, Wolfgang J.) Time-space trade-offs in a pebble game. *Acta Inform.* 10 (1978), no. 2, 111-115. (Forbes D. Lewis) **80j:68033** 68C25 (05C99, 68E10)
- (with Garey, Michael R.) A linear-time algorithm for finding all feedback vertices. *Inform. Process. Lett.* 7 (1978), no. 6, 274-276. (From the introduction) **80a:68030** 68C05 (68C25, 68E10)
- (with Aspwall, Bengt; Plass, Michael F.) A linear-time algorithm for testing the truth of certain quantified Boolean formulas. *Inform. Process. Lett.* 8 (1979), no. 3, 121-123. (Henry S. Warren, Jr.) **80b:68050** 68C25
- A class of algorithms which require nonlinear time to maintain disjoint sets. *J. Comput. System Sci.* 18 (1979), no. 2, 110-127. (Editors) **80c:68079** 68C05 (68D05)
- (with Lipton, Richard J.) A separator theorem for planar graphs. *SIAM J. Appl. Math.* 36 (1979), no. 2, 177-189. (Ian Munro) **80b:68050** 68E10
- (with Lipton, Richard J.; Rose, Donald J.) Generalized nested dissection. *SIAM J. Numer. Anal.* 16 (1979), no. 2, 346-358. (Petr Liebi) **80d:65041** 65F05
- Tarlini, M.** (with Cecchini, R.) Arbitrary-spin particles in an electromagnetic field. (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 1, 1-12. (C. J. Henrich) **80d:81054** 81D25
- Tarn, Tryn Jong** (with Nonoyama, Shigeki) An algebraic structure of discrete-time bilinear systems. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 211-221. (B. L. Osvieč) **80f:93028** 93B15
- Tarnavskii, A. A.** (with Golovačev, Ju. G.; Marennikova, O. N.) Stability of stratified flows. II. Viscid two-layer flow. (Russian) *Izv. Sibirsk. Otdel. Akad. Nauk SSSR Ser. Tehn. Nauk* 1977, no. 13, 16-28, 141. (From the summary) **80c:76056** 76V05
- Tarnavskii, G. A.** (with Kovenja, V. M.) A method for the solution of three-dimensional equations of gas dynamics. (Russian) *Čisl. Metody Meh. Splošn. Sredy* 9 (1978), no. 1 *Mat. Modelirovanie*, 65-83. (From the text) **80c:76041** 76N15 (65P05)
- Tarnopolska-Weiss, Marysia** On the number of lattice points in a compact  $n$ -dimensional polyhedron. *Proc. Amer. Math. Soc.* 74 (1979), no. 1, 124-127. (Ekkhard Krätzel) **80c:10048** 10J25
- Taroco, Edgardo** (with Feijóo, Raul A.; Raupp, Marco A.; Moura, Carlos A.) Approximate solutions of the problem of thin shells by the finite element method. (Spanish) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. II (Portuguese), pp. 873-891. *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Authors' summary) **80f:73067** 73L20 (65N30)
- Tarokh, M.** On output feedback stabilization and pole assignment. *Internat. J. Control* 31 (1980), no. 2, 399-408. (Author's summary) **80m:93065** 93D15
- Tarone, Robert E.** (with Gruenhege, Gary) Corrigenda to: "A note on the uniqueness of roots of the likelihood equations for vector-valued parameters" [*J. Amer. Statist. Assoc.* 70 (1975), no. 352, 903-904; MR 52 #12189]. *J. Amer. Statist. Assoc.* 74 (1979), no. 367, 744. (Editors) **80k:62046** 62F10
- Tarozzi, G.** (with Sella, F.) Nonlocal theories satisfying Bell's inequality. (Italian summary) *Nuovo Cimento B* (11) 48 (1978), no. 1, 120-130. (Authors' summary) **80b:81014** 81B99 (83C99)
- Tarres, R.** Optimal nonexplosive control of a nonconstrained diffusion and behaviour when the discount vanishes. *Stochastic control theory and stochastic differential systems* (Proc. Workshop, Deutsch. Forschungsgemeinschaft, Univ. Bonn, Bad Honnef, 1979), pp. 588-597. *Lecture Notes in Control and Information Sci.*, 16, Springer, Berlin, 1979. (A. A. Pervozvanskiĭ) **80j:93142** 93E20
- Tarres Freixenet, Juan** On semiproduct dynamical systems. (Spanish) *Rev. Mat. Hisp.-Amer.* (4) 38 (1978), no. 6, 289-300. (U. D'Ambrosio) **80g:54050** 54H20
- Tarsia, Antonio** (with Sasseti, Mauro) The problem of equilibrium of a plate resting on an elastic obstacle. (Italian. English summary) *Riv. Mat. Univ. Parma* (4) 4 (1978), 359-367 (1979). (D. R. Bland) **80f:73060** 73K10
- Tarski, Alfred** (with Doner, John E.; Mostowski, A.; Włodzimierz) The elementary theory of well-ordering—a metamathematical study. *Logic Colloquium '77* (Proc. Conf., Wrocław, 1977), pp. 1-54. *Studies in Logic and Foundations of Math.*, 96, North-Holland, Amsterdam, 1978. (A. B. Slomson) **80d:03027a** 03C10 (03B25, 03C65, 06A10)
- Tarski, Jan** Short introduction to nonstandard analysis and its physical applications. *Many degrees of freedom in field theory* (Proc. Eighth Internat. Summer Inst. Theoret. Phys., Univ. Bielefeld, Bielefeld, 1976), pp. 225-239. *NATO Adv. Study Inst. Ser., Ser. B: Physics*, 30, Plenum, New York, 1978. (Vadim Komkov) **80d:81047** 81C99 (03H10)
- Feynman-type integrals defined in terms of general cylindrical approximations. *Feynman path integrals* (Proc. Internat. Colloq., Marseille, 1978), pp. 254-279. *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (Author's summary) **80k:81034** 81C30 (46G99)
- Tartakoff, David S.** Local analytic hypoellipticity for  $\square$ , on nondegenerate Cauchy-Riemann manifolds. *Proc. Nat. Acad. Sci. U.S.A.* 75 (1978), no. 7, 3027-3028. (Makhlouf Derridj) **80g:58045** 58G05 (32F20, 35H05, 35N15)
- Remarks on isolated degeneracies of the Levi form and the analytic hypoellipticity of  $\square$ , and related partial differential operators. *Harmonic analysis in Euclidean spaces* (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 2, pp. 85-89. *Proc. Sympos. Pure Math.*, XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979. (Makhlouf Derridj) **80g:35040** 35H05 (32F20, 35N15)
- (with Rothschild, Linda Preiss) Parametries with  $C^\infty$  error for  $\square$ , and operators of Hörmander type. *Partial differential equations and geometry* (Proc. Conf., Park City, Utah, 1977), pp. 255-271. *Lecture Notes in Pure and Appl. Math.*, 48, Dekker, New York, 1979. (Makhlouf Derridj) **80g:35039** 35H05 (32F20, 35G05)
- Tartar, L.** Nonlinear constitutive relations and homogenization. *Contemporary developments in continuum mechanics and partial differential equations* (Proc. Internat. Sympos., Inst. Mat., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977), pp. 472-484. *North-Holland Math. Studies*, 30, North-Holland, Amsterdam, 1978. (K. S. Harinath) **80d:73013** 73B05 (35Q99)
- Quelques remarques sur les systèmes semi-linéaires. *Étude numérique des grands systèmes* (Proc. Sympos., Novosibirsk, 1976), pp. 198-212. *Méthodes Math. de l'Informatique*, 7, Dunod, Paris, 1978. (J. E. Lagnese) **80b:35036** 35D99 (34G20)
- Une nouvelle méthode de résolution d'équations aux dérivées partielles non linéaires. *Journées d'Analyse Non Linéaire* (Proc. Conf., Besançon, 1977), pp. 228-241. *Lecture Notes in Math.*, 665, Springer, Berlin, 1978. (Wolf von Wahl) **80b:35007** 35A35 (35C99)
- Some remarks on semilinear systems. (Russian) *Numerical methods in mathematical physics, geophysics and optimal control* (Sympos., Novosibirsk, 1976) (Russian), pp. 84-96, 233. "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (Author's summary) **80i:35047** 35G20
- Équations hyperboliques non linéaires. *Séminaire Goulaouic-Schwartz* (1977/1978), Exp. No. 18, 18 pp., École Polytech., Palaiseau, 1978. (J. Smoller) **80a:35083** 35L60 (76A99)
- Estimation de coefficients homogénéisés. *Computing methods in applied sciences and*



- engineering (Proc. Third Internat. Sympos., Versailles, 1977), I, pp. 364-373, Lecture Notes in Math., 704, Springer, Berlin, 1979. (A. Haimovici) **80i:35010** 35B20 (35J99)
- Tarzia, Domingo Alberto** Sur le problème de Stefan à deux phases. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 20, A941-A944. (Author's summary) **80c:35045** 35K20
- Taube, Manfred** Funktionalanalytische Methoden in der Operatorenrechnung. *Nova Acta Leopoldina (N.F.)* **49** (1978), no. 231, 95 pp. (S. Schwabik) **80c:47001** 47-02 (44A40, 46F10, 47A60)
- (with Reckziegel, Ingeborg) Eine verallgemeinerte Inverse eines Matrizenpolynoms. *Rostock. Math. Kolloq.* No. 9 (1978), 43-59. (Bryan E. Cain) **80i:15009** 15A09 (15A21, 47A55)
- On degenerate operator equations. *Generalized functions and operational calculus* (Proc. Conf., Varna, 1975), pp. 205-210, *Bulgar. Acad. Sci., Sofia*, 1979. (Winfried Kabbalo) **80m:47011** 47A50 (34G10)
- Some constructions of right inverses and generalized inverses. *Inverse and improperly posed problems in differential equations* (Proc. Conf., Math. Numer. Methods, Halle, 1979), pp. 259-269, *Math. Research, I, Akademie-Verlag, Berlin*, 1979. (M. Z. Nashed) **80b:47003** 47A05 (47A50)
- Tauscher, Rudolf J.** Der Differenzensatz von van der Corput und gleichverteilte Funktionen. *Anz. Österreich. Akad. Wiss. Math.-Natur. Kl.* **1978**, no. 4, 115-118. (O. P. Stackelberg) **80g:10055** 10K05 (22D99)
- Kriterien in der Theorie der Gleichverteilung. (English summary) *Monatsh. Math.* **86** (1978/79), no. 3, 221-237. (R. G. Stoneham) **80i:10040** 10K05
- Taiev, Spas P.** (with Sendov, Blagovest; Petrušev, P. P.) Characterization of  $S$ -derivatives of Lipschitzian functions. (Russian) *Serdica* **4** (1978), no. 2-3, 260-266. (J. S. Lipiński) **80i:26008** 26A24
- Tahjian, G.** (with Vilimovský, J.) Coreflectors not preserving the interval and Baire partitions of uniform spaces. *Proc. Amer. Math. Soc.* **77** (1979), no. 2, 257-263. (A. Császár) **80j:54022** 54E15
- Tanović, Milan R.** A generalization of Banach's contraction principle. *Publ. Inst. Math. (Beograd) (N.S.)* **23(37)** (1978), 179-191. (S. Swaminathan) **80a:54093** 54H25
- Taiminraev, Ju. U.** A boundary value problem with general glueing conditions for an equation of mixed type with two lines of degeneracy. (Russian) *Differentsial'nye Uravnenija* **15** (1979), no. 1, 132-141, 189. (L. A. Ivanov) **80j:35073** 35M05
- The eigenvalue problem for equations of mixed type with a nonsmooth line of degeneracy. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 4, 17-24, 87. (Megumi Saigo) **80g:35091** 35M05 (35P05)
- Tasumurov, S. S.** Bending of a finitely connected polygon into a polyhedron with a given boundary. (Russian) *Geometry*, No. 6 (Russian), pp. 102-107, *Leningrad. Gos. Ped. Inst., Leningrad*, 1977. (A. V. Pogorelov) **80j:53009** 53A05
- Tassa, U.** (with Fraenkel, A. S.; Mushkin, M. J.) Determination of  $\{n\}$  by its sequence of differences. *Canad. Math. Bull.* **21** (1978), no. 4, 441-446. (Maurice Mignotte) **80d:10051** 10F20 (10A30)
- Tasso, H.** A new class of Poisson brackets and related equations of evolution. *Let. Nuovo Cimento* (2) **24** (1979), no. 5, 136-138. (Martin Kummer) **80g:70008** 70H99 (35Q99)
- (with Caldas, I. L.) Constants of motion of nonlinear equations in an extended Poisson formalism. *Let. Nuovo Cimento* (2) **24** (1979), no. 14, 500-504. (From the text) **80h:70017** 70H15 (58F07)
- Tatarskov, V. N.** (with Potchin, V. A.) ★ Теория когерентности электромагнитного поля. (Russian) [Coherence theory of an electromagnetic field] *Статистическая Теория Связи* (Statistical Theory of Communications), 10. "Soyuz", Moscow, 1978. 207 pp. (Andrzej Zardecki) **80c:78001** 78-01 (35Q99)
- Tatarukiewicz, Krzysztof** Sur les équations qui ne devraient pas osciller. *Demonstratio Math.* **11** (1978), no. 3, 635-648. (R. Grimmer) **80c:34034** 34C10
- Les propriétés asymptotiques des solutions de certains systèmes d'équations différentielles. *Demonstratio Math.* **12** (1979), no. 2, 295-315. (V. Šeda) **80c:34051** 34C11
- Tatarskii, V. I.** Representation of the solution of some diffraction problems in terms of Gaussian path integrals. (Russian) *Dokl. Akad. Nauk SSSR* **241** (1978), no. 2, 333-336. (Andrzej Zardecki) **80c:78019** 78A45 (46G99)
- (with Sabel'fel'd, K. K.) The approximate calculation of Wiener continual integrals. (Russian) *Dokl. Akad. Nauk SSSR* **243** (1978), no. 4, 905-908. (B. A. Bondarenko) **80c:65053** 65D30 (65C05)
- (with Ostashev, V. E.) The method of multiple forward scattering in media with random inhomogeneities. (Russian. English summary) *Izv. Vys. Učebn. Zaved. Radiofizika* **22** (1979), no. 2, 170-179. (Authors' summary) **80c:73026** 73D25
- Tataru-Mihal, P.** Classical solutions for the  $d$ -dimensional  $\alpha$ -nonlinear model. (Italian and Russian summaries) *Nuovo Cimento A* (11) **51** (1979), no. 2, 169-179. (Hubert Gollek) **80b:81045** 81E05 (53C42, 58E20)
- Tate, John** (with Cartier, Pierre) A simple proof of the main theorem of elimination theory in algebraic geometry. *Enseign. Math.* (2) **24** (1978), no. 3-4, 311-317. (G. A. Eifromson) **80d:14001** 14A25
- (with Mumford, David) Fields medals. IV. An instinct for the key idea. *Science* **202** (1978), no. 4369, 737-739. (Editors) **80a:01038** 01A70 (14-03)
- Number theoretic background. *Automorphic forms, representations and  $L$ -functions* (Proc. Sympos. Pure Math., Oregon State Univ., Corvallis, Ore., 1977), Part 2, pp. 3-26, *Proc. Sympos. Pure Math., XXXIII, Amer. Math. Soc., Providence, R.I.*, 1979. (A. I. Vinogradov) **80m:12009** 12A67
- Tatebayashi, Makoto** (with Kasahara, Masao; Namekawa, Toshihiko) Error statistics and construction of error correcting codes for differentially encoded CPSK channels. *IEEE Trans. Inform. Theory* **24** (1978), no. 6, 763-766. (Authors' summary) **80b:94032** 94B70
- Tatjewski, P.** A penalty function approach to coordination in multilevel optimization problems. (French summary) With a comment by W. Findeisen. *RAIRO Automat.* **12** (1978), no. 3, 221-244, ii. (J. O'Reilly) **80a:93016** 93A15
- Tatjana, Vahé** (with Rosen, Gerald; Jakubowicz, Oleg) Constrained Hamiltonian formulation for interacting fields: stable particlike solutions. *J. Math. Phys.* **20** (1979), no. 3, 441-442. (Authors' summary) **80b:81032** 81C10 (35Q99)
- Taton, René** Repères pour une biographie intellectuelle d'Ampère. (English summary) *Rev. Histoire Sci. Appl.* **31** (1978), no. 3, 233-248. (I. Grattan-Guinness) **80i:01058** 01A70
- Supplément: "Inventaire chronologique de l'oeuvre d'Alexis-Claude Clairaut (1713-1765)" [Rev. Histoire Sci. Appl. **29** (1976), no. 2, 97-122; MR **57** #15882]. *Rev. Histoire Sci. Appl.* **31** (1978), no. 3, 269-271. (J. S. Joel) **80i:01012** 01A50 (01A70)
- Taub, A. H.** Relativistic fluid mechanics. *Annual review of fluid mechanics*, Vol. 10, pp. 301-332, *Annual Reviews, Palo Alto, Calif.*, 1978. (Attay Kovetz) **80d:76007** 76B99 (83C55)
- Tauber, G. E.** Expanding universe with bulk and shear viscosity in conformally flat coordinates. *Astrophys. and Space Sci.* **57** (1978), no. 1, 163-179. (R. Behari) **80a:83065** 83D05 (53B50)
- Taubman, Stephen B.** (with Adelman, Sidney) Some two-level multiple-response factorial plans. *J. Amer. Statist. Assoc.* **73** (1978), no. 363, 607-612. (M. N. Das) **80d:62063** 62K15
- Tauer, J.** (with Präger, M.) Numerical solution of stiff problems. *The use of finite element method and finite difference method in geophysics* (Proc. Summer School, Liblice, 1977), pp. 279-293, *Česk. Akad. Věd, Prague*, 1978. (Authors' summary) **80g:65086** 65L05
- (with Vitásek, E.)  $A$ -stability and numerical solution of abstract differential equations. *Equadiff IV* (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977), pp. 415-423, *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (U. Tippenhauer) **80i:65050** 65J05 (65L05)
- Tauglitz, G. L.** Error-burst-correcting convolutional codes. *Problémy Převodu Informací* **14** (1978), no. 3, 18-23 (Russian); translated as *Problems Inform. Transmission* **14** (1978), no. 3, 170-173 (1979). (Author's summary) **80g:94059** 94B20
- Tauman, Yair** A nondiagonal value on a reproducing space. *Math. Oper. Res.* **2** (1977), no. 4, 331-337 (1978). (Louis J. Billera) **80a:90173** 90D13
- (with Neyman, Abraham) The partition value. *Math. Oper. Res.* **4** (1979), no. 3, 236-264. (Authors' summary) **80i:90157** 90D13
- Tausch, Engelbert** A class of variational problems with linear growth. *Math. Z.* **164** (1978), no. 2, 159-177. (From the introduction) **80b:49024** 49F05
- Tausky, Olga** Some comments concerning G. B. Price's note on: "Determinants with dominant principal diagonal: a personal historical note" (Linear and Multilinear Algebra **6** (1978/79), no. 4, 247-250). *Linear and Multilinear Algebra* **6** (1978/79), no. 4, 251. (Thomas Hawkins) **80c:01018** 01A70 (15-03, 15A15)
- (with Guralnick, Robert M.) A remark concerning unipotent matrix groups. *Linear and Multilinear Algebra* **7** (1979), no. 1, 87-89. (Agnetta Vescan) **80b:15017** 15A18 (15A33)
- Some remarks concerning matrices of the form  $A - A'$ ,  $A' - A'$ . (German summary) *Z. Angew. Math. Phys.* **30** (1979), no. 2, 370-373. (Thomas H. Foregger) **80d:15018** 15A30 (15A57)
- See also Cohn, Harvey, **80c:12001**
- Tauts, A.** Multivalence of the axiom of normal functions. (Russian. Estonian and German summaries) *Tartu Riikl. Ül. Toimetised* No. 464 *Trudy Mat. i Meh.* no. 22 (1978), 13-27. (E. Mendelson) **80b:03086** 03E55 (03B15, 04A10)
- Tauvel, Patrice** Sur les quotients premiers de l'algèbre enveloppante d'une algèbre de Lie résoluble. *Bull. Soc. Math. France* **106** (1978), no. 2, 177-205. (Anthony Joseph) **80b:17010** 17B35
- Tavardze, G. U.** (with Mdznarišvili, V. V.) On the question of the solutions of functional equations of nonlinear stochastic control systems in a functional space. (Russian. Georgian and English summaries) *Sakharth. SSR Mecn. Akad. Moambe* **90** (1978), no. 3, 665-668. (Authors' summary) **80a:93197** 93E20
- Tavantzis, John** (with Reiss, Edward L.) A boundary value problem of thermal convection. *J. Differential Equations* **35** (1980), no. 1, 45-54. (C. R. Illingworth) **80c:76070** 76R10
- Tavart, S.** Sojourn times for conditioned Markov chains in genetics. *Theoret. Population Biol.* **15** (1979), no. 1, 108-113. (J. Gani) **80b:60008** 60J10 (92A10)
- Tavernini, Lucio** The approximate solution of Volterra differential systems with state-dependent time lags. *SIAM J. Numer. Anal.* **15** (1978), no. 5, 1039-1052. (J. R. Cash) **80c:65191** 65L99 (65Q05)
- Tavhildze, A. H.** (with Matveev, V. A.; Muradian, R. M.) Method of quark counting for inclusive processes. (Russian. English summary) *Teoret. Mat. Fiz.* **40** (1979), no. 3, 329-339. (Authors' summary) **80i:81055** 81G05
- Taylor, Alan** (with Baumgartner, James E.; Wagon, Stanley) Ideals on uncountable cardinals. *Logic Colloquium '77* (Proc. Conf., Wrocław, 1977), pp. 67-77, *Studies in Logic and Foundations of Math.*, 96, North-Holland, Amsterdam, 1978. (Andreas Blass) **80c:03058** 03E05 (06E10)
- Taylor, B. A.** (with Rubel, Lee A.) Irreducibility of certain entire functions with applications to harmonic analysis. *Ann. of Math.* (2) **108** (1978), no. 3, 553-567. (Carlos A. Berenstein) **80d:32003** 32A15 (30D30)
- (with Bedford, Eric) Variational properties of the complex Monge-Ampère equation. I. Dirichlet principle. *Duke Math. J.* **45** (1978), no. 2, 375-403. (Carlos A. Berenstein) **80a:32011** 32F05 (35J99)
- (with Bedford, Eric) The Dirichlet problem for an equation of complex Monge-Ampère type. *Partial differential equations and geometry* (Proc. Conf., Park City, Utah, 1977), pp. 39-50, *Lecture Notes in Pure and Appl. Math.*, 48, Dekker, New York, 1979. (Tosiaki Kori) **80j:32029** 32F05 (31C10, 35J60)
- (with Berenstein, Carlos Alberto) A new look at interpolation theory for entire functions of one variable. *Adv. in Math.* **33** (1979), no. 2, 109-143. (A. V. Bratšev) **80j:30053** 30E05
- (with Bedford, Eric) Variational properties of the complex Monge-Ampère equation. II. Intrinsic norms. *Amer. J. Math.* **101** (1979), no. 5, 1131-1166. (Carlos A. Berenstein) **80j:32034** 32F30 (35J99, 49F22)
- Taylor, B. C.** See Madelung, O., **80c:82001**
- Taylor, D. B.** (with Crampin, S.) Surface waves in anisotropic media: propagation in a homogeneous piezoelectric halfspace. *Proc. Roy. Soc. London Ser. A* **364** (1978), no. 1717, 161-179. (A. D. Wood) **80b:73014** 73D20 (35Q99, 86A15)
- On the existence of elastic surface waves. *Quart. J. Mech. Appl. Math.* **31** (1978), no. 3, 335-347. (Alan Jeffrey) **80b:73043** 73D20
- Taylor, D. E.** (with Livingston, Richard) Distance-regular graphs. *Combinatorial mathematics* (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977), pp. 313-323, *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (R. A. Melter) **80i:05077** 05C99

- (with Monro, G. P.) On multiply transitive permutation groups. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 1, 57–58. (Wolfgang Knapp) **80c:20005** 20B20
- Taylor, Desmond P.** (with Anderson, John B.) A bandwidth-efficient class of signal-space codes. *IEEE Trans. Inform. Theory* 24 (1978), no. 6, 703–712. (Authors' summary) **80a:94018** 94A24 (94A12)
- Taylor, Fred J.** (with Huang, Chao H.) A memory compression scheme for modular arithmetic. *IEEE Trans. Acoust. Speech Signal Process.* 27 (1979), no. 6, part 1, 608–611. (Authors' summary) **80j:94002** 94A12
- (with Shenoy, Varadaraj P.) On the Fourier transform of sequentially limited signals with applications to delta modulation and medicine. *Internat. J. Systems Sci.* 10 (1979), no. 9, 945–960. (From the introduction) **80f:94004** 94A05 (92A09)
- Taylor, Fritz** On the applicability of current population models to the growth of insect populations. Conference on Deterministic Differential Equations and Stochastic Processes Models for Biological Systems (San Cristobal, N.M., 1977). *Rocky Mountain J. Math.* 9 (1979), no. 1, 149–151. (K. E. Swick) **80i:92020** 92A15
- Taylor, G. C.** A topological version of some ergodic theorems. *Studia Math.* 63 (1978), no. 2, 199–205. (Serban Grigorescu) **80a:47014** 47A35 (15A51, 60J05)
- Taylor, G. D.** (with Meinardus, Günter) Periodic quadratic spline interpolant of minimal norm. *J. Approx. Theory* 23 (1978), no. 2, 137–141. (Editors) **80a:41008** 41A15
- (with Kaufman, E. H., Jr.) Uniform approximation with rational functions having negative poles. *J. Approx. Theory* 23 (1978), no. 4, 364–378. (V. N. Malozemov) **80f:41011** 41A20
- (with Chalmers, B. L.) Uniform approximation with constraints. *Jahresber. Deutsch. Math.-Verein.* 81 (1978/79), no. 2, 49–86. (John A. Roulrier) **80d:41010** 41A29
- Taylor, Howard M.** The time to failure of fiber bundles subjected to random loads. *Adv. in Appl. Probab.* 11 (1979), no. 3, 527–541. (From the summary) **80c:73054** 73K35 (62N10)
- Taylor, J. B.** (with Connor, J. W.; Hastie, R. J.) High mode number stability of an axisymmetric toroidal plasma. *Proc. Roy. Soc. London Ser. A* 365 (1979), no. 1720, 1–17. (Authors' summary) **80b:82043** 82A45 (35Q99)
- Taylor, J. C.** See **Taylor, John C.**
- Taylor, J. E.** (with Olhoff, N.) On optimal structural remodeling. *J. Optim. Theory Appl.* 27 (1979), no. 4, 571–582. (Edward J. Haug, Jr.) **80h:73048** 73K99 (49B34)
- Taylor, J. G.** See **Taylor, John G.**
- Taylor, James G.** Differential-game examination of optimal time-sequential fire-support strategies. *Naval Res. Logist. Quart.* 25 (1978), no. 2, 323–355. (D. J. Wilson) **80a:90182** 90D40
- Error bounds for the Liouville-Green approximation to initial-value problems. (German and Russian summaries) *Z. Angew. Math. Mech.* 58 (1978), no. 12, 529–537. (Author's summary) **80a:34012** 34A45 (65L05)
- Recent developments in the Lancaster theory of combat. (French summary) *Operational research '78 (Proc. Eighth IFORS Internat. Conf., Toronto, Ont., 1978)*, pp. 773–806. North-Holland, Amsterdam, 1979. (J. S. Joel) **80e:90159** 90D40 (90D25)
- Some simple victory-prediction conditions for Lancaster-type combat between two homogeneous forces with supporting fires. *Naval Res. Logist. Quart.* 26 (1979), no. 2, 365–375. (Kare M. Mjelde) **80c:90098** 90D25
- Optimal commitment of forces in some Lancaster-type combat models. *Oper. Res.* 27 (1979), no. 1, 96–114. (Kare M. Mjelde) **80c:90175** 90D25
- Prediction of zero points of solutions to Lancaster-type differential combat equations for modern warfare. *SIAM J. Appl. Math.* 36 (1979), no. 3, 438–456. (Kare M. Mjelde) **80c:90176** 90D25
- Taylor, James H.** The Cramér-Rao estimation error lower bound computation for deterministic nonlinear systems. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 343–344. (S. G. Tzafestas) **80d:93070** 93E10
- Taylor, John B.** (with Anderson, T. W.) Strong consistency of least squares estimates in dynamic models. *Ann. Statist.* 7 (1979), no. 3, 484–489. (Jifi Andel) **80f:62064** 62J05
- Taylor, John C.** Some remarks on Malliavin's comparison lemma and related topics. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 446–456. *Lecture Notes in Math.* 649, Springer, Berlin, 1978. (Mark Pinsky) **80a:60097** 60J45 (58G32)
- (with Hirsch, Francis) Renouveau et existence de résolvantes. *Séminaire de Théorie du Potentiel, No. 3 (Paris, 1976/1977)*, pp. 121–133. *Lecture Notes in Math.* 681, Springer, Berlin, 1978. (Gunnar Forst) **80f:60104** 60J45 (60J35, 60K05)
- Taylor, John G.** Towards a geometrization of nature. *Phys. Rev. D* (3) 18 (1978), no. 10, 3544–3551. (A. U. Klimyk) **80d:83067** 83C99 (22E70, 58E30)
- Quantizing super-Riemannian space. *Proc. Roy. Soc. London Ser. A* 362 (1978), no. 1711, 493–507. (B. K. Nayak) **80a:83040** 83C45 (58B20, 81M05)
- (with Bedding, S.; Downes-Martin, S.) A superfield analysis of supergravity. *Ann. Physics* 120 (1979), no. 1, 175–204. (S. Deser) **80f:83057** 83E99
- Gauging  $su(n|m)$ . *Phys. Lett. B* 84 (1979), no. 1, 79–82. (Author's summary) **80c:81087** 81E15
- Quantizing space-time. *Phys. Rev. D* (3) 19 (1979), no. 8, 2336–2348. (Author's summary) **80c:83052** 83E99
- Taylor, Keith** (with Baggett, Larry) Groups with completely reducible regular representation. *Proc. Amer. Math. Soc.* 72 (1978), no. 3, 593–600. (D. Miličević) **80b:22009** 22D10
- Taylor, Laurence R.** (with Cohen, F. R.) Computations of Gelfand-Fuks cohomology, the cohomology of function spaces, and the cohomology of configuration spaces. *Geometric applications of homotopy theory (Proc. Conf., Evanston, Ill., 1977)*, I, pp. 106–143. *Lecture Notes in Math.* 657, Springer, Berlin, 1978. (D. B. Fuks) **80f:58050** 58H10 (55T99, 57R32)
- (with Pedersen, Erik Kjaer) The Wall finiteness obstruction for a fibration. *Amer. J. Math.* 100 (1978), no. 4, 887–896. (Douglas R. Anderson) **80g:55030** 55R05 (57Q10)
- (with Cohen, F. R.; May, J. P.) Splitting of certain spaces  $CX$ . *Math. Proc. Cambridge Philos. Soc.* 84 (1978), no. 3, 465–496. (V. P. Snaith) **80a:55010** 55P47 (55Q35)
- (with Neisendorfer, Joseph) Dolbeault homotopy theory. *Trans. Amer. Math. Soc.* 245 (1978/79), 183–210. (J. F. Adams) **80f:32004** 32C10 (14F40, 55P62, 57R99, 58A14)
- Taylor, M. A.** A generalization of a theorem of Belousov. *Bull. London Math. Soc.* 10 (1978), no. 3, 285–286. (V. Sathyabhama) **80j:20079** 20N05
- Taylor, M. J.** Galois module structure of integers of relative abelian extensions. *J. Reine Angew. Math.* 303/304 (1978), 97–101. (Yoshiomi Furuta) **80e:12006** 12A35
- Taylor, Michael E.** Propagation, reflection, and diffraction of singularities of solutions to wave equations. *Bull. Amer. Math. Soc.* 84 (1978), no. 4, 589–611. (P. A. Mišnaevskii) **80j:35068** 35L67
- Rayleigh waves in linear elasticity as a propagation of singularities phenomenon. *Partial differential equations and geometry (Proc. Conf., Park City, Utah, 1977)*, pp. 273–291. *Lecture Notes in Pure and Appl. Math.* 48, Dekker, New York, 1979. (From the introduction) **80i:73016** 73D20 (35L99, 58G17)
- Taylor, P. J.** Truncation errors for Gregory quadrature rules. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1978)*, pp. 461–468. *Congress. Numer., XXII, Utilitas Math., Winnipeg, Man., 1979.* (Author's introduction) **80j:65019** 65D32
- Taylor, Paul** (with Fenn, Roger A.) Introducing doodles. *Topology of low-dimensional manifolds (Proc. Second Sussex Conf., Chelwood Gate, 1977)*, pp. 37–43. *Lecture Notes in Math.* 722, Springer, Berlin, 1979. (Lee Rudolph) **80k:57010** 57M25 (14J17)
- Counting lines and planes in generalised noughts and crosses. *Math. Gaz.* 63 (1979), no. 424, 77–82. (R. A. Meller) **80m:05022** 05B30
- Taylor, Peter D.** Evolutionarily stable strategies with two types of player. *J. Appl. Probab.* 16 (1979), no. 1, 76–83. (Andrew Schotter) **80c:92041** 92A15 (90D40)
- An analytical model for a short-term advantage for sex. *J. Theoret. Biol.* 81 (1979), no. 3, 407–421. (Author's summary) **80k:92006** 92A10
- Taylor, Robert L.** ★Stochastic convergence of weighted sums of random elements in linear spaces. *Lecture Notes in Mathematics*, 672. Springer-Verlag, Berlin-New York, 1978. vii + 216 pp. ISBN 3-540-08929-2. (Gilles Pisier) **80g:60006** 60B12
- (with Daffer, Peter Z.) Some weak laws of large numbers for probability measures on vector spaces. *Vector space measures and applications (Proc. Conf., Univ. Dublin, Dublin, 1977)*, I, pp. 411–417. *Lecture Notes in Math.* 644, Springer, Berlin, 1978. (V. J. Paulauskas) **80e:60010** 60B12
- (with Cheng, K. F.) On the uniform complete convergence of density function estimates. *Ann. Inst. Statist. Math.* 30 (1978), no. 3, 397–406. (Paul Deheuvels) **80h:62033** 62G05
- (with Zienkiewicz, O. C.) Complementary energy with penalty functions in finite element analysis. *Energy methods in finite element analysis*, pp. 153–174. Wiley, Chichester, 1979. (Ranbir S. Sandhu) **80f:73063** 73K25 (65N30)
- (with Daffer, Peter Z.) Laws of large numbers for  $D[0, 1]$ . *Ann. Probab.* 7 (1979), no. 1, 85–95. (Evarist Giné) **80c:60045** 60F15 (60B05)
- (with Wei, Duan) Laws of large numbers for tight random elements in normed linear spaces. *Ann. Probab.* 7 (1979), no. 1, 150–155. (W. A. Woyczyński) **80c:60018** 60B12
- (with Padgett, W. J.) Convergence of weighted sums of independent random variables and an extension to Banach space valued random variables. *Internat. J. Math. Math. Sci.* 2 (1979), no. 2, 309–323. (Carol Alf O'Connor) **80i:60008** 60B12
- Taylor, W. E., Jr.** On the oscillatory and asymptotic behavior of solutions of fifth order selfadjoint differential equations. *Pacific J. Math.* 77 (1978), no. 2, 557–563. (G. J. Etgen) **80c:34033** 34C10
- Taylor, Walter** Primal topological algebras. *Algebra Universalis* 9 (1979), no. 2, 211–220. (S. A. Morris) **80c:22004** 22A99 (08A99)
- Equational logic. *Houston J. Math.* 1979, Survey, iii + 83 pp. (Hugo Volger) **80j:03042** 03C05 (03-02, 08-02)
- Subdirectly irreducible algebras in regular permutable varieties. *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 196–200. (Jaroslav Ježek) **80c:08010** 08B05
- Tazaki, Eiichiro** (with Amagasa, Michio) Heuristic structure synthesis in a class of network systems using fuzzy automata. (Japanese. English summary) *Systems and Control* 22 (1978), no. 4, 232–239. (Kenji Onaga) **80j:94056** 94D05 (68D99)
- (with Amagasa, Michio) Structural modeling in a class of systems using fuzzy sets theory. *Fuzzy Sets and Systems* 2 (1979), no. 1, 87–103. (Jifi Šustál) **80e:94032** 94D05 (03E72, 90A99)
- Tazaki, Saburo** (with Yamada, Yoshio; Gray, Robert M.) Asymptotic performance of block quantizers with difference distortion measures. *IEEE Trans. Inform. Theory* 26 (1980), no. 1, 6–14. (Authors' summary) **80m:94039** 94A34
- Tazawa, Shinsei** (with Ushio, Kazuhiko; Yamamoto, Sumiyasu) Partite-claw-decomposition of a complete multipartite graph. *Hiroshima Math. J.* 8 (1978), no. 1, 195–206. (F. Harary) **80i:05033a** 05C05
- (with Ushio, Kazuhiko; Yamamoto, Sumiyasu) On claw-decomposition of a complete multipartite graph. *Hiroshima Math. J.* 8 (1978), no. 1, 207–210. (F. Harary) **80i:05033b** 05C05
- Tchuente, Maurice** Parallel calculation of a linear mapping on a computer network. *Linear Algebra Appl.* 28 (1979), 223–247. (Author's summary) **80b:65026** 65F30
- Tebyrce, E. I.** (with Bunu, I. D.) The lattice of pretorsors and classically semisimple rings. (Russian) Ring-theoretical constructions. *Mat. Issled.* No. 49 (1979), 35–39, 161. (R. Wiegandt) **80k:16038** 16A63
- Tedeschi, Giulio** On a generalization of the separation axioms. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 35 (1976/77), 225–232 (1978). (Marco Bernardi) **80a:54032** 54D15 (54D10)
- Openness of loci for affine and projective spectra in a graded Noetherian domain. (Italian. English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 24 (1979), 167–173. (S. Greco) **80m:14034** 14M05
- Tee, Garry J.** Letter to the editor: "Computational techniques in a set of late medieval astronomical tables" (J. Hist. Arabic Sci. 1 (1977), 24–32) by George Saliba. *J. Hist. Arabic Sci.* 1 (1977), no. 2, 323–324. (A. G. Molland) **80d:01009b** 01A30 (01A60, 26-03)
- Teer, Frank** (with Sang Ajang, Gerard J. M.) An efficient algorithm for detection of combined occurrences. *Inform. Process. Lett.* 8 (1979), no. 3, 137–140. (A. Aiello) **80c:68241** 68H05 (68B15, 68C05)
- Tefeller, S. C.** (with Eigen, G. J.) A two-parameter boundary problem for second-order differential system. *Ann. Mat. Pura Appl.* (4) 120 (1979), 293–303. (Brian D. Sleeman) **80j:34023** 34B25



- Teicher, Henry** (with Chow, Yuan Shih) ★Probability theory. Independence, interchangeability, martingales. *Springer-Verlag, New York-Heidelberg*, 1978. xv+455 pp. ISBN 0-387-90331-3 (R. J. Tomkins) **80a:60004** 60-02 (60G40)
- Rapidly growing random walks and an associated stopping time. *Ann. Probab.* 7 (1979), no. 6, 1078-1081. (Allan Gut) **80j:60036** 60F05 (60F15)
- Generalized exponential bounds, iterated logarithm and strong laws. *Z. Wahrsch. Verw. Gebiete* 48 (1979), no. 3, 293-307. (R. J. Tomkins) **80b:60044** 60F15
- Teichert-Gaida, Alina** A non-linear problem of Sjöstrand-v. Wolfersdorf's type. *Demonstratio Math.* 11 (1978), no. 2, 395-413. (A. Džuraev) **80b:35109** 35M05
- Teichnick, Luc** On Steiner spaces. *J. Combin. Theory Ser. A* 26 (1979), no. 2, 103-114. (Jim Totten) **80j:51011** 51E10 (05B25)
- Teiseler, Bernard** On a Minkowski-type inequality for multiplicities. II. *C. P. Ramamajam —a tribute*, pp. 347-361, *Tata Inst. Fund. Res. Studies in Math.*, 8, Springer, Berlin, 1978. (Jean-Jacques Risler) **80j:14002** 14B07 (32C40)
- (with Lê Dũng Tráng) Sur la géométrie des surfaces complexes. I. Tangentes exceptionnelles. *Amer. J. Math.* 101 (1979), no. 2, 420-452. (Jonathan M. Wahl) **80f:32008** 32C40 (14B07, 32B30)
- Du théorème de l'index de Hodge aux inégalités isopérimétriques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 4, A287-A289. (I. Dolgachev) **80k:14014** 14C17 (14M99, 28A75, 52A40)
- Teliepsch, Claudio** Spin, supersymmetry, and square roots of constraints. *Current trends in the theory of fields (Sympos., Florida State Univ., Tallahassee, Fla., 1978)*, pp. 134-139, *AIP Conf. Proc.*, 48, Amer. Inst. Physics, New York, 1978. (Don Weingarten) **80f:83024** 83C45 (58F05)
- Teixeira, A. F. de F.** (with Kleber, A.; Galvão, Carlos A. P.) Gravitational peculiarities of a scalar field. *J. Phys. A* 13 (1980), no. 2, 503-508. (Authors' summary) **80k:83005** 83C05
- Teixeira, Marco Antonio** On structural stability of pairings of vector fields and functions. *Bol. Soc. Brasil. Mat.* 9 (1978), no. 2, 63-81. (Ju. E. Glukh) **80m:58023** 58F10
- Generic bifurcation of certain singularities. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 1, 238-254. (M. C. Irwin) **80j:58058** 58F14
- Tejerna, A. F.** (with Zaragoza, C.) Systematic development of thermodynamics. (Spanish. English summary) *Rev. Real Acad. Cienc. Exact. Fis. Natur. Madrid* 72 (1978), no. 1, 97-121. (N. D. Sengupta) **80f:80001** 80-01
- Telega, Donald** (with Silverman, Herb; Silvia, Evelyn Marie) Convolution conditions for convexity starlikeness and spiral-likeness. *Math. Z.* 162 (1978), no. 2, 125-130. (William T. Sledd) **80i:30025** 30C45
- (with Silverman, Herb; Silvia, Evelyn Marie) Locally univalent functions and coefficient distortions. *Pacific J. Math.* 77 (1978), no. 2, 533-539. (D. M. Campbell) **80c:30013** 30C45
- (with Silverman, Herb) Extreme points of subclasses of close-to-convex functions. *Proc. Amer. Math. Soc.* 74 (1979), no. 1, 59-65. (Louis Brickman) **80c:30012** 30C45
- Telega, J. J.** On variational formulations for nonlinear, nonpotential operators. *J. Inst. Math. Appl.* 24 (1979), no. 2, 175-195. (Simon Reich) **80j:47086** 47H15 (49H05, 65J05)
- Telesman, Nicolae** Global analysis on PL-manifolds. *Trans. Amer. Math. Soc.* 256 (1979), 49-88. (József Dodziuk) **80k:58091** 58G10 (57R10)
- Telesman, Silviu** On a theorem of P. Lévy. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 674-692, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (H. Heyer) **80m:60017** 60B15 (43A05)
- Teigen, J.** On R. W. Llewellyn's rules to identify redundant constraints: a detailed critique and some generalizations. (German summary) *Z. Oper. Res. Ser. A-B* 23 (1979), no. 5, 197-206. (Author's summary) **80b:90097** 90C05
- Tell, M. T.** Four general relations between neutrino and antineutrino scattering on any fermion target. *Proceedings of the Conference on Structure of Matter—Mathematics and Phenomenology (Inst. Engrs., Mysore, 1978)*, pp. 295-301, *Matscience Rep.*, 93, Inst. Math. Sci., Madras, 1978. (Author's summary) **80c:81113** 81F99
- Teliche, G. N.** (with Adamov, V. I.; Taras'ev, G. S.) A variational method for the construction of models of thin rods. (Russian) *Prikl. Meh.* 14 (1978), no. 8, 95-101. (Vadim Komkov) **80b:73005** 73C20
- Teljakovski, S. A.** (with Balasov, L. A.) Integrability of trigonometric series with a lacunary sequence of second differences of coefficients. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 5, 983-987, 1213. (S. Aljančić) **80a:42004** 42A16
- On integrability of lacunary trigonometric series with weight. Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 1-2, 217-222. (Shigeru Takahashi) **80a:42005** 42A16 (42A55)
- Teller-Arenas, A.** (with Fronteau, J.; Combis, Patrick) Brownian quasiparticles in statistical physics. *Hadronic J.* 2 (1979), no. 5, 1053-1066. (Authors' summary) **80m:82009** 82A05
- Teller-Giron, R.** (with David, René) Comments on: "The error latency of a fault in a sequential digital circuit" (IEEE Trans. Comput. 25 (1976), no. 6, 655-659) by J. J. Shedletsky and E. J. McCluskey. With a reply by Shedletsky and McCluskey. *IEEE Trans. Comput.* 28 (1979), no. 1, 85-86. (Editors) **80c:94024** 94C05
- Telchow, Gerhard** On an iteration procedure. *Theory of nonlinear operators (Proc. Fifth Internat. Summer School, Central Inst. Math. Mech. Acad. Sci. GDR, Berlin, 1977)*, pp. 269-278, *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1978, 6, Akademie-Verlag, Berlin, 1978. (G. A. Watson) **80b:65070** 65J15 (47H17)
- Teller, Lester G.** (with Sharkey, William W.) Supportable cost functions for the multiproduct firm. *J. Econom. Theory* 18 (1978), no. 1, 23-37. (M. Schader and O. Opitz) **80k:90007** 90A12
- Tennam, Roger** Qualitative properties of Navier-Stokes equations. *Contemporary developments in continuum mechanics and partial differential equations (Proc. Internat. Sympos., Inst. Mat., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 485-494, *North-Holland Math. Studies*, 31, North-Holland, Amsterdam, 1978. (H. Rasmussen) **80d:35124** 35Q10 (76D05)
- Nonlinear boundary value problems arising in physics. *Differential equations and applications (Proc. Third Schengen Conf., Schengen, 1977)*, pp. 27-38, *North-Holland Math. Studies*, 31, North-Holland, Amsterdam, 1978. (G. Mancini) **80c:35059** 35Q20 (65P05)
- Generic properties of Navier-Stokes equations. *Mathematical problems in theoretical physics (Proc. Internat. Conf., Univ. Rome, Rome, 1977)*, pp. 361-370, *Lecture Notes in Phys.*, 80, Springer, Berlin, 1978. (P. C. Fife) **80d:35125** 35Q10
- (with Strang, Gilbert) Existence de solutions relaxées pour les équations de la plasticité: étude d'un espace fonctionnel. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 7, A515-A518. (Authors' summary) **80b:35071** 35J99 (73E99)
- (with Lichnerowicz, Alain) Pseudosolutions of the time-dependent minimal surface problem. *J. Differential Equations* 30 (1978), no. 3, 340-364. (F. J. Almgren, Jr.) **80a:35059** 35K22 (49F99)
- Monotone rearrangement of a function and the Grad-Mercier equation of plasma physics. *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis (Rome, 1978)*, pp. 83-98, *Pitagora, Bologna*, 1979. (T. Kahan) **80b:35120** 35Q20 (82A45)
- Some finite element methods in fluid flow. *Sixth International Conference on Numerical Methods in Fluid Dynamics (Proc. Conf., Tbilisi, 1978)*, pp. 34-55, *Lecture Notes in Phys.*, 90, Springer, Berlin, 1979. (Stephen W. Brady) **80i:76001** 76-02 (65N30)
- (with Saut, Jean-Claude) Generic properties of nonlinear boundary value problems. *Comm. Partial Differential Equations* 4 (1979), no. 3, 293-319. (A. A. Arsen'ev) **80c:35080** 35J60 (58C15)
- Temirbulatov, S. I.** Conditionally well-posed problems for the wave equation. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 5, 1142-1143. (V. V. Ivanov) **80b:35083** 35L20 (35R99)
- A corollary to a theorem of M. M. Lavrent'ev. (Russian) *Theoretical and applied problems of mathematics and mechanics (Russian)*, pp. 206-213, 246, "Nauka" Kazah. SSR, Alma-Ata, 1979. (V. G. Romanov) **80m:35077** 35R30
- (with Lavrent'ev, M. M.) On the theory of the mixed problem for the wave equation. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 5, 1062-1064. (R. Kodnár) **80b:35082** 35L20
- Some ill-posed problems for an equation of composite type. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1979, no. 1, 53-56, 92. (V. Djuriković) **80i:35175** 35R25 (35M05)
- Temirgaliyev, N.** Remark on the uniform convergence of multiple Fourier series. (Russian) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1978, no. 5, 85-87, 95. (R. L. Cooke) **80k:42023** 42B05
- Temiror, Ç.** Limit theorems for a queueing system with a nonhomogeneous stream of customer arrivals. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1978, no. 6, 78-79. (M. A. Fainberg) **80i:60092** 60K25
- Temko, S. V.** (with Kuz'min, S. K.) The stability of a collection of particles with a power interaction in a double layer. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 5, 890-900, 958. (Authors' summary) **80c:82012** 82A05
- Temljakov, V. N.** Approximation of periodic functions of several variables with bounded mixed derivative. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 3, 527-531. (From the text) **80k:42008** 42A10 (41A17, 65D15)
- Tenne, N. M.** Uniform asymptotic expansions of confluent hypergeometric functions. *J. Inst. Math. Appl.* 22 (1978), no. 2, 215-223. (F. W. J. Olver) **80c:33004** 33A30
- The asymptotic expansion of the incomplete gamma functions. *SIAM J. Math. Anal.* 10 (1979), no. 4, 757-766. (E. Rieckstien) **80k:33002** 33A15
- Tempelman, W.** The co-ordinationization of the kinematical vectors. (Italian and Russian summaries) *Nuovo Cimento B* (11) 49 (1979), no. 2, 259-276. (N. D. Sengupta) **80d:70004** 70B99 (83A05)
- Temperley, H. N. V.** (with Rogers, D. G.) A note on Baxter's generalization of the Temperley-Lieb operators. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 324-328, *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (Louis Shapiro) **80c:05022** 05A15 (82A99)
- (with Ashley, Susan E.) Some exact results for the Ashkin-Teller model. *Proc. Roy. Soc. London Ser. A* 365 (1979), no. 1722, 371-380. (Authors' summary) **80c:81088** 81E15
- Temperton, Clive** Direct methods for the solution of the discrete Poisson equation: some comparisons. *J. Comput. Phys.* 31 (1979), no. 1, 1-20. (Author's summary) **80c:65238** 65P05 (65-04)
- Temperville, A.** Interactions of solitary waves in shallow water theory. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Sios.)* 31 (1979), no. 2, 177-184. (Author's summary) **80m:76022** 76B15
- Templer, Mark** On the primality of  $k!+1$  and  $2 \cdot 3 \cdot 5 \cdots p+1$ . *Math. Comp.* 34 (1980), no. 149, 303-304. (Editors) **80j:10010** 10A25 (10-04)
- Templeton, J. G. C.** (with Hoq, A. K. M. Sirajul; Ali, Mir M.) The distribution of Student's ratio for samples from an exponential population. *Comm. Statist. A—Theory Methods* 7 (1978), no. 9, 837-850. (C. J. Park) **80g:62008** 62E15
- Templeton, S.** (with Corrigan, E.; Goddard, Peter) Instanton Green functions and tensor products. *Nuclear Phys. B* 151 (1979), no. 1, 93-117. (Authors' summary) **80b:81041** 81C40 (58E20, 58G10, 81E10)
- Ten, V. P.** Dynamic contact problem for a viscoelastic half-plane. *Prikl. Mat. Meh.* 41 (1977), no. 5, 926-934. (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 5, 952-960 (1979). (S. P. Gajda) **80f:73048** 73F99
- Tena Ayuso, Juan** (with Blanco Martín, María Francisca) The kernel of the homomorphism  $W(Q) \rightarrow W(Q(\sqrt{d}))$ . (Spanish) *Rev. Mat. Hisp.-Amer.* (4) 38 (1978), no. 2-3, 94-99. (Maurice Flament) **80c:10021** 10C02 (12A25, 15A63)
- Ten Berge, Jos M. F.** See ten Berge, Jos M. F.
- Tenenbaum, L. A.** Investigation of a class of graph-dynamic systems. *Automat. i Telemekh.* 1978, no. 10, 153-173. (Russian. English summary); translated as *Automat. Remote Control* 39 (1978), no. 10, part 2, 1534-1549 (1979). (Itsuho Takanami) **80c:93080** 93C55 (05C05, 93B99)
- Teneblat, Ketil** The Rauch comparison theorem and some applications. (Portuguese) *Proceedings of the Ninth Brazilian Mathematical Colloquium (Poços de Caldas, 1973)*, Vol. 1 (Portuguese), pp. 205-216, *Inst. Mat. Pura Apl., São Paulo*, 1977. (J. S. Joel) **80k:53065** 53C20
- Bäcklund's theorem for  $n$ -dimensional submanifolds of space forms. *An. Acad. Brasil. Cienc.* 51 (1979), no. 3, 363-364. (K. Nomizu) **80k:53041** 53B25
- (with Terng, Chuu Lian) A higher dimension generalization of the sine-Gordon equation and its Bäcklund transformation. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979),

- no. 3, 589–593. (Clarence M. Ablow) **80b:35129** 35Q20 (25A30, 58A15, 58F07)
- Tengstrand, Göran** (with Snellman, Håkan) Relativistic scattering of model particles. *J. Math. Phys.* **20** (1979), no. 1, 132–140. (Authors' summary) **80b:81108** 81F20
- Ten Men Jan** (with Aparcin, A. S.) Unimprovable estimates of the solutions of certain integral inequalities. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 1, 192–195, 207. (B. Crstici) **80b:26022** 26D15
- Tennerello, C.** (with Bondi, P.; Fergola, P.; Gambardella, L.) Partial stability of large-scale systems. *IEEE Trans. Automat. Control* **24** (1979), no. 1, 94–97. (V. Sree-Hari-Rao) **80b:93006** 93A15 (93D05)
- Tennison, B. R.** Intersection multiplicities and tangent cones. *Math. Proc. Cambridge Philos. Soc.* **85** (1979), no. 1, 33–42. (G. Horrocks) **80d:14005** 14C17 (13H10)
- Tenno, R.** Algorithms for the adaptation of plant models with randomly varying parameters. A comparative analysis. (Russian. Estonian and English summaries) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* **27** (1978), no. 3, 289–294. (Author's summary) **80b:93084** 93C40
- Ten Raa, Thijs** See **ten Raa, Thijs**
- Teo, K. L.** (with Ahmed, N. U.)  $L^p(R_0)$  ( $p > 1$ ) stability in the mean  $m$  ( $m > 1$ ) of a class of stochastic Volterra integral equations. *Inform. Sci.* **12** (1977), no. 2, 129–150. (J. S. Milton) **80g:60063** 60H20
- (with Nguyen Do, K.) Optimal control of a two-class national economic model. *Internat. J. Systems Sci.* **9** (1978), no. 9, 965–979. (P. Kischka) **80a:90040** 90A16
- (with Moore, E. J.) On directional derivative methods for solving optimal parameter selection problems. *Internat. J. Systems Sci.* **9** (1978), no. 9, 1029–1041. (Authors' summary) **80a:93158** 93E10 (49C20)
- (with Ahmed, N. U.) Optimal control of systems governed by a class of nonlinear evolution equations in a reflexive Banach space. *J. Optim. Theory Appl.* **25** (1978), no. 1, 57–81. (Wai Leung Chan) **80k:49005** 49A27
- (with Yeo, L. T.) On the computational methods of optimal control problems. *Internat. J. Systems Sci.* **10** (1979), no. 1, 51–76. (Gerard G. L. Meyer) **80c:93089** 93C99
- Optimal control of systems governed by time-delayed, second-order, linear, parabolic partial differential equations with a first boundary condition. *J. Optim. Theory Appl.* **29** (1979), no. 3, 437–481. (N. U. Ahmed) **80m:49019** 49B22
- (with Reid, D. W.; Boyd, I. E.) Stochastic optimal control theory and its computational methods. *Internat. J. Systems Sci.* **11** (1980), no. 1, 77–95. (Authors' summary) **80j:93143** 93E20 (93E25)
- Teo, Susat Khoh** (with Tarafdar, E.) On the existence of solutions of the equation  $Lx \in Nx$  and a coincidence degree theory. *J. Austral. Math. Soc. Ser. A* **28** (1979), no. 2, 139–173. (J. Dancs) **80m:47062** 47H15 (55M20, 58C30)
- Teodorescu, Dan** Modeling Markovian biological systems via optimization operators. *Biol. Cybernet.* **30** (1978), no. 3, 129–139. (K. Dietz) **80a:62134** 62M05
- Cybernetical actions and Markov processes. *J. Cybernet.* **9** (1979), no. 2, 169–183. (Author's summary) **80c:92050** 92A90
- Teodorescu, Ion D.** On characteristic curves. (Romanian. French summary) *Stud. Cerc. Mat.* **30** (1978), no. 3, 339–352. (P. Drăgăli) **80c:53009** 53B05
- (with Codău, Nicolae) Sur les courbes caractéristiques d'une variété différentiable relatives à une algèbre de déformation. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **23** (1979), no. 1, 37–48. (Franco Tricceri) **80k:53032** 53B15 (57R25)
- Sur les variétés de Vranceanu plongées dans un espace euclidien à  $n$  dimensions. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 1, 167–172. (Froim Marcus) **80j:53010** 53A05
- (with Nicolescu, Liviu) Sur les espaces de Riemann conformément euclidiens. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 5, 759–773. (Hassan Akbar-Zadeh) **80j:53022** 53B20
- Teodorescu, Nicolae** See Vranceanu, Gheorghe; et al., **80j:01035**
- Teodorescu, P. P.** (with Cristescu, N.) G. C. Moisil's researches in mechanics. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 5, 675–680. (Walter Hengartner) **80k:01052** 01A70
- Teodorescu, Petre P.** (with Kecs, W.) ★Введение в теорию обобщенных функций с приложениями в технике. (Russian) [Introduction to the theory of generalized functions with application to technology] Translated from the Romanian by O. E. Bulgaru. Edited by B. E. Pobedra. "Mir", Moscow, 1978. 518 pp. (Vadim Komkov) **80d:80032** 00A69 (46F10)
- Teodorescu, Radu I.** On the smoothness of a space. (Romanian. English summary) *Bul. Univ. Braşov Ser. C* **19** (1977), 95–98 (1978). (Theodore S. Bolis) **80c:46033** 46B20
- Factorisations régulières et sous-espaces hyperinvariants. *Acta Sci. Math. (Szeged)* **40** (1978), no. 3–4, 389–396. (Harro Heuser) **80a:47011** 47A15
- Sur la fonction caractéristique d'une contraction. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 10, 1583–1585. (E. Durszt) **80c:47015** 47A65 (47A45)
- Sur l'unicité de la décomposition des contractions en somme directe. *J. Funct. Anal.* **31** (1979), no. 2, 245–254. (E. Durszt) **80c:47005** 47A15 (47A45)
- Teodorescu, Veronica** Théorèmes de sélection pour les applications multivoques lipschitziennes. *An. Univ. Craiova Mat. Fiz.-Chim. No. 5* (1977), 51–54. (S. N. Mukhopadhyay) **80b:54021** 54C60
- Teodorescu, P.** See **Teodorescu, Petre P.**
- Teorey, Toby J.** (with Das, K. Sundar) An efficient job scheduling algorithm for mixed turnaround and deadline applications. *Inform. Sci.* **16** (1978), no. 2, 137–150. (Authors' summary) **80c:68084** 68C15
- Tepličkí, M. G.** Certain problems in the theory of finite Markov chains. *Izv. Akad. Nauk SSSR Teh. Kibernet.* **1978**, no. 1, 96–100, 221 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 1, 77–81. (Ė. I. Kistauri) **80a:90143** 90C40
- Tepličkí, Ju. V.** Invariant tori of countable systems of differential equations. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1978**, no. 9, 797–800, 661. (M. Švec) **80g:34068** 34G20
- On the problem of reducibility of countable systems of differential equations with quasiperiodic coefficients. (Russian) *Ukrain. Mat. Ž.* **31** (1979), no. 4, 463–465, 479. (Author's summary) **80m:34059** 34G10
- Teplý, Mark L.** (with Hansen, Friedhelm) On the Gabriel dimension and subidealizer rings. *Module theory (Proc. Special Session, Amer. Math. Soc., Univ. Washington, Seattle, Wash., 1977)*, pp. 95–118, *Lecture Notes in Math.*, 700, Springer, Berlin, 1979. (K. R. Goodearl) **80k:16037** 16A55
- Teppati, Giancarlo** (with Scaravelli, Corrado) On probability Souslin measures. (Italian summary) *Rend. Istit. Mat. Univ. Trieste* **9** (1977), no. 1–2, 64–69 (1978). (Author's summary) **80c:28007** 28A12
- Terada, Hiroaki** (with Sasao, Tsutomu) Multiple-valued logic and the design of programmable logic arrays with decoders. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979)*, pp. 27–37, IEEE, Long Beach, Calif., 1979. (Authors' summary) **80m:94115** 94C99 (03B50)
- Teramoto, Ei** (with Shigesada, Nanako; Kawasaki, Kohkichi) Spatial segregation of interacting species. *J. Theoret. Biol.* **79** (1979), no. 1, 83–99. (Authors' summary) **80c:92038** 92A15
- (with Kawasaki, Kohkichi; Shigesada, Nanako) Switching effect of predation on competitive prey species. *J. Theoret. Biol.* **79** (1979), no. 3, 303–315. (Authors' summary) **80c:92039** 92A15
- Ter-Antonyan, V. M.** (with Pogosjan, G. S.) Connection between Cartesian and polar wave functions of a nonrelativistic charged particle in a homogeneous magnetic field. (Russian. English summary) *Theoret. Mat. Fiz.* **40** (1979), no. 1, 140–143. (Author's summary) **80i:81052** 81D05
- Teraso, Hiroaki** The rational forms on the weighted projective space and the filtration by the order of pole. *Sci. Papers College Gen. Ed. Univ. Tokyo* **28** (1978), no. 2, 153–158. (C. A. M. Peters) **80i:14006** 14F40 (14G30)
- Terlik, György** Representation of an autoregressive field by moving averages, and the maximum likelihood estimation of its mean. (Hungarian. Russian summary) *Alkalmaz. Mat. Lapok* **3** (1977), no. 3–4, 379–388 (1978). (Author's summary) **80g:62072** 62M10
- (with Kormos, J.) Notes on matrix-valued stationary stochastic processes. I. *Publ. Math. Debrecen* **25** (1978), no. 3–4, 281–283. (Hannu Niemi) **80c:60044** 60G10
- Notes on matrix-valued stationary stochastic processes. II. *Publ. Math. Debrecen* **26** (1979), no. 1–2, 123–126. (Hannu Niemi) **80j:60061** 60G25 (60G10)
- Terebula, S. Ju.** (with Ivanov, V. A.) Some limit theorems for a nonequipprobable scheme of group distribution of particles. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **23** (1978), no. 3, 644–650. (D. A. Darling) **80b:60021** 60C05 (60F05)
- Teregulov, A. G.** On the theory of the stability of thin shells. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 5, 80–83. (From the text) **80g:73061** 73L99
- Terehin, M. T.** (with Barančikov, V. A.) A variational method for the proof of the existence of almost periodic solutions of a system of ordinary differential equations. (Russian) *Differencial'nye Uravneniya (Ryazan)* **No. 11** (1978), 174–178. (K. W. Chang) **80c:34048** 34C27
- Terehov, A. N.** A boundary value problem for a third-order quasilinear equation of mixed-composite type. (Russian) *Dinamika Splošn. Sredy* **No. 36** *Dinamika Židkostei so Svobodnymi Granicami* (1978), 138–149, 163. (Author's summary) **80d:35112** 35M05
- Terent'ev, V. I.** On the question of a foundation for pattern recognition algorithms that are based on the computation of estimates. (Russian) *Problemy Kibernet.* **No. 34** (1978), 187–220, 272. (Author's summary) **80b:68110** 68G10
- Terent'ev, A. G.** The nonlinear theory of cavitation flow. (Russian) *Questions of applied mathematics and mechanics*, **No. 5** (Russian), pp. 138–185, 210. *Čuvas' Gos. Univ., Cheboksary*, 1977. (From the introduction) **80c:76010** 76B99 (65E05)
- A sloping entrance to an ideal weightless fluid of a thin body with a ventilated cavity. (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* **1979**, no. 3, 66–76. (Author's summary) **80k:76011** 76B10
- Terent'ev, E. D.** (with Ryzov, O. S.) An unsteady boundary layer with self-induced pressure. *Prikl. Mat. Meh.* **41** (1977), no. 6, 1007–1023 (Russian); translated as *J. Appl. Math. Mech.* **41** (1977), no. 6, 1024–1040 (1979). (S. H. Lam) **80c:76035** 76N05 (35Q10)
- Terent'ev, M. V.** (with Marinov, M. S.) A functional integral on unitary groups. *Jadernaja Fiz.* **28** (1978), no. 5, 1418–1434 (Russian); translated as *Soviet J. Nuclear Phys.* **28** (1978), no. 5, 729–737. (C. S. Sharma) **80b:81023** 81C35 (58D30)
- (with Bakker, B. L. G.; Kondrajuk, L. A.) On the formulation of two- and three-body relativistic equations employing light-front dynamics. *Nuclear Phys. B* **158** (1979), no. 2–3, 497–519. (R. L. Ingraham) **80j:81066** 81F10
- Terenzi, Paolo** Markuschevich bases and quasicomplementary subspaces in Banach spaces. (Italian summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* **111** (1977), no. 1, 49–61 (1978). (W. J. Davis) **80c:46021** 46B15
- On the structure, in a Banach space, of the sequences without an infinite basic subsequence. (Italian summary) *Boll. Un. Mat. Ital. B* **5** (1978), no. 1, 32–48. (Ivan Singer) **80d:46025** 46B15
- Some completeness properties of general sequences in a Banach space. (Italian summary) *Boll. Un. Mat. Ital. B* **5** (1978), no. 3, 743–753. (Ivan Singer) **80d:46016** 46B15
- Biorthogonal systems in Banach spaces. (Italian summary) *Riv. Mat. Univ. Parma* **4** (4) (1978), 165–204 (1979). (W. H. Ruckle) **80g:46016** 46B15
- Ter Haar, D.** See **ter Haar, D.**
- Ter Riele, H. J. J.** See **ter Riele, H. J. J.**
- Terjeki, J.** On the asymptotic stability of solutions of functional-differential equations. *Ann. Polon. Math.* **36** (1979), no. 3, 299–314. (Thomas S. Angell) **80h:34104** 34K20
- Ter-Krikorov, A. M.** (with Beklarjan, L. A.; Petrov, A. A.) A linear dynamic production model. (Russian) *Ekonom. i Mat. Metody* **14** (1978), no. 2, 312–325. (From the introduction) **80a:90017** 90A11
- Terleicki, Georg** (with Teubner, Eberhard; Grün, Norbert; Scheid, Werner) Classical relativistic trajectory method and application to the K-shell ionisation in U-U collisions. *J. Phys. B* **13** (1980), no. 3, 523–538. (Authors' summary) **80k:81182** 81G35 (81M05)
- Terleicki, Ju. A.** Gibbs random fields in a low-temperature region. (Russian) *Dokl. Akad. Nauk SSSR* **246** (1979), no. 3, 540–544. (Vladimir Šips) **80c:82013** 82A05
- Terlikowska-Osłowska, Barbara** Radical and semisimple classes of objects in categories with a self-dual set of axioms. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* **26** (1978), no. 1, 7–13. (Thomas F. Fox) **80a:18010** 18E40 (18A20)
- Terlikowski, Tomasz** Approximation of state constraints for a class of dynamic optimization problems. (Russian and Polish summaries) *Arch. Automat. Telemekh.* **24** (1979), no. 2, 195–219. (Author's summary) **80g:93059** 93C99



- Termini, S.** (with De Luca, A.; Perrin, Dominique; Restivo, Antonio) Synchronization and simplification. *Discrete Math.* 27 (1979), no. 3, 297-308. (Henry Beker) **80a:94030** 94B50
- Terog, Chun Lian** (with Tenenblat, Ket) A higher dimension generalization of the sine-Gordon equation and its Bäcklund transformation. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 3, 589-593. (Clarence M. Ablow) **80b:35129** 35Q20 (35A30, 58A15, 58F07)
- Terno, Johannes** (with Gierth, Gertraude) The Nicholson principle in discrete dynamic optimization. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 1, 67-77. (Authors' summary) **80c:90113** 90C39 (90C10)
- Ternov, I. M.** (with Halilov, G. A.; Čizov, G. A.; Gaina, A. B.) Finite motion of massive particles in Kerr and Schwarzschild fields. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1978, no. 9, 109-114. (Authors' summary) **80b:83050** 83D05
- (with Halilov, V. R.; Pavlova, O. S.) Equations of the spin motion in an external field. I. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1978, no. 12, 89-95. (Authors' summary) **80b:81028** 81C05
- Krasickov-Ternovskii, I. F.** See **Krasickov-Ternovskii, I. F.**
- Terol Terol, Procopio** See **Zorua Terol, Procopio**
- Terpe, F.** See **Proceedings: Conference Topology and Measure, 80d:28002a** and **Proceedings: Conference Topology and Measure, 80d:28002b**
- Terpušov, A. F.** (with Nazarov, A. A.) The finding of optimal dynamic priorities in the case of oblique observations. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1977, no. 6, 85-90 (Russian); translated as *Engrg. Cybernetics* 15 (1977), no. 6, 66-71 (1978). (Micha Yadin) **80c:60111** 60K25
- Terras, A.** Real zeroes of Epstein's zeta function for ternary positive definite quadratic forms. *Illinois J. Math.* 23 (1979), no. 1, 1-14. (H. Iwaniec) **80g:10042** 10H10 (10C15)
- Terras, Rihó** On the existence of a density. *Acta Arith.* 35 (1979), no. 1, 101-102. (R. C. Buck) **80h:10066** 10L10 (58F99)
- Terrell, George** (with Curtis, Morton)  $HP^\infty$ , genuine and counterfeit. *Algebraic and geometric topology (Proc. Sympos., Univ. California, Santa Barbara, Calif., 1977)*, pp. 76-86. *Lecture Notes in Math.*, 664, Springer, Berlin, 1978. (Albert O. Shar) **80j:55014** 55P60
- Terškovič, I. A.** (with Degermendži, A. G.; Pečurkin, N. S.) A criterion for the stationary coexistence of flowing-liquid microbe populations. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 4, 987-990. **80d:92023** 92A15
- Terton, Gerhard** Zu Wilhelm Wundts Auffassung von der Determination. *Wiss. Z. Karl-Marx-Universität Leipzig Ges. Sprachwiss. Reihe* 28 (1979), no. 3, 295-301. (J. F. A. K. van Benthem) **80j:03011** 03A05 (01A55, 03-03)
- Terzija, T.** On varieties containing Schwartz spaces. (Turkish summary) *İstanbul Üniv. Fen Fak. Mecm. Ser. A* 40 (1978), 5-8 (1978). (J. Diestel) **80h:46003** 46A12
- (with Alpeyren, M.; Ramanujan, M. S.) Subspaces of some nuclear sequence spaces. *Nederl. Akad. Wetensch. Indag. Math.* 41 (1979), no. 2, 217-224. (E. Dubinsky) **80g:46010** 46A45
- Teschke, Lothar** (with Zimmermann, Karel) Extremale Algebren und verallgemeinerte Konvexitätsräume. (English and Czech summaries) *Ekonom.-Mat. Obzor* 15 (1979), no. 1, 74-84. (Robert E. Jamison) **80h:52003** 52A01 (51M30, 90C25)
- Über die Normalteiler der  $p$ -Sylowgruppe der symmetrischen Gruppe vom Grade  $p^n$ . *Math. Nachr.* 87 (1979), 197-212. (Wolfgang Knappe) **80c:20029** 20D15
- Teschner, W.** Optimality of intermediate-thrust arcs in rotating potential force fields. *Celestial Mech.* 21 (1980), no. 3, 311-320. (Author's summary) **80m:70030** 70M05 (70F07)
- Tesei, A.** (with Talenti, Giorgio) Remarks on the asymptotical behaviour of solutions to some nonlinear parabolic equations. *Rend. Sem. Mat. Univ. Padova* 59 (1978), 57-66 (1979). (E. Podolaki) **80h:35015** 35B40 (35K55)
- (with de Mottoni, Piero) Asymptotic stability results for a system of quasilinear parabolic equations. *Applicable Anal.* 9 (1979), no. 1, 7-21. (Lu-San Chen) **80f:35014** 35B35 (35K55)
- Tetastation, Leigh**  $C^3$  modeling with symmetrical rationality. *Appl. Math. Comput.* 6 (1980), no. 1, 51-61. (Author's summary) **80j:93144** 93E20 (90B99)
- Teslenko, N. M.** (with Lidov, M. L.) Optimization of the solution of some problems of aircraft control by a parameter gradient method. (Russian) *Software for cosmic experiments (Russian)*, pp. 112-141, 278. "Nauka", Moscow, 1978. (Authors' summary) **80c:70032** 70M05 (93C99)
- Teslenko, V. I.** (with Petrov, E. G.) Relaxation in a system of oscillation levels of a harmonic oscillator. (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 1, 128-138. (G. Lassner) **80i:82016** 82A05
- Tessarotto, M.** (with Clemente, R.) On the derivation of the Boltzmann equation from the BBGKY hierarchy. *Transport Theory, Statist. Phys.* 8 (1979), no. 1, 1-16. (Authors' summary) **80c:82001** 82A05 (45K05)
- Tesau, Franz** (with Rosenberger, Gerhard) Über vollständige Automorphismengruppen und Gleichungen in der Modulgruppe. *Czechoslovak Math. J.* 29(104) (1979), no. 2, 192-201. (A. M. Macbeath) **80c:20049** 20F28
- Testa, M.** (with Rossi, G. C.) The structure of Yang-Mills theories in the temporal gauge. I. General formulation. *Nuclear Phys. B* 163 (1980), no. 1-2, 109-132. (Authors' summary) **80k:81109** 81E10
- Testard, D.** Some properties of the representation of the quasilocal observables in statistical mechanics and quantum field theory. (French summary) *Algèbres d'opérateurs et leurs applications en physique mathématique (Proc. Colloq., Marseille, 1977)*, pp. 409-416. *Colloques Internat. CNRS, 274, CNRS, Paris, 1979.* (Etang Chen) **80m:82016** 82A15
- Tetnikov, V. M.** Construction of the front of a shock wave in the three-dimensional piston problem. (Russian) *Dinamika Splošn. Sredy No. 33 Nekotorye Problemy Mat. i Meh.* (1978), 114-133, 172-173. (Author's summary) **80d:76056** 76L05 (76N15)
- (with Ljapidevskii, V. Ju.; Mamontov, E. V.) Problems of non-steady-state gas dynamics. (Russian) *Dinamika Splošn. Sredy No. 38 Nestacionarn. Problemy Gidrodinamiki* (1979), 89-110, 175. (Authors' summary) **80k:76063** 76N15
- Tetenov, A. V.** (with Apanasov, B. N.) The existence of nontrivial quasiconformal deformations of Kleinian groups in space. (Russian) *Dokl. Akad. Nauk SSSR* 239 (1978), no. 1, 14-17. (Lipman Bers) **80c:30023** 30F40 (30C60, 32G15)
- Tetreault, David J.** (with Dupree, Thomas H.) Renormalized dielectric function for collisionless drift wave turbulence. *Phys. Fluids* 21 (1978), no. 3, 425-433. (Authors' summary) **80a:78016** 78A40 (35Q99)
- Tetravasil, M. R.** A theorem of Howson. (Russian. Georgian and English summaries) *Studies in mathematical logic and the theory of algorithms (Russian)*, pp. 25-28. *Tbilis. Univ., Tbilisi, 1978.* (D. L. Johnson) **80d:20016** 20F05
- The problem of conjugacy for groups with one defining relation and the complexity of Turing computations. (Russian. Georgian and English summaries) *Studies in mathematical logic and the theory of algorithms (Russian)*, pp. 29-43. *Tbilis. Univ., Tbilisi, 1978.* (V. N. Remeslennikov) **80d:20038** 20F10 (68C25)
- The problem of conjugacy for a class of groups and the complexity of computations. (Russian. Georgian and English summaries) *Tbilis. Gos. Univ. Inst. Prikl. Mat. Trudy* 5/6 (1978), 250-258. (Author's summary) **80c:68125** 68C25 (20M05)
- Teubner, Eberhard** (with Terlecki, Georg; Grün, Norbert; Scheid, Werner) Classical relativistic trajectory method and application to the K-shell ionisation in U-U collisions. *J. Phys. B* 13 (1980), no. 3, 523-538. (Authors' summary) **80h:81182** 81G35 (81M05)
- Teugels, J. L.** (with Bingham, N. H.) Tauberian theorems and regular variation. *Nieuw Arch. Wisk.* (3) 27 (1979), no. 2, 153-186. (E. Seneta) **80g:40006** 40E05 (26A12, 26A42, 44A15)
- Tery, Isnel** (with Calude, Cristian; Marcus, Solomon) The first example of a recursive function which is not primitive recursive. (French summary) *Historia Math.* 6 (1979), no. 4, 380-384. (Editors) **80i:03053** 03D20 (01A60)
- Tevzadze, V. I.** Uniform convergence of Fourier-Walsh series. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* 92 (1978), no. 2, 301-304. (W. R. Wade) **80g:42020** 42C10
- Tewari, K.** (with Choudhury, S. C.) (NB)-property in near-rings. *Riv. Mat. Univ. Parma* (4) 4 (1978), 29-36 (1979). (Marjory J. Johnson) **80j:16C37** 16A76 (16A21)
- (with Choudhury, D. P.) Tensor purities, cyclic quasiprojectives and cocyclic copurity. *Comm. Algebra* 7 (1979), no. 15, 1559-1572. (B. Stenström) **80j:16018** 16A50 (16A64)
- Tewari, U. B.** (with Parthasarathy, K.) Isometric multipliers of Segal algebras. *Bull. Austral. Math. Soc.* 20 (1979), no. 1, 105-114. (Harald E. Krogstad) **80g:43008** 43A22
- (with Dutta, M.) Continuously translating vector-valued measures. *Trans. Amer. Math. Soc.* 257 (1980), no. 2, 507-519. (R. Anantharaman) **80j:28016** 28B05
- Textor, Wolfgang** A theorem on maximum variance. *Internat. J. Theoret. Phys.* 17 (1978), no. 8, 599-609. (Author's summary) **80c:81028** 81C10 (15A18)
- Textorius, B.** (with Langer, Heinz) A generalization of M. G. Krein's method of directing functionals to linear relations. *Proc. Roy. Soc. Edinburgh Sect. A* 81 (1978), no. 3-4, 237-246. (J. Bognár) **80d:47037** 47B25 (47B50)
- Teyssandier, P.** (with Linet, B.) Point charge in a static, spherically symmetric Brans-Dicke field. *Gen. Relativity Gravitation* 10 (1979), no. 4, 313-319. (Carl Brans) **80c:83031** 83D05
- Thacker, H. B.** (with Wilkinson, David) Inverse scattering transform as an operator method in quantum field theory. *Phys. Rev. D* (3) 19 (1979), no. 12, 3660-3665. (Brian DeFacio) **80i:81054** 81F99 (47A40)
- (with Bergknoff, H.) Structure and solution of the massive Thirring model. *Phys. Rev. D* (3) 19 (1979), no. 12, 3666-3681. (Authors' summary) **80i:81121** 81E99 (53A05, 58F06)
- Thabane, A. B.** Equivalent conditions for some ideals in BCK-algebras. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 1, 51-56. (Leo Esakia) **80a:03087** 03G25 (06D99)
- On complete BCK-algebras. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 1, 123-131. (Leo Esakia) **80a:03088** 03G25 (06D99)
- Remarks on commutative BCK-algebras. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 2, 237-244. (M. Gould) **80c:06018** 06D99 (03G25, 08A05)
- Characterizations of certain ideals in implicative BCK-algebras. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 3, 475-481. (G. H. Wenzel) **80j:03090b** 03G25 (06D99)
- A note on states of von Neumann algebras. (Czech and Russian summaries) *Appl. Mat.* 24 (1979), no. 3, 199-200, iv. (J. W. Bunce) **80j:46102** 46L30
- Decomposition of a von Neumann algebra relative to  $A^*$ -automorphism. *Proc. Edinburgh Math. Soc.* (2) 22 (1979), no. 1, 9-10. (Jun Tomiyama) **80h:46104** 46L10
- Thakare, Nimbakrishna** (with Pethe, P. V.) Applications of Riesz representation theorem in semi-inner product spaces. *Indian J. Pure Appl. Math.* 7 (1976), no. 9, 1024-1031. (Authors' summary) **80d:46042** 46C99 (46B99, 47A15)
- (with Patil, K. R.) New operational formulas and generating functions for Laguerre polynomials. *Indian J. Pure Appl. Math.* 7 (1976), no. 10, 1104-1118. (T. S. Chihara) **80g:33022** 33A65
- (with Pethe, P. V.) Remarks on: "Admissible sets in Banach spaces" (Rev. Roumaine Math. Pures Appl. 18 (1973), 25-31) by C. Franchetti. *J. Indian Math. Soc. (N.S.)* 41 (1977), no. 3-4, 371-373 (1978). (John R. Giles) **80b:46028** 46B20
- (with Khasbardar, Sunanda) Commutativity in a Banach algebra. *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 3, 581-584. (A. M. Sinclair) **80a:46023** 46H05
- (with Pawar, Y. S.) O-distributive semilattices. *Canad. Math. Bull.* 21 (1978), no. 4, 469-481. (T. S. Fofanova) **80f:06002** 06A12
- (with Patil, D. A.) On extreme points of functions of order  $\alpha$  with positive real part and related results. *Indian J. Pure Appl. Math.* 9 (1978), no. 12, 1353-1358. (K. S. Padmanabhan) **80c:30013** 30D50
- (with Phadke, S. V.) Numerical principal and  $p$ -principal points of an operator. *Kyungpook Math. J.* 18 (1978), no. 2, 201-205. (Takayuki Furuta) **80b:47005** 47A10
- (with Khasbardar, Sunanda) TVS via vectorial pseudonorms. *Proc. Nat. Acad. Sci. India Sect. A* 48 (1978), no. 2, 79-84. (T. Husain) **80b:46004** 46A15
- (with Patil, K. R.) Operational formulas for a function defined by a generalized Rodrigues' formula. I. *Proc. Nat. Acad. Sci. India Sect. A* 48 (1978), no. 2, 85-93. (J. P. Singhal) **80k:33013** 33A65
- (with Patil, K. R.) Multilinear generating function for the Konhauser biorthogonal polynomial sets. *SIAM J. Math. Anal.* 9 (1978), no. 5, 921-923. (H. L. Manocha) **80j:33020** 33A65
- (with Patil, D. A.) On coefficient bounds of  $p$ -valent  $\lambda$ -spiral functions of order  $\alpha$ . *Indian J. Pure Appl. Math.* 10 (1979), no. 7, 842-853. (E. P. Merkes) **80k:30017** 30C45

- (with Phadke, S. V.) Generalized inverses and operator equations. *Linear Algebra Appl.* 23 (1979), 191-199. (Charles W. Groetsch) **80b:47017** 47A62 (5A09)
- Thakare, W. K.** (with Patil, D. A.) Radii of convexity of certain classes of  $p$ -valent analytic functions. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 1, 71-84. (W. C. Royster) **80b:30021** 30C45
- Thakur, L. B.** Finite time stability of stochastic control systems. *Indian J. Pure Appl. Math.* 10 (1979), no. 5, 558-566. (Author's summary) **80d:93006** 93E20
- On some properties of stochastic integro-differential equations. *J. Indian Acad. Math.* 1 (1979), no. 1, 18-24. (Arthur C. H. Lee) **80f:60056** 60H20 (45J05)
- Thaler, Maximilian** Ergodic properties of real transformations. *Ergodic theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1978)*, pp. 203-209, *Lecture Notes in Math.*, 729, Springer, Berlin, 1979. (Manfred Denker) **80j:28027** 28D05
- $\sigma$ -endliche invariante Masse für die Engelschen Reihen. *Anz. Österreich. Akad. Wiss. Math.-Natur. Kl.* 116 (1979), no. 2, 46-48. (F. Schweiger) **80j:28028** 28D05 (10K10)
- Thall, Peter F.** (with Ammann, Larry P.) Count distributions, orderliness and invariance of Poisson cluster processes. *J. Appl. Probab.* 16 (1979), no. 2, 261-273. (Walter Warmuth) **80b:60069** 60G55
- Thi' bat Tham** See **Thi' Bat Tham**
- Thieme, Wolfgang** (with Benker, H.; Göpfert, Alfred) Zu einigen Aspekten der Dualitätstheorie in allgemeinen Räumen. *Fortschritte in der mathematischen Optimierung (Tagung, Humboldt Univ., Berlin, 1978)*, pp. 6-24, *Seminarberichte*, 15, Humboldt Univ., Berlin, 1978. (Uwe Zimmermann) **80b:90154** 90C48
- Extrema linearer Funktionale auf Ordnungsintervallen. *Beiträge Anal.* No. 11 (1978), 137-141. (P. K. Subramanian) **80d:46018a** 46A99 (49B27)
- Ein Dualitätssatz für lineare Optimalprobleme auf Ordnungsintervallen. *Beiträge Anal.* No. 11 (1978), 143-150. (P. K. Subramanian) **80d:46018b** 46A99 (49B27)
- Struktureigenschaften linearer Optimalprobleme auf Ordnungsintervallen. *Beiträge Anal.* No. 11 (1978), 151-158. (P. K. Subramanian) **80d:46018c** 46A99 (49B27)
- le cong Thanh** See **Le Cong Thanh**
- vo Thanh Liem** See **Vo Thanh Liem**
- nguyen Thanh Van** See **Nguyen Thanh Van**
- Thi'lyal, P. S.** (with Indu, B. D.; Tiwari, M. D.) Solution of Legendre's and Bessel's equations by Green's function approach. *Acta Cienc. Indica* 4 (1978), no. 4, 417-420. (Authors' summary) **80g:33013** 33A45 (34A40)
- (with Indu, B. D.) Green's functions in nonlinear oscillations. *Internat. J. Math. Ed. Sci. Tech.* 10 (1979), no. 2, 205-209. (E. Leimanis) **80b:34056** 34C15
- Thas, C.** Properties of ruled surfaces in the Euclidean space  $E^n$ . *Bull. Inst. Math. Acad. Sinica* 6 (1978), no. 1, 133-142. (C.-C. Hsiung) **80e:53061** 53C45
- A note on a class of submanifolds of a space form  $R^m(k)$ . *Soochow J. Math.* 4 (1978), 29-38. (Huei-Shyong Lue) **80e:53055** 53C40
- Minimal monosystems. *Yokohama Math. J.* 26 (1978), no. 2, 157-167. (Ju. Burago) **80g:53015** 53B25
- A Gauss map on hypersurfaces of submanifolds in Euclidean spaces. *J. Korean Math. Soc.* 16 (1979/80), no. 1, 17-27. (Y. Katsurada) **80f:53030** 53C40
- Thas, J. A.** Combinatorics of partial geometries and generalized quadrangles. *Higher combinatorics (Proc. NATO Advanced Study Inst., Berlin, 1976)*, pp. 183-199, NATO Adv. Study Inst. Ser., Ser. C: Math. and Phys. Sci., 31, Reidel, Dordrecht, 1977. (Stanley E. Payne) **80b:51012** 51E30 (05B25)
- (with Hirschfeld, J. W. P.; Hubaut, Xavier) Sets of type  $(1, n, q+1)$  in finite projective spaces of even order  $q$ . *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 3, 133-136. (Editors) **80e:05040** 05B25
- (with Debroey, I.) On semipartial geometries. *J. Combin. Theory Ser. A* 25 (1978), no. 3, 242-250. (Author's review [J. A. T.]) **80e:05050** 05B30
- (with Laskar, Renu) On some generalizations of partial geometry. *Graph theory and related topics (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 277-287, Academic Press, New York, 1979. (Francis Buekenhout) **80g:51011** 51E25 (05B25)
- (with De Clerck, F.) Note on the extension of restricted  $(r, \lambda)$ -designs. *Ars Combin.* 7 (1979), 261-263. (R. C. Mullin) **80j:05031** 05B30 (05B05)
- Generalized quadrangles satisfying at least one of the Moufang conditions. *Simon Stevin* 53 (1979), no. 1-2, 151-162. (Stanley E. Payne) **80f:51015** 51E30 (05B25)
- trong tom That** See **Tuong Tom That**
- Thatcher, James W.** (with Wagner, Eric G.; Wright, Jesse B.) Data type specification: parameterization and the power of specification techniques. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 119-132, ACM, New York, 1978. (Authors' summary) **80d:68028** 68B15
- (with Wagner, Eric G.; Wright, Jesse B.) Programming languages as mathematical objects. *Mathematical foundations of computer science, 1978 (Proc. Seventh Symp., Zakopane, 1978)*, pp. 84-101, *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (G. Berry) **80b:68008** 68B10
- Thatcher, R. W.** Controlling the error in the numerical solution of elliptic equations. *J. Inst. Math. Appl.* 22 (1978), no. 4, 443-455. (Author's summary) **80e:65234** 65N30
- Thayne, André** Integer expansions of discrete functions and their use in optimization problems. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979)*, pp. 82-87, IEEE, Long Beach, Calif., 1979. (Author's summary) **80m:94104** 94C10
- Encoding of parallel program schemata by vector addition systems. *Internat. J. Comput. Inform. Sci.* 8 (1979), no. 3, 209-218. (Author's summary) **80e:68064** 68B20
- (with Davio, M.) Algorithms for minimal-length schedules. *Philips J. Res.* 34 (1979), no. 1-2, 26-47. (Authors' summary) **80g:90062** 90B35 (68C15)
- Thedeen, Torbjörn** On the relation between offered, critical and accepted gap distributions. *J. Appl. Probab.* 16 (1979), no. 1, 54-64. (Frank A. Haight) **80b:90066** 90B20
- Theby, Armin** Right alternative algebras and Wedderburn principal theorem. *Proc. Amer. Math. Soc.* 72 (1978), no. 3, 427-435. (Irvine Roy Hentzel) **80m:17001** 17A30 (17C10)
- Thees, Michael** Bewertete Vektorräume und pseudovollständige Körper. *Mitt. Math. Gesellsch. Hamburg* 10, no. 5, 385-389 (1977). (George Bachman) **80k:12036** 12J20 (46P05)
- Thell, Henri** The measurement of inequality by components of income. *Econom. Lett.* 2 (1979), no. 2, 197-199. (Author's summary) **80f:90049** 90A99
- (with Bowman, John P.; Laitinen, Kenneth) New results on rational random behavior. *Econom. Lett.* 2 (1979), no. 3, 201-204. (Authors' summary) **80e:90044** 90A05
- Thels, W. R.** (with Berg, B.; Karowski, M.; Thun, H. J.) Generalized Jost functions and Levinson's theorem in a  $(1+1)$ -dimensional relativistic field-theoretic model. *Phys. Rev. D* (3) 17 (1978), no. 4, 1172-1177. (Anton Z. Capri) **80e:81091** 81F05 (35P25)
- Thelsen, Wilfred** A note on John of Beaumont's version of Euclid's *De visu*. *British J. Hist. Sci.* 11 (1978), no. 38, part 2, 151-155. (A. G. Molland) **80e:01009** 01A35 (01A20)
- pham The Lai** See **Pham The Lai**
- colliot-Thélène, Jean-Louis** See **Colliot-Thélène, Jean-Louis**
- Theldize, D. L.** Parametric identification of linear dynamic systems. (Russian. English and Georgian summaries) *Sobšč. Akad. Nauk Gruzii. SSR* 92 (1978), no. 1, 157-160. (Author's summary) **80d:93030** 93B30
- verloren van Themaat, W. A.** See **Verloren van Themaat, W. A.**
- Theobald, Geneviève** (with Gagnepain, Jean-Jacques) Propagation d'une onde élastique dans un milieu anisotrope perturbé. (English summary) *Rev. CETHEDC* No. 53 (1978), 43-62. (Authors' summary) **80a:73016** 73C50 (35Q99)
- Theocaris, Pericles S.** (with Ioakimidis, Nikolaos I.) Numerical solution of Cauchy type singular integral equations by use of the Lobatto-Jacobi numerical integration rule. (Czech summary) *Apl. Mat.* 23 (1978), no. 6, 439-452. (Frank G. Hagin) **80f:65145** 65R20 (45L10)
- (with Ioakimidis, Nikolaos I.) A curvilinear crack along the interface of two plane isotropic elastic media. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* 23 (1978), no. 4, 563-575. (Authors' summary) **80a:73058** 73M05 (00A89)
- On the singular stress field at a multiwedge corner. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* 23 (1978), no. 5, 673-685. (Author's summary) **80a:73015** 73C45 (00A89)
- (with Ioakimidis, Nikolaos I.) Application of the Gauss, Radau and Lobatto numerical integration rules to the solution of singular integral equations. *Z. Angew. Math. Mech.* 58 (1978), no. 11, 520-522. (J. Sprekels) **80c:65255** 65R20
- (with Ioakimidis, Nikolaos I.) The V-notched elastic half-plane problem. (German summary) *Acta Mech.* 32 (1979), no. 1-3, 125-140. (Authors' summary) **80c:73017** 73C45
- (with Tsamasyphros, G. J.) Numerical solution of systems of singular integral equations with variable coefficients. *Applicable Anal.* 9 (1979), no. 1, 37-52. (Authors' summary) **80f:65148** 65R20 (45L10)
- (with Ioakimidis, Nikolaos I.) A system of curvilinear cracks in an isotropic elastic half-plane. (French summary) *Internat. J. Fracture* 15 (1979), no. 4, 299-309. (F. Erdogan) **80f:73063** 73M05
- (with Ioakimidis, Nikolaos I.) Numerical determination of a class of generalized stress intensity factors. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 7, 949-959. (Petr Procházka) **80f:73016** 73C45 (65R20)
- (with Ioakimidis, Nikolaos I.) A remark on the numerical evaluation of stress intensity factors by the method of singular integral equations. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 11, 1710-1714. (Maria Comninou) **80f:73059** 73M05 (45E05)
- (with Kazantzakis, J. G.) The evaluation of certain two-dimensional singular integrals used in three-dimensional elasticity. *Internat. J. Solids and Structures* 15 (1979), no. 3, 203-207. **80b:73012** 73C99 (45E10)
- (with Ioakimidis, Nikolaos I.) A method of numerical solution of Cauchy-type singular integral equations with generalized kernels and arbitrary complex singularities. *J. Comput. Phys.* 30 (1979), no. 3, 309-323. (J. Sprekels) **80f:65149** 65R20
- (with Chrysakis, A. C.; Ioakimidis, Nikolaos I.) Cauchy-type integrals and integral equations with logarithmic singularities. *J. Engrg. Math.* 13 (1979), no. 1, 63-74. (Editors) **80b:65159** 65R20 (45E05)
- (with Ioakimidis, Nikolaos I.) A remark on the numerical solution of singular integral equations and the determination of stress-intensity factors. *J. Engrg. Math.* 13 (1979), no. 3, 213-222. (Authors' summary) **80c:65140** 65R20
- Experimental study of plane elastic contact problems by the pseudocoustics method. *J. Mech. Phys. Solids* 27 (1979), no. 1, 15-32. (Author's summary) **80b:73055** 73T05 (78A05)
- (with Tsamasyphros, G. J.) A general bi-orthogonality condition: application to plane elasticity problems. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* 24 (1979), no. 2, 241-248. (Clarence M. Ablow) **80e:35020** 35J40 (73C35)
- Erratum: "Stress and displacement singularities near corners" [Z. Angew. Math. Phys. 26 (1975), no. 1, 77-98; MR 53 #15058]. *Z. Angew. Math. Phys.* 30 (1979), no. 4, 728. (Editors) **80f:73009** 73C45
- Theodorakopoulos, Nikos** On the statistical mechanics of a discrete  $q^d$  chain. *J. Phys. A* 12 (1979), no. 8, L211-L214. (Author's summary) **80e:82041** 82A67 (34B25)
- Theodorescu, Radu** (with Hengartner, Walter) ★Einführung in die Monte-Carlo-Methode. Carl Hanser Verlag, Munich-Vienna, 1978. 188 pp. ISBN 3-446-12331-8 (James E. Gentle) **80c:65016** 65C05 (65-01, 68J99)
- (with Herkenrath, Ulrich) On certain aspects of the two-armed bandit problem. (German, Russian and French summaries) *Elektron. Informationsverarb. Kybernet.* 14 (1978), no. 10, 527-535. (K. S. Fu) **80a:93192** 93E20
- (with Herkenrath, Ulrich) General control systems. *Inform. Sci.* 14 (1978), no. 1, 57-73. (Authors' summary) **80b:93004** 93A10 (68D99)
- Theodosopoulos, M.** (with Grecos, A. P.) On the derivation of linearized hydrodynamics from kinetic theory. *Phys. A* 95 (1979), no. 1, 35-68. (Authors' summary) **80c:82034** 82A40
- Théra, Michel** (with Penot, Jean-Paul) Semi-continuité des applications et des multiapplications. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 4, A241-A244. (Authors' summary) **80m:58007** 58C20
- (with Penot, Jean-Paul) Polarité des applications convexes à valeurs vectorielles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 7, A419-A422. (Authors' summary) **80c:46014** 46A99 (49A27)
- Thurmann, W. K.** Gaussian-to-Heisenberg crossover behavior of the specific heat in renormalized perturbation theory. *Phys. Rev. B* (3) 21 (1980), no. 5, 1930-1940. (Author's summary) **80k:82037** 82A25
- Thvenoz-Fosse, Pascale** (with David, René) A method to analyse random testing of sequential circuits. (French and German summaries) *Digital Process.* 4 (1978), no. 34



- 313-332. (Authors' summary) **80g:94093** 94C10 (68D15)  
(with David, René) Design of totally self-checking asynchronous modular circuits. *J. Design Automat. Fault-Tolerant Comput.* 2 (1978), no. 4, 271-287. (Chantal Robach) **80d:94040** 94C99 (68D25)  
(with David, René) Panorama des méthodes de test non déterministes des circuits logiques. (English summary) *RAIRO Automat.* 13 (1979), no. 1, 5-38, ii. (Authors' summary) **80g:94055** 94C99
- Therlis, J.** ★ Concise dictionary of physics and related subjects. Second edition, revised and enlarged. Pergamon Press, Oxford-New York-Toronto, Ont., 1979. ix + 370 pp. ISBN 0-08-023048-2 (Editors) **80h:00002** 00A20
- Thews, Klaus** Multiple solutions for elliptic boundary value problems with odd nonlinearities. *Math. Z.* 163 (1978), no. 2, 163-175. (E. M. Saak) **80d:35064** 35J65 (58E05)
- Thi, Dao Cong** See **Dao Cong Thi**
- Thiagarajan, T. R.** (with Harris, Carl M.) Statistical tests for exponential service from M/G/1 waiting-time data. *Naval Res. Logist. Quart.* 26 (1979), no. 3, 511-520. (Authors' summary) **80g:90056** 90B22 (90B05)
- Thibault, Lionel** Sous-différentiels de fonctions vectorielles compactement lipschitziennes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 21, A995-A998. (Author's summary) **80g:58014** 58C20 (46G05)  
Fonctions compactement lipschitziennes et programmation mathématique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 4, A213-A216. (Jean-Baptiste Hiriart-Urruty) **80i:49029** 49B34 (90C25)  
Subdifferentials of compactly Lipschitzian vector-valued functions. *Travaux Sémin. Anal. Convexe* 8 (1978), no. 1, Exp. No. 5, 54 pp. (Pierre Lorian) **80c:49010** 49A50 (58E15)  
Mathematical programming and optimal control problems defined by compactly Lipschitzian mappings. *Travaux Sémin. Anal. Convexe* 8 (1978), no. 2, exp. no. 10, 58 pp. (L. D. Berkovitz) **80f:49019** 49B27 (46G99)  
Subdifferentiability of compactly Lipschitzian mappings. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978), Section I*, pp. 637-645. *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (Stanley H. Benton, Jr.) **80i:49019** 49A50 (46G05)  
Conditions nécessaires pour des problèmes de contrôle optimal définis par des fonctions compactement lipschitziennes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 2, A133-A136. (Author's summary) **80h:49010** 49B10
- Thie, Paul R.** ★ An introduction to linear programming and game theory. John Wiley & Sons, New York-Chichester-Brisbane, 1979. xiii + 335 pp. ISBN 0-471-04248-X. (C. B. Millham) **80f:90005** 90-01 (90C05)
- Thiébaut, Christine** See **Laurent-Thiébaut, Christine**
- Thielke, Helmut** (with Moldenhauer, Wolfgang) Zur Pivotisierung bei der Auflösung linearer Gleichungssysteme. *Rostock. Math. Kolloq.* No. 12 (1979), 59-63. (Siegfried Filippi) **80h:65030** 65F05
- Thiele, Chr.** (with Fischer, K.) On a distribution free method in discriminant analysis. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 10 (1979), no. 2, 281-289. (Margaret P. Gessaman) **80m:62057** 62H30 (62G99)
- Thiele, Helmut** Gewebe, deren Ternärkörper aus einem Vektorraum hervorgeht. *Mitt. Math. Sem. Gießen* No. 140 (1979), 33-79. (R. Artzy) **80i:51003** 51A15
- Thiele, Rainer** Die Realisierung logischer Funktionen durch optimale baumförmige Netze aus Multiplexer-ULMs. (English and French summaries) *Digital Process.* 5 (1979), no. 3-4, 163-180. (Author's summary) **80m:94105** 94C10
- Thi, Van Thiêm** See **Lê Văn Thiêm**
- Thieme, Horst R.** Asymptotic estimates of the solutions of nonlinear integral equations and asymptotic speeds for the spread of populations. *J. Reine Angew. Math.* 306 (1979), 94-121. (J. M. Cushing) **80g:92033** 92A15 (45M05)  
On a class of Hammerstein integral equations. *Manuscripta Math.* 29 (1979), no. 1, 49-84. (M. Joshi) **80i:45015** 45G10 (47H07)
- Thiep, Nguyen** See **Nguyen Thiep**
- Thierin, G.** On the reverse of a linear program. *Soochow J. Math.* 4 (1978), 1-5. (Author's summary) **80f:90080** 90C05
- Thierry-Mieg, Jean** (with Ne'eman, Yuval) Geometrical gauge theory of ghost and Goldstone fields and of ghost symmetries. *Proc. Nat. Acad. Sci. U.S.A.* 77 (1980), no. 2, part 1, 720-723. (Authors' summary) **80h:81133** 81E99
- Thiers, W.** Quine and the policy of extensionality. *Philos. Stud.* 33 (1978), no. 4, 387-394. (Jerzy Perzanowski) **80c:03006** 03A05
- Thijse, G. Philip A.** On solutions of elliptic differential equations with operator coefficients. *Integral Equations Operator Theory* 1 (1978), no. 4, 567-579. (E. M. Saak) **80d:35140** 35R20 (47A50)  
(with Kabbalo, Winfried) On holomorphic operator function equations. *Integral Equations Operator Theory* 2 (1979), no. 2, 244-263. (P. A. Kučment) **80j:47021** 47A62 (47A55)  
See also **Šubin, M. A.** **80m:46045**
- Thijssen, W. Th. M.** Some new data concerning the publication of *L'homme machine* and *L'homme plus que machine*. *Janus* 64 (1977), 159-177. (Editors) **80a:01017** 01A50
- Thim, Anton** Integrabilität beim geodätischen Fluß. *Beiträge zur Differentialgeometrie, Heft 2*, vii + 98 pp., *Bonner Math. Schriften*, 103, Univ. Bonn, Bonn, 1978. (Wolfgang Ziller) **80j:58060b** 58F17 (53C22, 70H05)
- Thionet, Pierre D.** ★ Quelques problèmes concernant les sondages. *Angewandte Statistik und Ökonometrie*, 9. *Vandenhoeck & Ruprecht, Göttingen*, 1978. 137 pp. ISBN 3-525-11240-8 (M. E. Thompson) **80c:62012** 62D05  
L'échantillonnage sélectif: une revue. (English summary) *Publ. Économétriques* 11 (1978), no. 2, 1-77, 95. (M. E. Thompson) **80h:62014** 62D05
- Thirring, Walter** ★ Lehrbuch der mathematischen Physik. Band 1. Klassische dynamische Systeme. Springer-Verlag, Vienna, 1977. xiii + 255 pp. ISBN 3-211-81430-2 (M. Martinis) **80f:70012** 70G05 (58Fxx, 83C99)  
★ A course in mathematical physics. Vol. I. Classical dynamical systems. Translated from the German by Evans M. Harrell. Springer-Verlag, New York-Vienna, 1978. xii + 258 pp. ISBN 0-387-81496-5 (Vadim Komkov) **80d:70003** 70-02 (58-01, 83-02)  
★ Lehrbuch der mathematischen Physik. Band 2. Klassische Feldtheorie.
- Springer-Verlag, Vienna*, 1978. x + 258 pp. ISBN 3-211-81475-2 (M. Martinis) **80c:78001a** 78-02 (83-02)  
(with Wallner, R.) The use of exterior forms in field theory. *Differential geometrical methods in mathematical physics, II* (Proc. Conf., Univ. Bonn, Bonn, 1977), pp. 171-178. *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (Andrzej Trautman) **80d:83002** 83-02 (53B50, 58A10)  
The use of exterior forms in field theory. *Mathematical problems in theoretical physics* (Proc. Internat. Conf., Univ. Rome, Rome, 1977), pp. 395-402. *Lecture Notes in Phys.*, 80, Springer, Berlin, 1978. (From the text) **80c:81097** 81E99 (58A10)  
★ A course in mathematical physics. Vol. 2. Classical field theory. Translated from the German by Evans M. Harrell. Springer-Verlag, New York-Vienna, 1979. viii + 249 pp. ISBN 0-387-81532-5 (Editors) **80c:78001b** 78-02  
★ Lehrbuch der mathematischen Physik. Band 3. Quantenmechanik von Atomen und Molekülen. Springer-Verlag, Vienna, 1979. x + 263 pp. ISBN 3-211-81538-4 (M. Martinis) **80m:81013** 81B10 (81-02)  
(with Narnhofer, Heide) The taming of the dipole ghost. Symposium on Mathematical Methods in the Theory of Elementary Particles (Liblice, 1978). *Czechoslovak J. Phys. B* 29 (1979), no. 1, 60-67. (T. Sasakawa) **80h:81175** 81G25  
(with Breiteneker, M.) Scattering theory in classical dynamics. *Rio. Nuovo Cimento* (3) 2 (1979), no. 4, 21 pp. (V. D. Košanenko) **80h:70021** 70H99 (47A40, 58F07, 81F99)
- Thirwa, D.** See **Govinda Thirwa, D.**
- Tho, Vo Van** See **Vo Van Tho**
- Thoen, Walter** Zum Satz von Frey und Kelly. *Math. Ann.* 232 (1978), no. 1, 1-14. (H.-B. Brinkmann) **80d:18003** 18A40  
Semitopological functors. I. *J. Pure Appl. Algebra* 15 (1979), no. 1, 53-73. (M. Hušek) **80h:18012a** 18D99 (18A40, 54B30)  
(with Wischnewsky, Manfred B.) Semitopological functors. II. External characterizations. *J. Pure Appl. Algebra* 15 (1979), no. 1, 75-92. (M. Hušek) **80h:18012b** 18D99 (18A40, 54B30)
- Thom, Paul** Aristotle's syllogistic. *Notre Dame J. Formal Logic* 20 (1979), no. 4, 751-759. (Maurice Bergmann) **80h:03004** 03-03 (01A20, 03B20)
- Thom, René** Gradients of analytic functions. *Proceedings of the Seventh National Mathematics Conference* (Dept. Math., Azarabadegan Univ., Tabriz, 1976), pp. 364-371. *Azarabadegan Univ., Tabriz*, 1977. (D. R. J. Chillingworth) **80h:58025** 58C27 (58F25)  
Catastrophe theory and its applications. *Proceedings of the Seventh National Mathematics Conference* (Dept. Math., Azarabadegan Univ., Tabriz, 1976), pp. 372-379. *Azarabadegan Univ., Tabriz*, 1977. (Editors) **80d:58015** 58C28  
Tectonique des plaques et théorie des catastrophes. (English summary) *Journées Singulières de Dijon* (Univ. Dijon, Dijon, 1978), pp. 4, 205-231. *Asérisque*, 59-60, Soc. Math. France, Paris, 1978. (I. Stewart) **80m:58010** 58C28 (73N99)  
Limit sets of leaves of analytic foliations. (Japanese) Special issue on the 100th anniversary of the Mathematical Society of Japan. *Sūgaku* 30 (1978), no. 2, 132-136. (A. Morimoto) **80m:58030** 58F18  
Sur certains aspects qualitatifs de la théorie des équations aux dérivées partielles. *Computing methods in applied sciences and engineering* (Proc. Third Internat. Symp., Versailles, 1977), I, pp. 3-7. *Lecture Notes in Math.*, 704, Springer, Berlin, 1979. (J. S. Joel) **80j:58068** 58G30 (35Bxx, 58-01, 58F14)
- Thoma, M.** (with Doležal, Jaroslav) On the numerical solution of N-player non-zero-sum differential games via Nash solution concept. (Russian summary) *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* 8 (1979), no. 5-6, 371-385. (Authors' summary) **80j:90122** 90D25
- Thomas, Ann M.** (with Anderson, Donald A.) Resolution IV fractional factorial designs for the general asymmetric factorial. *Comm. Statist. A—Theory Methods* 8 (1979), no. 9, 931-943. (J. A. John) **80m:62073** 62K15
- Thomas, Barbara V. Smith** (with Franklin, Stanley P.) A survey of  $k_n$ -spaces. *Proceedings of the 1977 Topology Conference* (Louisiana State Univ., Baton Rouge, La., 1977), I. *Topology Proc.* 2 (1977), no. 1, 111-124 (1978). (W. F. Larmarin) **80h:54044** 54D50 (54D45, 54E35)  
On the coproduct of the topological groups  $Q$  and  $Z_2$ . *Categorical topology* (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978), pp. 371-375. *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (S. N. Hudson) **80h:22001** 22A05  
(with Fay, Temple H.; Ordman, Edward T.) The free topological group over the rationals. *General Topology Appl.* 10 (1979), no. 1, 33-47. (M. I. Kabenjuk) **80c:22001** 22A05
- Thomas, C. B.** Free actions by finite groups on  $S^1$ . *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 1, pp. 125-130. *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (J. A. Schafer) **80h:57075** 57S25  
A classifying space for the contact pseudogroup. *Mathematika* 25 (1978), no. 2, 191-201. (Claude Roger) **80h:57021** 57R32 (53C15, 58H10)  
On 3-manifolds with finite solvable fundamental group. *Invent. Math.* 52 (1979), no. 2, 187-197. (Benny Evans) **80h:57020** 57N10 (57S30)
- Thomas, Daniel** (with Kernevez, Jean-Pierre; Murray, James Dickson; Joly, Ghyslain; Duban, Marie-Claude) Propagation d'onde dans un système à enzyme immobilisée. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 14, A961-A964. (Authors' summary) **80c:92012** 92A09
- Thomas, Donald H.** (with Meyer, W. Weston) Erratum: "Variations on a theme by Schoenberg" [J. Approx. Theory 18 (1976), no. 1, 39-49]. *J. Approx. Theory* 25 (1979), no. 1, 91. (Editors) **80g:41013** 41A15
- Thomas, E. S.** (with Pecelli, G.) Normal modes, uncoupling, and stability for a class of nonlinear oscillators. *Quart. Appl. Math.* 37 (1979/80), no. 3, 281-301. (Richard Cushman) **80h:34053** 34C15 (58F14, 58F22, 58F30, 70K20)
- Thomas, Edward** (with Montgomery, John T.; Sine, Robert) Some topological properties of weakly almost periodic mappings. *Topology Appl.* 11 (1980), no. 1, 69-85. (V. V. Obuhovskii) **80h:54078** 54H20 (47D05)
- Thomas, Emery** (with Rees, Elmer) Smoothings of isolated singularities. *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976),

- Part 2, pp. 111–117, *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978, (John W. Wood) **80c:57021** 57R10 (14B07, 57R90)
- (with Rees, Elmer) Complex cobordism and intersections of projective varieties. *Variétés analytiques compactes (Colloq., Nice, 1977)*, pp. 168–178, *Lecture Notes in Math.*, 683, Springer, Berlin, 1978, (John W. Wood) **80c:57044** 57R90 (14M10)
- Thomas, Erik G. F.** Représentations intégrales dans les cônes convexes conucléaires et applications. *Séminaire Choquet, 17e année (1977/78), Initiation à l'analyse*, Fasc. 1, Exp. No. 9, 12 pp., *Secrétariat Math.*, Paris, 1978, (W. Hackenbroch) **80c:46011** 46A55 (46G99)
- Integral representations in conuclear spaces. *Vector space measures and applications (Proc. Conf., Univ. Dublin, Dublin, 1977)*, II, pp. 172–179, *Lecture Notes in Math.*, 645, Springer, Berlin, 1978, (Robert F. Wheeler) **80a:46010** 46A55
- Thomas, G.** The consistency error of extended variational principles in the finite element method. *Comput. Math. Appl.* 4 (1978), no. 4, 315–324. (Author's summary) **80a:65235** 65N30 (65J05)
- Boundedness and definiteness qualities of a functional equation for nonconforming trial functions. *Comput. Methods Appl. Mech. Engrg.* 15 (1978), no. 3, 335–351. (O. John) **80d:73083** 73K05 (65N30)
- Thomas, H.** (with Büttiker, M.) Stability of nonuniform states in systems exhibiting continuous bifurcation. *Solitons and condensed matter physics (Proc. Sympos. Nonlinear (Soliton) Structure and Dynamics in Condensed Matter, Oxford, 1978)*, pp. 321–325, *Springer Ser. in Solid-State Sci.*, 8, Springer, Berlin, 1978, (D. ter Haar) **80a:82029** 82A25 (58E07)
- (with Büttiker, M.) Hydrodynamic modes, soft modes and fluctuation spectra near the threshold of a current instability. *Z. Phys. B* 33 (1979), no. 3, 275–287. (V. H. Weston) **80c:76058** 76W05 (76B99)
- Thomas, Jean Marie** (with Raviart, Pierre-Arnaud) Dual finite element models for second order elliptic problems. *Energy methods in finite element analysis*, pp. 175–191, Wiley, Chichester, 1979, (P. G. Ciarlet) **80j:65034** 65N30 (35J25)
- Thomas, John B.** (with Tantarantana, Sawad) Truncated sequential probability ratio test. *Inform. Sci.* 13 (1977), no. 3, 283–300. (B. K. Ghosh) **80j:62078** 62L10
- (with Poor, H. Vincent) Memoryless discrete-time detection of a constant signal in  $m$ -dependent noise. *IEEE Trans. Inform. Theory* 25 (1979), no. 1, 54–61. (Seihaku Higuchi) **80d:94002** 94A12
- (with Abrahams, Julia) A note on the characterization of bivariate densities. *SIAM J. Appl. Math.* 37 (1979), no. 2, 433–435. (A. M. Mathai) **80h:62009a** 62E10
- (with Abrahams, Julia) Erratum: "A note on the characterization of bivariate densities with Gaussian marginal densities" (*SIAM J. Appl. Math.* 37 (1979), no. 2, 433–435). *SIAM J. Appl. Math.* 37 (1979), no. 3, 714. (Editors) **80h:62009b** 62E10
- (with Wood, M. D.) Nearly optimal detection of known signals in correlated Gaussian noise. *Inform. Sci.* 20 (1980), no. 1, 13–33. (Authors' summary) **80m:94019** 94A12
- (with Poor, H. Vincent; Mami, M.) On robust detection of discrete-time stochastic signals. *J. Franklin Inst.* 309 (1980), no. 1, 29–53. (Authors' summary) **80m:94017** 94A12
- Thomas, Joseph C.** Homological dimension under change of rings. *Comm. Algebra* 7 (1979), no. 6, 625–640. (B. L. Osofsky) **80j:16031** 16A60
- Thomas, L. C.** (with Osaki, Shunji) An optimal ordering policy for a spare unit with lead time. *European J. Oper. Res.* 2 (1978), no. 6, 409–419. (Andor Dobó) **80a:90055** 90B05
- Thomas, M. P.** Invariant complements to closed invariant subspaces. *Canad. J. Math.* 31 (1979), no. 1, 139–147. (Nicholas P. Jewell) **80c:47009** 47A15 (13F30)
- Thomas, P. D.** (with Lombard, C. K.) Geometric conservation law and its application to flow computations on moving grids. *AIAA J.* 17 (1979), no. 10, 1030–1037. (Authors' summary) **80h:65104** 65P05 (76D05)
- Thomas, R. H. K.** Pairs of convex bodies. *J. London Math. Soc.* (2) 19 (1979), no. 1, 144–146. (P. R. Goodey) **80m:52002** 52A20
- Thomas, R. K.** (with Miles, G.) The breakdown of automorphisms of compact topological groups. *Studies in probability and ergodic theory*, pp. 207–218, *Advances in Math., Suppl. Studies*, 2, Academic Press, New York, 1978, (S. G. Dani) **80c:22007** 22C05 (22D40)
- (with Miles, G.) On the polynomial uniformity of translations of the  $n$ -torus. *Studies in probability and ergodic theory*, pp. 219–229, *Advances in Math., Suppl. Studies*, 2, Academic Press, New York, 1978, (Douglas Lind) **80c:28017** 28D15 (10K99)
- (with Miles, G.) Generalized torus automorphisms are Bernoullian. *Studies in probability and ergodic theory*, pp. 231–249, *Advances in Math., Suppl. Studies*, 2, Academic Press, New York, 1978, (S. G. Dani) **80c:22011** 22D40 (28D05)
- Thomas, William J.** A simple generalization of Turing computability. *Notre Dame J. Formal Logic* 20 (1979), no. 1, 95–102. (A. M. Dawes) **80h:03068** 03D75 (03D10)
- Thomas, Wolfgang** The theory of successor with an extra predicate. *Math. Ann.* 237 (1978), no. 2, 121–132. (G. N. Kobzev) **80b:03054** 03D35 (03B25)
- Star-free regular sets of  $\omega$ -sequences. *Inform. and Control* 42 (1979), no. 2, 148–156. (R. E. Ladner) **80h:68052** 68D45
- Thomas, Yves** (with de Larminat, Philippe) ★Automatique des systèmes linéaires. Tome 1. Signaux et systèmes. *Flammarion Sciences*, Paris, 1975, 333 pp. ISBN 2-257-15011-2 (R. Curtain (Zbl 324:93002)) **80h:93025a** 93B30
- (with de Larminat, Philippe) ★Automatique des systèmes linéaires. Tome 2. Identification. *Flammarion Sciences*, Paris, 1977, 230 pp. ISBN 2-257-15012-0 (R. Curtain (Zbl 324:93002)) **80h:93025b** 93B30
- (with de Larminat, Philippe) ★Automatique des systèmes linéaires. Tome 3. Commande. *Flammarion Sciences*, Paris, 1977, 232 pp. ISBN 2-257-15013-9 (R. Curtain (Zbl 324:93002)) **80h:93025c** 93B30
- Thomason, Andrew** Hamiltonian cycles and uniquely edge colourable graphs. *Advances in graph theory (Cambridge Combinatorial Conf., Trinity College, Cambridge, 1977)*. *Ann. Discrete Math.* 3 (1978), 259–268. (J. Bosák) **80c:05077** 05C45 (05C15)
- (with Bollobás, Béla) Set colourings of graphs. *Discrete Math.* 25 (1979), no. 1, 21–26. (A. J. W. Hilton) **80g:05035** 05C15
- Thomason, Michael G.** (with Maryanski, Fred J.) Properties of stochastic syntax-directed translation schemata. *Internat. J. Comput. Inform. Sci.* 8 (1979), no. 2, 89–110. (Authors' summary) **80c:68209** 68F15 (68D25, 94A15)
- Thomason, Robert W.** (with May, J. P.) The uniqueness of infinite loop space machines. *Topology* 17 (1978), no. 3, 205–224. (J. F. Adams) **80g:55015** 55P42 (55N22, 55P39)
- Uniqueness of delooping machines. *Duke Math. J.* 46 (1979), no. 2, 217–252. (J. F. Adams) **80c:55013** 55P35 (55R35)
- Homotopy colimits in the category of small categories. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 1, 91–109. (Daniel R. Grayson) **80b:18015** 18F25
- (with Latch, Dana May; Wilson, W. Stephen) Simplicial sets from categories. *Math. Z.* 164 (1979), no. 3, 195–214. (John Roy Dennett) **80c:55012** 55P10 (18G30, 55U05)
- Thomason, S. K.** Possible worlds and many truth values. *Studia Logica* 37 (1978), no. 2, 195–204. (John Bacon) **80a:03030** 03B45 (03B50)
- Thomassen, Carsten** Straight line representations of infinite planar graphs. *J. London Math. Soc.* (2) 16 (1977), no. 3, 411–423. (F. Harary) **80i:05039** 05C10
- Hypohamiltonian graphs and digraphs. *Theory and applications of graphs (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976)*, pp. 557–571, *Lecture Notes in Math.*, 642, Springer, Berlin, 1978, (J. A. Bondy) **80c:05079** 05C45 (05C20, 05C38)
- Hamiltonian paths in squares of infinite locally finite blocks. *Advances in graph theory (Cambridge Combinatorial Conf., Trinity College, Cambridge, 1977)*. *Ann. Discrete Math.* 3 (1978), 269–277. (Arthur M. Hobbs) **80c:05078** 05C45
- Reconstructing 1-coherent locally finite trees. *Comment. Math. Helv.* 53 (1978), no. 4, 608–612. (F. Harary) **80h:05040** 05C60
- On separating cycles in graphs. *Discrete Math.* 22 (1978), no. 1, 57–73. (G. Chartrand) **80d:05035** 05C38
- Reconstructibility versus edge reconstructibility of infinite graphs. *Discrete Math.* 24 (1978), no. 2, 231–233. (D. L. Greenwell) **80g:05051** 05C60
- Counterexamples to Faudree and Schelp's conjecture on Hamiltonian-connected graphs. *J. Graph Theory* 2 (1978), no. 4, 341–347. (Ralph Faudree) **80a:05131** 05C38
- (with Hakimi, S. L.; Schmeichel, E. F.) On the number of Hamiltonian cycles in a maximal planar graph. *J. Graph Theory* 3 (1979), no. 4, 365–370. (D. Barnette) **80i:05075** 05C45
- (with Chvátal, V.; Fleischner, H.; Sheehan, J.) Three-regular subgraphs of four-regular graphs. *J. Graph Theory* 3 (1979), no. 4, 371–386. (Ralph Faudree) **80i:05073** 05C99
- Thomée, Vidar** Some interior estimates for semidiscrete Galerkin approximations for parabolic equations. *Math. Comp.* 33 (1979), no. 145, 37–62. (Rolf Rannacher) **80d:65123** 65N30 (65M15)
- (with Brenner, Philip) On rational approximations of semigroups. *SIAM J. Numer. Anal.* 16 (1979), no. 4, 683–694. (G. W. Hedstrom) **80j:47052** 47D05 (41A20)
- Thomson, J. D.** (with Brace, J. W.) Uniform filter convergence and pointwise filter convergence for function spaces. *Illinois J. Math.* 23 (1979), no. 1, 93–100. (J. Dugundji) **80h:46031** 46E10 (54E15)
- Thomlinson, M. M.** (with Outhwaite, C. W.) Numerical study of a modified BBGY integral equation for the primitive model of an electrolyte solution. *Molecular Phys.* 38 (1979), no. 3, 941–942. (Authors' summary) **80c:82031** 82A50
- Thompson, C. D.** (with Bentley, J. L.; Kung, H. T.; Schkolnick, M.) On the average number of maxima in a set of vectors and applications. *J. Assoc. Comput. Mach.* 25 (1978), no. 4, 536–543. (Fabrizio Luccio) **80a:68035** 68C25 (68C05)
- Thompson, C. W.** Dissipations on von Neumann algebras. *Comm. Math. Phys.* 62 (1978), no. 1, 71–78. (Ola Brattelli) **80d:46118** 46L10
- Thompson, Colin J.** (with Hines, D. F.) A one-dimensional random walk with repulsion. *J. Austral. Math. Soc. Ser. B* 20 (1977/78), no. 3, 375–380. (J. Gillis) **80m:60076** 60J15 (82A99)
- ★Mathematical statistical mechanics. Reprinting of the 1972 original. *Princeton University Press, Princeton, N.J.*, 1979. x+278 pp. ISBN 0-691-08219-7, 0-691-08220-0 (Editors) **80h:82001** 82-01
- Thompson, G. L.** (with Deal, K.; Sethi, Suresh P.) A bilinear-quadratic differential game in advertising. *Control theory in mathematical economics (Proc. Third Kingston Conf., Part B, Univ. Rhode Island, Kingston, R.I., 1978)*, pp. 91–109, *Lecture Notes in Pure and Appl. Math.*, 47, Dekker, New York, 1979. (Authors' summary) **80g:90137** 90D40 (90D25)
- Thompson, H. B.** (with Tarafdar, E.) On Ky Fan's minimax principle. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 2, 220–226. (A. A. Fonarev) **80a:47086** 47H05
- Thompson, J. M. T.** An evolution game for a prey-predator ecology. *Bull. Inst. Math. Appl.* 15 (1979), no. 7, 162–167. (Hal Leslie Smith) **80h:92020** 92A17
- Stability predictions through a succession of folds. *Philos. Trans. Roy. Soc. London Ser. A* 292 (1979), no. 1386, 1–23. (D. R. J. Chillingworth) **80m:58011** 58C28 (73H05)
- Thompson, James R.** (with Tapia, Richard A.) ★Nonparametric probability density estimation. *Johns Hopkins Series in the Mathematical Sciences*, 1, *Johns Hopkins University Press, Baltimore, Md.*, 1978. xi+176 pp. ISBN 0-8018-2031-6 (Bradford R. Crain) **80j:62042** 62G05
- (with Byrd, R. H.; Tapia, Richard A.) Optimal smoothing of direct estimates of the power spectrum. *Optimization in statistics. Comm. Statist. B—Simulation Comput.* 7 (1978), no. 4, 335–344. (G. Tusiányi) **80d:62089** 62M15
- Thompson, Joe F.** (with Mastin, C. Wayne) Elliptic systems and numerical transformations. *J. Math. Anal. Appl.* 62 (1978), no. 1, 52–62. (N. D. Kopačevskii) **80i:65134** 65N99
- Thompson, M. E.** (with Godambe, V. P.) Some aspects of the theory of estimating equations. *J. Statist. Plann. Inference* 2 (1978), no. 1, 95–104. (V. P. Bhapkar) **80h:62020** 62F10 (62A20)
- Thompson, Mark** Coercive inequalities for pseudodifferential operators of constant rank. *Ann. Mat. Pura Appl.* (4) 115 (1977), 1–15 (1978). (F. Cardoso) **80a:35121** 35S05 (58G15)
- Thompson, Mary L.** Selection of variables in multiple regression. I. A review and evaluation. *Internat. Statist. Rev.* 46 (1978), no. 1, 1–19. (D. V. Lindley) **80a:62107a** 62J05 (62J07)
- Selection of variables in multiple regression. II. Chosen procedures, computations and examples. (French summary) *Internat. Statist. Rev.* 46 (1978), no. 2, 129–146. (D. V. Lindley) **80a:62107b** 62J05



- Thompson, Maynard** Asymptotic growth and stability in populations with time dependent vital rates. *Math. Biosci.* **42** (1978), no. 3-4, 267-278. (P. D. M. Macdonald) **80b:92042** 92A15
- Information diffusion in populations with immigration. *Inform. Sci.* **17** (1979), no. 2, 113-130. (K. E. Swick) **80i:92021** 92A15
- Thompson, R. C.** See **Thompson, Robert C.**
- Thompson, R. C.** See **Thompson, Russell C.**
- Thompson, Richard A.** (with Gray, F. Gail; Shih, Lionel C. C.) Diagnosis of faults in modular trees. *IEEE Trans. Comput.* **28** (1979), no. 5, 342-353. (Authors' summary) **80g:94101** 94C15 (68E10)
- Thompson, Robert C.** Singular values and diagonal elements of complex symmetric matrices. *Linear Algebra Appl.* **26** (1979), 65-106. (E. Deutsch) **80f:15011** 15A18 (15A42, 15A57)
- Principal minors of complex symmetric and skew matrices. *Linear Algebra Appl.* **28** (1979), 249-255. (C. F. Moppert) **80j:15007** 15A18 (15A42)
- The case of equality in the matrix-valued triangle inequality. *Pacific J. Math.* **82** (1979), no. 1, 279-280. (Marvin Marcus) **80k:15027** 15A45 (15A23)
- The Smith invariants of a matrix sum. *Proc. Amer. Math. Soc.* **78** (1980), no. 2, 162-164. (Thomas H. Foregger) **80i:15014** 15A36 (15A21)
- Thompson, Robin** Corrections to: "The estimation of variance and covariance components with an application when records are subject to culling" (Biometrics **29** (1973), 527-550). *Biometrics* **34** (1978), no. 2, 328-329. (Editors) **80b:62081** 62J05 (62P10)
- Corrections to: "Design of experiments to estimate heritability when observations are available on parents and offspring" (Biometrics **32** (1976), no. 2, 283-304). *Biometrics* **34** (1978), no. 2, 329. (Editors) **80b:62115** 62P10
- Thompson, Russell C.** (with Schmitt, Klaus; Walter, Wolfgang) Existence of solutions of a nonlinear boundary value problem via the method of lines. *Nonlinear Anal.* **2** (1978), no. 5, 519-535. (From the introduction) **80b:65132** 65N40 (35J65)
- Approximate solution of elliptic boundary value problems by systems of ordinary differential equations. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 397-405, Academic Press, New York, 1979. (P. G. Ciarlet) **80j:65036** 65N40
- Thompson, Skip** (with Rodabaugh, D. J.) Adams-type methods with increased ranges of stability. *Comput. Math. Appl.* **4** (1978), no. 4, 349-357. (Authors' summary) **80a:65155** 65L05 (65K05)
- (with Rodabaugh, D. J.) Optimally stable fifth-order integration methods: a numerical approach. *Internat. J. Math. Math. Sci.* **1** (1978), no. 3, 319-334. (Authors' summary) **80a:65156** 65L05
- Thompson, Travis** SQ-closed spaces. *Math. Japon.* **22** (1977/78), no. 4, 491-495. (Author's summary) **80a:54042** 54D30
- Thompson, W. A., Jr.** (with Lee, Larry) Reliability of multiple component systems. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 329-336, Academia, Prague, 1978. (Andor Dobó) **80c:90071** 90B25
- Thomsen, I.** Design and estimation problems when estimating a regression coefficient from survey data. *Metrika* **25** (1978), no. 1, 27-35. (V. P. Godambe) **80a:62019** 62D05
- Thomsen, P. G.** Numerical solution of large systems of ordinary differential equations. *Z. Angew. Math. Mech.* **58** (1978), no. 7, T448-T449. (Editors) **80c:65159** 65L05
- Thomsen, Wolfgang** On a Fabini-type theorem and its application in game theory. (German and French summaries) *Math. Operationsforsch. Statist. Ser. Statist.* **9** (1978), no. 3, 419-423. (Author's summary) **80c:28005** 28A35 (90D25)
- The common domain of uniqueness of the products of finitely additive probability measures. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. C, pp. 311-316, Reidel, Dordrecht, 1979. (E.-A. Weiss, Jr.) **80m:28006** 28A25 (28A35)
- Thomson, B. S.** On weak Vitali covering properties. *Canad. Math. Bull.* **21** (1978), no. 3, 339-345. (D. Preiss) **80m:28004** 28A15
- Thomson, James E.** (with Olin, Robert F.) Lifting the commutant of a subnormal operator. *Canad. J. Math.* **31** (1979), no. 1, 148-156. (R. G. Douglas) **80b:47034** 47B20
- Thomson, Michael W.** (with Gupta, Narain D.; Laffey, Thomas J.) On the higher relation modules of a finite group. *J. Algebra* **59** (1979), no. 1, 172-187. (Louis Solomon) **80b:20012** 20C05 (20F05)
- Representations of certain verbal wreath products by matrices. *Math. Z.* **167** (1979), no. 3, 239-257. (Norman Blackburn) **80g:20043** 20E22 (20G05)
- nguyen-quang-do Thong** See **Nguyen-Quang-Do Thong**
- Thorbjörnsson, Gudlaugur** Nonhyperbolic closed geodesics. *Math. Scand.* **44** (1979), no. 1, 135-148. (Y. Muto) **80i:58022** 58E10 (53C22)
- Thorbjörnsson, Arthur R.** (with Armbruster, Edwin R.) Computer-aided tolerance/correlation design of integrated circuits. *IEEE Trans. Circuits and Systems* **26** (1979), no. 9, 763-767. (Authors' summary) **80h:94063** 94C99
- Thorburn, Daniel** An inventory depletion problem with random and age-dependent lifetimes. *Naval Res. Logist. Quart.* **25** (1978), no. 3, 395-404. (Andor Dobó) **80b:90052** 90B05
- Thorin, Olof** On the infinite divisibility of the lognormal distribution. *Scand. Actuar. J.* **1977**, no. 3, 121-148. (Charles M. Goldie) **80m:60022** 60E07
- An extension of the notion of a generalized  $\Gamma$ -convolution. *Scand. Actuar. J.* **1978**, no. 3, 141-149. (M. J. Goovaerts) **80c:60030** 60E07
- Proof of a conjecture of L. Bondesson concerning infinite divisibility of powers of a gamma variable. *Scand. Actuar. J.* **1978**, no. 3, 151-164. (M. J. Goovaerts) **80c:60031** 60E07
- Thomier, K. K.** Applications of path integrals to problems in dissipation. *Path integrals and their applications in quantum, statistical and solid state physics (Proc. NATO Advanced Study Inst., State Univ. Antwerp, Antwerp, 1977)*, pp. 359-382, NATO Adv. Study Inst. Ser., Ser. B: Physics, 34, Plenum, New York, 1978. (Author's summary) **80c:82047** 82A70 (81C35)
- Thorne, C. J.** (with Morel, J. P.) Solving linear systems of equations. *Information linkage between applied mathematics and industry (Proc. First Annual Workshop, Naval Postgraduate School, Monterey, Calif., 1978)*, pp. 483-499, Academic Press, New York, 1979. (From the text) **80g:65036** 65F10
- Thornett, M. L.** A class of second-order stationary random measures. *Stochastic Process. Appl.* **8** (1978/79), no. 3, 323-334. (Toshio Mori) **80k:60070** 60G57 (42A87)
- Thorpe, Edward O.** The probability that a matrix has a saddle point. *Inform. Sci.* **19** (1979), no. 2, 91-95. (Norbert Schmitz) **80b:90165** 90D05
- Thorpe, Brian** An extension of Cauchy's criterion to Nörlund summability. *Math. Z.* **162** (1978), no. 2, 139-144. (William T. Sledd) **80d:40006** 40G05
- Thorpe, John A.** ★Elementary topics in differential geometry. Undergraduate Texts in Mathematics. Springer-Verlag, New York-Heidelberg, 1979. xiii + 253 pp. ISBN 0-387-90357-7 (Vladislav Goldberg) **80c:53001** 53-01
- Thorup, Anders** (with Jessen, Borge) The algebra of polytopes in affine spaces. *Math. Scand.* **43** (1978), no. 2, 211-240. (G. T. Sallee) **80i:52008** 52A25
- Thouless, D. J.** (with Edwards, J. T.; Licciardello, D. C.) Use of the Lanczos method for finding complete sets of eigenvalues of large sparse symmetric matrices. *J. Inst. Math. Appl.* **23** (1979), no. 3, 277-283. (Authors' summary) **80c:65006** 65F15
- Thouvenot, J.-P.** (with Smorodinsky, Meir) Bernoulli factors that span a transformation. *Israel J. Math.* **32** (1979), no. 1, 39-43. (Douglas Lind) **80d:28037** 28D05
- Thron, W. J.** (with Andima, Susan J.) Order-induced topological properties. *Pacific J. Math.* **75** (1978), no. 2, 297-318. (H. R. Bennett) **80a:54065** 54F99 (54F05)
- (with Jones, William B.) Sequences of meromorphic functions corresponding to a formal Laurent series. *SIAM J. Math. Anal.* **10** (1979), no. 1, 1-17. (A. Edrei) **80f:30029** 30E10 (41A21)
- nguyen van Thu** See **Nguyen Van Thu**
- nguyen thu loan** See **Nguyen Thu Loan**
- Thue, David J.** Two algorithms for shortest paths through multiple criteria networks. *Information linkage between applied mathematics and industry (Proc. First Annual Workshop, Naval Postgraduate School, Monterey, Calif., 1978)*, pp. 567-573, Academic Press, New York, 1979. (From the text) **80j:90064** 90B15 (90C35)
- Thun, H. J.** (with Berg, B.; Karowski, M.; Theis, W. R.) Generalized Jost functions and Levinson's theorem in a (1+1)-dimensional relativistic field-theoretic model. *Phys. Rev. D* **13** (1978), no. 4, 1172-1177. (Anton Z. Capri) **80i:81091** 81F05 (35P25)
- Thüring, Karl-Josef** Direkte Berechnung spezieller Anzahlen in Polynom-Algebra-Theorie. *Math. No. 4* (1978), 161-171. (R. W. Robinson) **80a:05118** 05C30
- Thurston, W. P.** (with Epstein, D. B. A.) Transformation groups and natural bundles. *Proc. London Math. Soc.* **3** (1979), no. 2, 219-236. (R. S. Palais) **80h:58006** 58A20 (58R65)
- Thywe, Karl-Erik** (with Fröman, Nanny) Settling the question of the high-energy behavior of phase shifts produced by repulsive, strongly singular, inverse-power potentials. *J. Math. Phys.* **20** (1979), no. 8, 1716-1719. (W. Wasow) **80g:81063** 81F05 (34E20)
- Thyregod, P.** On Bayes decision rules for symmetric finite populations. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 521-526, Academia, Prague, 1978. (D. V. Lindley) **80b:62015** 62D05 (62C10)
- Tiago de Oliveira, J.** Regression and unbiased regression. *Trabajos Estadist. Investigación Oper.* **29** (1978), no. 3, 97-99. (D. G. Kabe) **80i:62058** 62J02
- Tiao, G. C.** (with Guttman, Irwin) Effect of correlation on the estimation of a mean in the presence of spurious observations. (French summary) *Canad. J. Statist.* **6** (1978), no. 2, 229-247. (Anthony O'Hagan) **80c:62050** 62F35 (62M10)
- Tichtatschke, Rainer** Fehlerschranken bei diskretisierten semi-infiniten linearen Optimierungsaufgaben. *Wiss. Z. Tech. Hochschule Karl-Marx-Stadt* **20** (1978), no. 6, 789-793. (Markku Kallio) **80b:90091** 90C05
- Tichomirov, V. M.** See **Tihomirov, V. M.**
- Tichy, Robert F.** Ein Analogon zum Satz von Koksma in Quaternionen. *Arch. Math. (Basel)* **32** (1979), no. 4, 346-348. (W. J. LeVeque) **80j:10059** 10K05
- Diskrepanz von Ketten. (English summary) *Monatsh. Math. Phys.* **87** (1979), no. 4, 317-324. (Harald Rindler) **80j:10060** 10K05
- Tidten, Michael** Fortsetzungen von  $C^\infty$ -Funktionen, welche auf einer abgeschlossenen Menge in  $\mathbb{R}^n$  definiert sind. (English summary) *Manuscripta Math.* **27** (1979), no. 3, 291-312. (P. T. Church) **80k:58016** 58C25 (26B05, 46E10)
- Tielking, J. P.** Asymmetric bending of annular plates. *Internat. J. Solids and Structures* **16** (1980), no. 4, 361-373. (Author's summary) **80m:73053** 73K10
- Tiemblo, A.** (with de Urries, F. J.; Julve, J.) Nonlinear group realizations and Higgs-like mechanism. (Italian and Russian summaries) *Nuovo Cimento A* **11** (1979), no. 2, 225-240. (Authors' summary) **80d:81053** 81D20
- nguyen zui tien** See **Nguyen Zui Tien**
- vu tien khang, j.** See **Vu Tien Khang, J.**
- Tier, Charles** (with Keller, Joseph B.) A tri-allelic diffusion model with selection. *SIAM J. Appl. Math.* **35** (1978), no. 3, 521-535. (From the summary) **80c:92020** 92A10
- Tierney, John A.** ★Differential equations. *Allyn and Bacon, Inc., Boston, Mass.: London, 1979.* xii + 385 + A18 pp. ISBN 0-205-06167-2 (From the preface) **80f:34001** 34-01
- Tierney, M. F.** See **Cartier, Pierre**, **80m:03111**
- Tiersten, H. F.** (with McCarthy, M. F.) The growth of wave discontinuities in piezoelectric semiconductors. *J. Math. Phys.* **20** (1979), no. 12, 2682-2691. (Peter J. Chen) **80h:73068** 73R05
- Tietäväinen, A.** Some recent results on perfect codes. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 647-655, Colloq. Math. Soc. János Bolyai, 20, North-Holland, Amsterdam, 1979. (J. H. van Lint) **80c:94028** 94B25
- Tietz, Hubert** Charakterisierungen für Hausdorff-Matrizen. *J. Reine Angew. Math.* **301** (1978), 216-220. (Wolfgang Luh) **80f:40004** 40G05 (40C05)
- Tignol, J.-P.** (with Amitsur, S. A.; Rowen, Louis Halle) Division algebras of degree 4 and 8 with involution. *Bull. Amer. Math. Soc. (N.S.)* **1** (1979), no. 4, 691-693. (D. A. Jordan) **80b:16029** 16A45 (16A28)
- Tihomirov, A. S.** (with Guél, N. P.) Algebraic two-dimensional systems of a plane in  $P_n$  and their application in the theory of mappings. (Russian) *Modern geometry (Russian)*, pp. 49-57, Leningrad. Gos. Ped. Inst., Leningrad, 1978. (M. Jecuyer) **80b:51024** 51N35 (14M20)
- (with Skopeč, Z. A.) Mapping of some systems of quadratic manifolds of the space  $P_3$  into the space  $P_0$ . (Russian) *Modern geometry (Russian)*, pp. 94-102, Leningrad. Gos. Ped. Inst., Leningrad, 1978. (R. M. Geidel'man) **80k:14054** 14M12 (14E99)
- Tihomirov, N. A.** (with Čeban, V. G.; Sabodaj, P. F.) Some homogeneous transient

- motions of an incompressible fluid caused by the motion of a piston and by the generation of energy. (Russian) *Bul. Akad. Stiince RSS Moldoven* 1978, no. 3, 27-32, 93. (Authors' summary) **80d:76054** 76L05
- Tihomirov, N. B.** Approximation of continuous functions by interpolation polynomials. (Russian) *The theory of the approximation of functions* (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 365-366, "Nauka", Moscow, 1977. (Editors) **80m:41002** 41A05
- Tihomirov, V. M.** Extremal problems in approximation theory and the diameters of smooth functions. (Russian) *The theory of the approximation of functions* (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 359-365, "Nauka", Moscow, 1977. (Editors) **80m:41010** 41A17
- (with Ioffe, Alexandre D.) ★ *Theorie der Extremalaufgaben*. Translated from the Russian by Bernd Luderer. VEB Deutscher Verlag der Wissenschaften, Berlin, 1979. 399 pp. (Editors) **80d:49001a** 49-02 (46G99)
- (with Ioffe, Alexandre D.) ★ *Theory of extremal problems*. Translated from the Russian by Karol Makowski. Studies in Mathematics and its Applications, 6. North-Holland Publishing Co., Amsterdam-New York, 1979. xii + 460 pp. ISBN 0-444-85167-4 (Editors) **80d:49001b** 49-02 (46G99)
- (with Bulaev, A. P.) Inequalities for derivatives in the multidimensional case. (Russian) *Mat. Zametki* 25 (1979), no. 1, 59-73, 158. (H. Triebel) **80i:49009** 49A29 (26A33, 26D10)
- Tihomov, A. N.** (with Vasil'ev, F. P.) Methods for the solution of ill-posed extremal problems. (Russian) *Mathematical models and numerical methods* (Papers, Fifth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975), pp. 297-342, Banach Center Publ., 3, PWN, Warsaw, 1978. (A. I. Šchiop) **80b:65071** 65J05 (90C99)
- Les problèmes mal posés et les problèmes mathématiques de traitement automatique de résultats d'expériences. *Computing methods in applied sciences and engineering* (Proc. Third Internat. Sympos., Versailles, 1977), 1, pp. 8-20, Lecture Notes in Math., 704, Springer, Berlin, 1979. (M. Z. Nashed) **80m:35072** 35R25 (00A69, 65J99)
- (with Glasko, V. B.; Kulik, N. I.; Škijarov, I. N.) An inverse problem of heat conductivity. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 3, 768-774, 799. (Frederick A. Howes) **80i:80005** 80A20 (65N30)
- See also *Mathematical models and numerical methods*, **80m:65012** and *Aleksandrov, P. S.* **80j:01040**
- Tihomov, N. A.** Determining the characteristic of evaporation. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 18 (1978), no. 6, 1529-1538, 1630. (Author's summary) **80b:76039** 76S05 (35R30)
- A problem of determining the nonlinear coefficient of a differential equation. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* 1979, no. 2, 4-10, 70. (J. Král) **80j:35094** 35R30 (65P05)
- Tijdeman, R.** (with Voorhoeve, M.; Györfy, K.) On the Diophantine equation  $1^k + 2^k + \dots + x^k + R(x) = y^2$ . *Acta Math.* 143 (1979), no. 1-2, 1-8. (E. L. Cohen) **80c:10020** 10B15
- Tijms, H. C.** (with Federgrün, A.; Hordijk, A.) Recurrence conditions in denumerable state Markov decision processes. *Dynamic programming and its applications* (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977), pp. 3-22, Academic Press, New York, 1978. (L. C. Thomas) **80i:90094** 90C40
- (with Federgrün, A.; Hordijk, A.) A note on simultaneous recurrence conditions on a set of denumerable stochastic matrices. *J. Appl. Probab.* 15 (1978), no. 4, 842-847. (Dean Isaacson) **80a:60087** 60J10 (15A51)
- (with Federgrün, A.; Schweitzer, Paul J.) Contraction mappings underlying undiscounted Markov decision problems. *J. Math. Anal. Appl.* 65 (1978), no. 3, 711-730. (S. K. Srinivasan) **80i:90142** 90C40
- Tjjs, S. H.** The structure of the solution sets of zero-sum games. *Third Symposium on Operations Research* (Univ. Mannheim, Mannheim, 1978), Section 4, pp. 301-309, *Operations Research Verfahren*, 34, Hain, Meisenheim, 1979. (Bert Fristedt) **80j:90118** 90D05
- Approximation of infinite linear programs in games with finite subprograms in subgames. *Simon Stevin* 53 (1979), no. 3, 219-229. (H. A. Thurston) **80i:90081** 90C05 (90C50, 90D99)
- Tikhonov, A. N.** See **Tihomov, A. N.**
- Tikhonchuk, Yel** On the diagonalization of the general quadratic Hamiltonian for coupled harmonic oscillators. *J. Math. Phys.* 20 (1979), no. 3, 406-408. (Author's summary) **80d:81022** 81C10
- (with Shalitin, Dan) Transformation between the normal and antinormal expansions of boson operators. *J. Math. Phys.* 20 (1979), no. 8, 1676-1678. (Martin Kummer) **80j:81093** 81H05
- Tikva, M. L.** (with Yip, D. Y. N.) A four-moment approximation based on the  $F$  distribution. *Austral. J. Statist.* 20 (1978), no. 3, 257-261. (Authors' summary) **80j:62020** 62E15
- Linear regression model with censored observations. *Comm. Statist. A—Theory Methods* 7 (1978), no. 13, 1219-1232. (H. Toutenburg) **80d:62052** 62J05
- van Tilburg, Henk** On the existence of a cyclic code with rate  $R$ . *Discrete Math.* 22 (1978), no. 1, 97-98. (Author's summary) **80c:94013** 94B15
- Tilburg, Henk C. A.** (with Baument, Leonard D.; McElice, Robert J.) Symbol synchronization in convolutionally coded systems. *IEEE Trans. Inform. Theory* 25 (1979), no. 3, 362-365. (Sat Narain Gupta) **80j:94027** 94B10
- Tilinaeva, N. I.** See **Tiljaeva, N. I.**
- Tillier, A.** Quelques applications géométriques des algèbres de Jordan. *Publ. Dép. Math. (Lyon)* 14 (1977), no. 3, 59-132. (E. Vinberg) **80c:17018** 17C35 (53C35)
- Les groupes de transsections des espaces symétriques associés à une algèbre de Jordan de forme réelle. *Publ. Dép. Math. (Lyon)* 14 (1977), no. 4, 27-56. (E. Vinberg) **80c:17019** 17C35 (53C35)
- Tiljaeva, N. I.** (with Grin', V. T.; Kraiko, A. N.; Šironosov, V. A.) Analysis of one-dimensional flow stability in a channel with arbitrary variation of stationary flow parameters between the closing shock cross section and channel outlet. *Prikl. Mat. Meh.* 41 (1977), no. 4, 637-645 (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 4, 651-659 (1978). (Authors' summary) **80i:76026** 76L05
- vanderstraeten-Tilquin, Godélieve* See *Vanderstraeten-Tilquin, Godélieve*
- Til, Borge** (with Balachandran, K. R.) Stable and superstable customer policies in queues with balking and priority options. *European J. Oper. Res.* 3 (1979), no. 6, 485-498. (Erol Gelenbe) **80c:90069** 90B22
- Timan, A. F.** (with Vestrid, I. A.) A universality property of Hilbert spaces. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 3, 528-530. (A. Császár) **80c:54039** 54E40 (46C99)
- Timan, M. F.** (with Ponomarenko, V. G.) Behavior near the boundary of the solutions of a boundary value problem and of their derivatives. (Russian) *The theory of the approximation of functions* (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 282-286, "Nauka", Moscow, 1977. (V. Ždanovič (RŽMat 1977:10 B357)) **80i:35045** 35G15
- A property of orthonormal systems that satisfy the S. M. Nikol'skii inequality. (Russian) *The theory of the approximation of functions* (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 356-358, "Nauka", Moscow, 1977. (N. T. Anisimova) **80c:42012** 42C05
- Timbeau, Jean** (with Crumeyrolle, Albert) Quantification des systèmes classiques sur les variétés pseudo-riemanniennes à structure spinorielle. *Proceedings of the Seventh National Mathematics Conference* (Dept. Math., Azarabadegan Univ., Tabriz, 1976), pp. 61-70, Azarabadegan Univ., Tabriz, 1977. (Virgil Obădeanu) **80i:58051** 58F06
- Timčenko, A. A.** (with Hodzickii, A. G.) Synthesis of multiply connected control system by the inverse method. (Russian. English summary) *Avtomatika* 1979, no. 3, 44-52, 93. (Stefan Mirică) **80b:93030** 93B99 (93B17)
- Timischl, Werner** (with Nöbauer, Wilfried) ★ *Mathematische Modelle in der Biologie*. Eine Einführung für Biologen, Mathematiker, Mediziner, und Pharmazeuten. Mathematik für Naturwissenschaftler. Friedr. Vieweg & Sohn, Braunschweig, 1979. vi + 232 pp. ISBN 3-528-03068-2 (S. Levin) **80i:92003** 92A05
- Timmermann, B.** The uniform and the strong topology on realizations of the algebra of polynomials. *Rep. Math. Phys.* 15 (1979), no. 1, 47-55. (J. W. M. Ford) **80m:46061** 46L99
- Timmermann, Horst** Eine inzidenzgeometrische Definition der Mannigfaltigkeiten von Segre. *Mitt. Math. Gesellsch. Hamburg* 10, no. 5, 373-383 (1977). (O.-H. Keller) **80i:14021** 14J99 (14M20)
- Timmermann, Werner** Classification of domains. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics* (Leipzig, 1977), pp. 143-145, Teubner, Leipzig, 1978. (Editors) **80b:47002** 47A05 (47D40)
- Timmesfeld, Franz** (with Solomon, Ronald) A note on tightly embedded subgroups. *Arch. Math. (Basel)* 31 (1978/79), no. 3, 217-223. (Bernd Baumann) **80b:20017** 20D05 (20D25)
- On the structure of 2-local subgroups in finite groups. *Math. Z.* 161 (1978), no. 2, 119-136. (M.ª Jesús Iranzo) **80d:20020** 20D05
- A note on 2-groups of GF(2<sup>n</sup>)-type. *Arch. Math. (Basel)* 32 (1979), no. 2, 101-108. (Gernot Stroth) **80i:20020** 20D15
- Timofeev, A. V.** (with Ginzburg, A. R.) On adaptive stabilization of programmed motions of mechanical systems. *Prikl. Mat. Meh.* 41 (1977), no. 5, 859-869 (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 5, 881-892 (1979). (Valdas Pukas) **80d:93045** 93C99 (70H99)
- Adaptive control of programmed motion of dynamic systems. *Avtomatika* 1978, no. 3, 36-44 (Russian); translated as *Soviet Autom. Control* 11 (1978), no. 3, 30-36. (B. Wittenmark) **80j:93072** 93C40
- Timofeev, Ju. A.** (with Orlova, Natal'ja) On the question of applying the Bubnov-Galerkin method to the analytical investigation of heat transfer processes. (Russian. Lithuanian and English summaries) *Diferencial'nye Uravnenija i Primenenija—Trudy Sem. Protsessy Optimal. Upravlenija I Sekcija No. 22* (1978), 25-36, 75. (Authors' summary) **80c:65236** 65P05 (65N30)
- Application of the Bubnov-Galerkin method to the solution of stationary heat transfer problems in piecewise-homogeneous bodies. (Russian. Lithuanian and English summaries) *Diferencial'nye Uravnenija i Primenenija—Trudy Sem. Protsessy Optimal. Upravlenija I Sekcija No. 22* (1978), 67-74, 77. (Author's summary) **80c:65239** 65P05
- (with Bogaenko, I. N.) Questions on improving the convergence of series in the solution of the Poisson equation. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 10(197), 7-10. (Ju. K. Dem'janovič) **80j:35012** 35C10
- (with Bogaenko, I. N.) Solution of the third boundary value problem for equations of elliptic type I. (Russian) *Diferencial'nye Uravnenija* 15 (1979), no. 3, 545-547, 574. (M. A. Atahodžev) **80i:35043** 35J25
- Timofeev, L. L.** Estimation of the parameters of Gaussian random fields. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 18 (1978), no. 3, 173-181, 217. (M. Arató) **80i:62078** 62M09
- Timofeev, N. M.** (with Usmanov, H. H.) Additive functions and limit theorems in function spaces. (Russian. Tajiki summary) *Izv. Akad. Nauk Tadžik. SSR Otdel. Fiz.-Mat. i Geol.-Him. Nauk* 1978, no. 4(70), 25-33. (D. A. Darling) **80k:10050** 10K20 (60F17)
- Timofeev, V. V.** (with Sidorov, I. M.) Analysis of two-frequency regimes of operations in a stabilization system. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 1, 174-182, 223 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 1, 127-135. (Authors' summary) **80a:93129** 93D05
- Timofeevskaja, O. D.** Taking into account the relative group motion in the charged scalar theory with two sources. (Russian. English summary) *Teoret. Mat. Fiz.* 37 (1978), no. 2, 203-211. (V. V. Sokolov) **80b:81120** 81L05 (58F06)
- Quantization in the neighborhood of the classical solution in nonlinear O(3)-invariant theory. (Russian. English summary) *Teoret. Mat. Fiz.* 37 (1978), no. 3, 326-335. (Wayne J. Holman, III) **80k:81139** 81E99 (22E70)
- Timofeyev, A. V.** See **Timofeev, A. V.**
- Timofeyev, V. V.** See **Timofeev, V. V.**
- Timobov, A. V.** Some fixed-point theorems. (Russian) *Methods of functional analysis in mathematical economics*, pp. 98-110, "Nauka", Moscow, 1978. (Klaus Lommatzsch) **80b:90048** 90A16 (54H25)
- Timohović, V. L.** (with Levin, M. A.)  $M$ -spaces and strong countable compactifiability. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 3, 213-216, 284. (Stojan Nedev) **80c:54032** 54D35 (54E18)
- (with Goldovt, I. Ju.) Saturation of topological spaces and the Morita problem. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1979, no. 1, 34-37, 86. (Roy Dyckhoff) **80m:54040** 54E18



- Timney, Richard M.** (with Rubel, Lee A.) An extremal property of the Bloch space. *Proc. Amer. Math. Soc.* 75 (1979), no. 1, 45–49. (Joel H. Shapiro) **80m:30034** 30D99 (32A10, 46E15)
- Timokova, E. I.** Formal integrals for the restricted, plane, three-body problem. *Astronom. Zh.* 56 (1979), no. 1, 164–172 (Russian); translated as *Soviet Astronom.* 23 (1979), no. 1, 91–94. (D. Schmidt) **80f:70009** 70F07
- Timourian, J. G.** (with Church, P. T.) Maps having 0-dimensional critical set image. *Indiana Univ. Math. J.* 27 (1978), no. 5, 813–831. (M. L. Marx) **80k:57056** 57R45 (with Church, P. T.) Differentiable maps with small critical set or critical set image. *Indiana Univ. Math. J.* 27 (1978), no. 6, 953–971. (K. Lamotte) **80k:57030** 57R45 (58C25, 58C27)
- Timung, Dinh Tin** See Luong Dinh Tin
- Tin, P.** See Balagopal, K. **80b:60129**
- Tisdell, Ralph** (with Bloom, Stephen L.) Algebraic and graph theoretic characterizations of structured flowchart schemes. *Transformations of programmes (Proc. Third Internat. Sympos. Programming, Paris, 1978)*, pp. 57–66. Dunod, Paris, 1978. (Editors) **80a:68014** 68B10 (with Elgot, Calvin C.; Bloom, Stephen L.) On the algebraic structure of rooted trees. *J. Comput. System Sci.* 16 (1978), no. 3, 362–399. (Horst Reichel) **80a:68070** 68E10 (05C05) (with Bauer, Douglas) Graphs with prescribed connectivity and line graph connectivity. *J. Graph Theory* 3 (1979), no. 4, 393–395. (T. Zamfirescu) **80j:05083** 05C40
- Timeo, Antonio R.** (with Rivero Mendoza, Jesús; Manasevich, Raul F.) Asymptotic and oscillatory behavior of third-order differential equations of a certain type. *J. Math. Anal. Appl.* 65 (1978), no. 3, 607–615. (John R. Graef) **80f:34031** 34C10
- Ting, D.** (with Coffmann, E. G., Jr.; Leung, Joseph Y.-T.) Bin-packing problems and their applications in storage and processor allocation. *Computer performance (Proc. Internat. Sympos. Computer Performance Modeling, Measurement and Evaluation, IBM Thomas J. Watson Res. Center, Yorktown Heights, N.Y., 1977)*, pp. 327–339. North-Holland, Amsterdam, 1977. (V. A. Val'kovskii) **80k:05039** 05B40 (68B15, 68C25)
- Ting, Mei Ling** (with Wang, Huai Ch'ian) Homogeneous Banach spaces of locally integrable functions. *Nanta Math.* 12 (1979), no. 1, 62–70. (Hans G. Feichtinger) **80i:43004** 43A15 (46E30)
- Timco, E. N.** (with Johnson, F. T.; Lu, P.; Epton, M. A.) Three-dimensional flow over wings with leading-edge vortex separation. *AIAA J.* 18 (1980), no. 4, 367–380. (Authors' summary) **80m:76029** 76C05 (76B05)
- Titner, Gerhard** (with Gómez, Guillermo L.) Application of diffusion processes to the planning of economic development. (Spanish) *Bol. Mat.* 11 (1977), no. 4–6, 209–241. **80d:90026** 90A16
- Tipler, Frank J.** General relativity and conjugate ordinary differential equations. *J. Differential Equations* 30 (1978), no. 2, 165–174. (Vadim Komkov) **80d:83018** 83C05 (34C10) Singularities and causality violation. *Gen. Relativity Gravitation* 10 (1979), no. 12, 983–984. (George S. Whiston) **80j:83028** 83D05 (83F05) What is a black hole? *Gen. Relativity Gravitation* 10 (1979), no. 12, 1063–1064. (J. G. Taylor) **80k:83038** 83C99 Existence of closed timelike geodesics in Lorentz spaces. *Proc. Amer. Math. Soc.* 76 (1979), no. 1, 145–147. (Mauro Francaviglia) **80i:83016** 83C15 (53C50)
- Tiplicky, M. G.** See Teplický, M. G.
- Tirani, Romeo** A statistical method for error estimation in approximate integration formulas. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* 26 (1977), no. 1, 205–213 (1978). **80c:65051** 65D30
- Tirapegui, E.** (with Langouche, F.; Roekaerts, D.) Functional integral methods for random fields. *Stochastic processes in nonequilibrium systems (Lectures, Fifth Sitges Internat. School Statist. Mech., Sitges, 1978)*, pp. 316–329. *Lecture Notes in Phys.* 84, Springer, Berlin, 1978. (G. Papanicolaou) **80g:82011** 82A05 (60H10, 81C30) (with Langouche, F.) Summing up perturbation theory in a solvable nonrenormalizable model. *Lett. Nuovo Cimento* (2) 22 (1978), no. 10, 403–409. (From the text) **80a:81006** 81E15 (47A55) (with Langouche, F.; Roekaerts, D.) Higher-order corrections through functional integrals to the WKB approximation in curved spaces. *Lett. Nuovo Cimento* (2) 25 (1979), no. 10, 307–313. (M. J. Goovaerts) **80j:81021** 81C12 (58D30, 58G25) (with Langouche, F.; Roekaerts, D.) Functional integral methods for stochastic fields. *Phys. A* 95 (1979), no. 2, 252–274. (Authors' summary) **80k:82006** 82A05 (with Langouche, F.; Roekaerts, D.) Discretization problems of functional integrals in phase space. *Phys. Rev. D* (3) 20 (1979), no. 2, 419–432. (L. L. Lee) **80k:81033** 81C30 (28C20) (with Langouche, F.; Roekaerts, D.) Perturbation expansions through functional integrals for nonlinear systems. *Phys. Rev. D* (3) 20 (1979), no. 2, 433–438. (M. J. Goovaerts) **80j:81021** 81C35 (with Langouche, F.; Roekaerts, D.) On the perturbation expansion for the Fokker-Planck dynamics. *Progr. Theoret. Phys.* 61 (1979), no. 6, 1617–1628. (Koichiro Matsuno) **80k:82006** 82A05 (with Langouche, F.; Roekaerts, D.) Short derivation of Feynman Lagrangian for general diffusion processes. *J. Phys. A* 13 (1980), no. 2, 449–452. (Authors' summary) **80i:82015** 82A05 (81C35)
- Tiraps, Yupsorn** Factorizable transformation semigroups. *Semigroup Forum* 18 (1979), no. 1, 15–19. (William R. Nico) **80j:20072** 20M20
- Tiruel, Gino** On locally compact paracompact spaces. (Italian summary) *Rend. Istit. Mat. Univ. Trieste* 10 (1978), no. 1–2, 128–132 (1979). (James C. Smith) **80e:54028** 54D30
- Tikhonko, A. V.** Strongly semisimple semigroups with minimality conditions. (Russian) Algebras and modules. *Mat. Issled.* No. 48 (1978), 112–122. (V. K. Drbohlav) **80c:20047** 20M11 Semisimple semigroups with minimality conditions. (Russian) Algebras and modules. *Mat. Issled.* No. 48 (1978), 123–133. (V. K. Drbohlav) **80c:20048** 20M11
- Thack, Thomas** 2-Gruppen mit kleinen selbststanzialisierenden Untergruppen. *Comm. Algebra* 7 (1979), no. 8, 833–844. (Gernot Stroth) **80f:20021** 20D15
- Thatcher, David** (with Golubitsky, Martin) A survey on the singularities and stability of differential forms. *Journées Singulières de Dijon (Univ. Dijon, Dijon, 1978)*, pp. 3, 43–82, Astérisque, 59–60, Soc. Math. France, Paris, 1978. (Robert Roussarie) **80m:58001** 58A10 (34C05, 58C27)
- Tikhayevskiy, S.** (with Polak, Elijah; Klessig, R.) A comparative study of several general convergence conditions for algorithms modeled by point-to-set maps. Point-to-set maps and mathematical programming. *Math. Programming Stud.* No. 10 (1979), 172–190. (John J. Dinkel) **80c:90140** 90C30
- Tihina, L. V.** (with Levickii, I. A.) Application of variational methods for the approximate construction of the Green function in problems of bending of plates. (Russian) *Prikl. Meh.* 14 (1978), no. 7, 128–131, 144. (Authors' summary) **80c:73040** 73K10 (49Bxx)
- Tikhin, V. F.** (with Gasilov, V. A.; Goloviznin, V. M.; Taran, M. D.; Turina, N. N.; Favorskii, A. P.; Šalkov, M. Ju.) Application of Newton's method for the solution of difference equations in hydrodynamics. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 100* (1978), 41 pp. (Authors' summary) **80b:76007** 76D05 (65P05) (with Bogdanova, M. S.; Kučerov, A. B.; Nikolaev, E. S.; Taran, M. D.; Favorskii, A. P.; Šapošnikova, S. A.; Šalkov, M. Ju.) Some implicit iteration methods. Analysis and comparison. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 115* (1978), 35 pp. (Authors' summary) **80c:65117** 65J05 (with Koršija, T. K.; Favorskii, A. P.; Šalkov, M. Ju.) A variational approach to the construction of difference schemes for the heat equation on curvilinear grids. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 1* (1979), 60 pp. (Authors' summary) **80c:65091** 65N05 (80A10) (with Favorskii, A. P.; Šalkov, M. Ju.) Variational-difference schemes for the heat equation on nonregular networks. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 6, 1342–1346. (From the text) **80m:65086** 65P05
- Tissot, J. M.** (with Miannay, D.; Le Poac, P.; Royer, J.) Approches de l'intégrale de Rice. *Ann. École Nat. Sup. Méc. Nantes* 1978, 93–107. (Authors' conclusion) **80b:73054** 73M05
- Titik, Nicolae** Certain locally convex topologies on tensor product spaces. (Romanian. French summary) *Bul. Univ. Braşov Ser. C* 19 (1977), 99–103 (1978). (Author's summary) **80j:46111** 46M05 On a class of  $I_0$  operators. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 2, 255–258. (F. P. Vass) **80g:47027** 47B10
- Titarenko, V. V.** Asymptotic investigations of some self-similar interactions of shock waves. (Russian) *Numerical methods and programming*, No. 1 (Russian), pp. 60–72, 197. Saratov. Gos. Univ., Saratov, 1977. (Author's summary) **80f:76034** 76L05
- Titenkii, M. N.** An iteration method for solving parabolic equations. (Russian) *Numerical methods and programming*, No. 1 (Russian), pp. 41–52, 196. Saratov. Gos. Univ., Saratov, 1977. (K. Moszyński) **80j:34082** 34G20 (65L05, 65N20)
- Titli, André** (with Hassan, Mohamed F.; Singh, Madan G.) Near optimal decentralised control with a pre-specified degree of stability. *Automatica—J. IFAC* 15 (1979), no. 4, 483–488. (Edward J. Davison) **80g:93063** 93D05
- Titov, N. P.** Graph-scheme of the coherence problem. (Russian) *Theory of semigroups and its applications*, No. 4 (Russian), pp. 75–88, 127. Saratov. Gos. Univ., Saratov, 1978. (A. Preller) **80j:18010** 18D99
- Titov, O. V.** Existence theorems for the solution of self-similar boundary value problems of hypersonic viscous shock layer. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 3, 701–707, 798. (Author's summary) **80c:76032** 76K05 (65P05)
- Titov, S. S.** Solution of periodic Cauchy problems using special trigonometric series. (Russian) *Čisl. Metody Meh. Splōin. Sredy* 9 (1978), no. 2, 112–124. (E. L. Albasiny) **80i:65100** 65M99 Expansion of the solutions of nonlinear equations into double series. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 10, 1844–1850, 1918. (Author's summary) **80d:35023** 35C10 (35G20) Convergence of the logarithmic series for an axially symmetric double wave in the neighborhood of a quiescent region. (Russian) *Trudy Inst. Mat. i Meh. Ural. Nauch. Centr Akad. Nauk SSSR No. 25 Metody Resheniya Krayevykh Zadach Meh. Splōin. Sredy* (1978), 67–77, 80. (Author's summary) **80c:76029** 76N15 (35C99)
- Titres, Yvon** (with Staroswiecki, Marcel) Modelling of a system by local models with topological methods. (Russian summary) *Systems Sci.* 4 (1978), no. 2, 111–128. (B. L. Ovsienko) **80a:93157** 93E10 (90D40)
- Tits, Jacques** Groupes de Whitehead de groupes algébriques simples sur un corps (d'après V. P. Platonov et al.). *Séminaire Bourbaki, 29e année (1976/77)*, Exp. No. 505, pp. 218–236. *Lecture Notes in Math.*, 677, Springer, Berlin, 1978. (J. S. Joel) **80d:12000** 12A60 (16A40, 20G25) Reductive groups over local fields. *Automorphic forms, representations and L-functions (Proc. Sympos. Pure Math., Oregon State Univ., Corvallis, Ore., 1977)*, Part 1, pp. 29–69. *Proc. Sympos. Pure Math.*, XXXIII, Amer. Math. Soc., Providence, R.I., 1979. (From the text) **80c:20064** 20G25 (20G10)
- Titush, M. F.** (with Zarubin, A. G.) Some problems of mechanics with discontinuous boundary conditions and a nonsmooth boundary. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 9, 1632–1637, 1723. (Authors' summary) **80c:35093** 35Q20
- Tluryn, Jerzy** Fixed-points and algebras with infinitely long expressions. I. Regular algebras. *Fund. Inform.* (4) 2 (1978), no. 1, 103–127. (Author's summary) **80a:68049** 68C99 (08A30, 68F05) Some results on the decomposition of finite automata. *Inform. and Control* 38 (1978), no. 3, 288–297. (Jerzy W. Grzymala-Busse) **80c:68062** 68D30 (68D37)
- Tiwari, A. K.** The delta functional and the change of variable. *Math. Student* 45 (1977), no. 1, 55–59 (1978). (From the introduction) **80d:46072** 46F10 Pseudofunctions and singular products of distributions. *Indian J. Pure Appl. Math.* 10 (1979), no. 9, 1082–1091. (Reinhard Mennicken) **80j:46068** 46F10 On spaces of type  $LH_{\infty}$  and their Laplace-Hankel transformations. *Indian J. Pure Appl. Math.* 10 (1979), no. 12, 1532–1542. (B. R. Honsele) **80m:44007** 44A10 Singular products of distributions. *Math. Ann.* 240 (1979), no. 1, 39–40. (S. Łojasiewicz) **80i:46036** 46F10
- Tiwari, M. D.** (with Thapliyal, P. S.; Indu, B. D.) Solution of Legendre's and Bessel's equations by Green's function approach. *Acta Clev. Indica* 4 (1978), no. 4, 417–420. (Authors' summary) **80g:33013** 33A45 (34A40)
- Tiwari, Ramji** (with Rao, P. P.) A class of static Weyl solutions for the Brans-Dicke Maxwell fields. *Acta Phys. Acad. Sci. Hungar.* 45 (1978), no. 4, 285–291 (1979). (Steve Kloster) **80f:83028** 83C50

- (with Srivastava, Virender Kumar) Efficiency of two-stage and three-stage least squares estimators. *Econometrica* 46 (1978), no. 6, 1495-1498. (H. Neudecker) 80a:62050 62J05 (62P20)
- A class of nonstatic cylindrically symmetric coupled zero-mass and electromagnetic fields. *Indian J. Pure Appl. Math.* 10 (1979), no. 3, 339-346. (Author's summary) 80a:83008 83C05 (53B50, 78A25)
- (with Bhamra, K. S.) Cosmological solutions for the metric representing null radiation. *Indian J. Pure Appl. Math.* 10 (1979), no. 5, 543-548. (Authors' summary) 80a:83066 83D05 (53B20)
- Tiwarei, S. On the theory of transforms associated with eigenvectors. III. *J. Indian Inst. Sci.* 60 (1978), no. 10, 207-223. (Alexander Alenicyan) 80i:34037 34B25
- On eigenvectors of a matrix differential operator. *Math. Ed. (Siwan)* 12 (1978), no. 3, A51-A61. (E. Müller-Pfeiffer) 80a:34027 34B25
- Tiwari, A. K. (with Paramhans, S. A.) On closures of submodules. *Indian J. Pure Appl. Math.* 8 (1977), no. 11, 1415-1419. (Authors' introduction) 80i:16041 16A54 (16A62)
- semenov-Tjan-Sankii, M. A. See Semenov-Tjan-Sankii, M. A.
- Tjajukhin, A. I. (with Aščepkov, L. T.; Novosel'skii, A. V.) An attempt at numerical identification of dynamical systems. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 118-129, 315-316. *Irkutsk. Gos. Univ., Irkutsk*, 1976. (Authors' summary) 80j:93037 93B30
- Tjornehoim, Dag Multiplicity theory for random fields using quantum mechanical methods. *Probability theory on vector spaces (Proc. Conf., Trzebiezowice, 1977)*, pp. 257-274. *Lecture Notes in Math.*, 656, Springer, Berlin, 1978. (V. S. Mandrekar) 80b:60051 60G12 (81C99)
- A measure of association for spatial variables. *Biometrika* 65 (1978), no. 1, 109-114. (Z. Sidák) 80a:62083 62H20 (62G99)
- Tjukavkin, L. V. Commutative semirings with flat modules. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 5, 60-62. (Günter Pilz) 80a:16054 16A78
- Tjulina, I. A. See History and methodology of the natural sciences, 80d:01002
- Tjupita, V. I. (with Kigel', V. R.) Closure of the set of effective plans for some classes of multicriteria problems. (Russian. English summary) *Issled. Operacii i ASU* No. 13 (1979), 67-74, 134. (I. Maruyaci) 80j:90102 90C31
- Tjonehoim, A. N. On the question of determining the carrying ability of piles. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1978, no. 1, 47-53, 92. (Author's summary) 80a:73057 73K99 (34C99)
- Tjurikov, E. V. A Hilbert nonlinear boundary value problem for quasilinear elliptic systems. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 5, 1068-1072. (S. G. Samko) 80a:35039 35J65 (35E25)
- Tjuria, S. A. The classification of deformations of a special Lie algebra of Cartan type. (Russian) *Mat. Zametki* 24 (1978), no. 6, 847-857, 894. (W. T. van Est) 80b:17010 17B65 (17B70)
- Tjuria, V. M. Invertibility of linear difference operators with almost periodic coefficients in a space of bounded sequences. (Russian) *Proceedings of a Seminar on Differential Equations*, No. 3 (Russian), pp. 115-118, 150, Kuibyshev. Gos. Univ., Kuibyshev, 1977. (Author's summary) 80a:47035 47B39 (39A12)
- Invertibility of the operator  $d/dt - A(t)$  in some function spaces. (Russian) *Mat. Zametki* 25 (1979), no. 4, 585-590, 637. (A. A. Skalikov) 80j:47049 47B38 (47E05)
- Tjurma, N. N. (with Gasilov, V. A.; Golovizin, V. M.; Taran, M. D.; Tikhin, V. F.; Favorukii, A. P.; Šatkov, M. Ju.) Application of Newton's method for the solution of difference equations in hydrodynamics. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 100* (1978), 41 pp. (Authors' summary) 80b:76007 76D05 (65P05)
- Tkačenko, A. I. See Tkačenko, O. I.
- Tkačenko, M. G. The behavior of cardinal invariants under the union operation for a chain of spaces. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 4, 50-58. (Aleksander Błaszczyk) 80j:54003 54A25
- Bicomponents that are representable as the union of a countable number of left subspaces. I, II. (Russian. English summary) *Comment. Math. Univ. Carolin.* 20 (1979), no. 2, 361-379, 381-395. (V. V. Miškin) 80a:54029 54D30 (54D55)
- See also Simon, Petr, 80m:54008
- Tkačenko, N. E. (with Kil'čevskii, M. O.; Kil'činskaja, G. A.) ★ Аналитическая механика непрерывных систем. (Russian) [Analytical mechanics of continuous systems] "Naukova Dumka", Kiev, 1979. 188 pp. (Editors' description) 80f:70002 70-02 (49A99)
- Tkačenko, O. I. The possibility of decreasing round-off errors in the computation of the parameters of motion. (Russian) Optimization of computations (the solution of equations, numerical integration, statistical data processing). *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 40* (1977), 14-19. 80d:65051 65G05
- Identification of the state of a linear nonstationary system with one immeasurable coordinate. (Russian. English summary) *Avtomatika* 1979, no. 3, 30-34, 93. (Author's summary) 80c:93050 93B30
- Some possibilities for the reduction of round-off errors in the integration of ordinary differential equations. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 1, 245-248, 272. (Author's summary) 80c:65103 65G05 (65L99)
- Tkačenko, V. A. Operators that commute with generalized integration in spaces of analytic functionals. (Russian) *Mat. Zametki* 25 (1979), no. 2, 271-282, 318. (M. I. Nagibida) 80d:47054 47B38
- Tkačenko, V. O. The stability of spiral magnetohydrodynamic oscillations of a plasma of finite conductivity. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 19* (1978), 16 pp. (From the summary) 80c:78024 78A55
- Tkacz, M. (with Grochulski, J.; Konik, Tadeusz) On some relations of tangency of arcs in metric spaces. *Demonstratio Math.* 11 (1978), no. 3, 567-582. (V. P. Soltan) 80i:51023 51K05 (53C75)
- Tkalic, A. P. (with Sevel'ov, A. G.) Analysis of the possibility of solving the problem of analytic construction of regulators for nonlinear systems. (Russian) *Adapt. Sistemy Avtomat. Upravlenija* No. 7 (1979), 116-119, 131. (I. Muntean) 80j:93055 93C10
- Tkalic, E. F. (with Kudin, G. I.) The investigation of nonlinear control systems by the averaging method. (Russian. English summary) *Vyčisl. Prikl. Mat. (Kiev)* No. 38 (1979), 106-111, 166. (Authors' summary) 80c:93091 93C99
- Tkalic, V. S. (with Zaplatnii, V. I.) A variational principle for one-dimensional dissipative systems. (Russian) *Asymptotic methods in systems theory (Russian)*, pp. 147-154. *Irkutsk. Gos. Univ., Irkutsk*, 1977. (Editors) 80m:70024 70H99 (49H05)
- Tkebnava, G. E. On the order of the growth of powers of lacunary algebraic basis in the space  $C^m(I^d)$ . (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astron. Phys.* 26 (1978), no. 9-10, 805-807. (D. E. Wulbert) 80c:41003 41A10
- Tkmaladze, N. T. (with Kikvidze, Z. A.) A method of weighting elements of a fuzzy set. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* 91 (1979), no. 2, 317-320. (Authors' summary) 80m:94122 94D05
- hoang kuok Toan See Hoang Kuok Toan
- nguen ky Toan See Nguen Kuok Toan
- nguyen ky Toan See Nguyen Ky Toan
- Tobias, T. Kuhn-Tucker conditions for the two-phase stochastic programming problem with integral constraints. (Russian. Estonian and English summaries) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* 27 (1978), no. 1, 3-8. (I. V. Evstigneev) 80c:90118 90C15
- Lagrange multipliers in linear multistage stochastic programming problems. (Estonian and Russian summaries) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* 28 (1979), no. 2, 97-100. (I. M. Stancu-Minasian) 80b:90115 90C15
- Tobiska, Lutz Asymptotische Lösung singular gestörter Probleme. *Elliptische Differentialgleichungen (Meeting, Rostock, 1977)*, pp. 231-236. *Wilhelm-Pieck-Unt., Rostock*, 1978. (Piero de Mottoni) 80b:35010 35B25 (35C20)
- Tod, K. P. (with Newman, Ezra T.; Porter, John R.) Twistor surfaces and right-flat spaces. *Gen. Relativity Gravitation* 9 (1978), no. 12, 1129-1142. (R. Behari) 80a:83021 83C20 (32L05, 53C55)
- (with Hansen, R. O.; Newman, Ezra T.; Penrose, R.) The metric and curvature properties of  $\mathcal{K}$ -space. *Proc. Roy. Soc. London Ser. A* 363 (1978), no. 1715, 445-468. (C. T. J. Dodson) 80b:83017 83C30 (53C50)
- Toda, Mitsuhiro (with Patel, Rajnikant) Performance bounds for continuous-time filters in the presence of modeling errors. *IEEE Trans. Aerospace Electron. Systems* 14 (1978), no. 6, 912-919. (J. P. Babary) 80b:93151 93E11
- (with Patel, Rajnikant) Trace inequalities involving Hermitian matrices. *Linear Algebra Appl.* 23 (1979), 13-20. (B. Levinger) 80b:15028 15A45
- Toda, Morikazu A question about the localized mode due to a light impurity. *Stochastic behavior in classical and quantum Hamiltonian systems (Volta Memorial Conf., Como, 1977)*, pp. 145-150. *Lecture Notes in Phys.*, 93, Springer, Berlin, 1979. (T. K. Caughey) 80b:82073 82A67
- Solitons and heat conduction. Special issue on solitons in physics. *Phys. Scripta* 20 (1979), no. 3-4, 424-430. (Author's summary) 80g:80004 80A20 (82A67)
- Todd, Michael J. Solving the generalized market area problem. *Management Sci.* 24 (1977/78), no. 14, 1549-1554. (John J. Dinkel) 80a:90129 90C30 (90B05)
- (with Saigal, R.) Efficient acceleration techniques for fixed point algorithms. *SIAM J. Numer. Anal.* 15 (1978), no. 5, 997-1007. (Authors' summary) 80c:65013 65B99 (54H25, 90C48)
- A note on computing equilibria in economies with activity analysis models of production. *J. Math. Econom.* 6 (1979), no. 2, 135-144. (Mamoru Kaneko) 80g:90022 90A14 (90C50)
- Todorović, S. On a property of partially ordered sets. *Publ. Inst. Math. (Beograd) (N.S.)* 23(37) (1978), 207-212. (Jacques Lévy-Bruhl) 80a:05075 05C05 (06A10)
- Todorov, I. T. (with Minčev, M. C.; Petkova, V. B.) ★ Conformal invariance in quantum field theory. *Scuola Normale Superiore Pisa, Pisa*, 1978. vi + 273 pp. (Charles L. Hammer) 80f:81061 81E05 (32A25)
- (with Tagirov, E. A.) A geometric approach to the solution of conformal invariant nonlinear field equations. *Acta Phys. Austriaca* 51 (1979), no. 2, 135-154. (Jules Beckers) 80j:81039 81D25 (53C10, 58G35)
- Todorov, Katscho Die  $\mathcal{Q}$ -Klassen der endlichen symmetrischen Halbgruppen und ihre Mächtigkeiten. *Semigroup Forum* 17 (1979), no. 4, 387-388. (J. B. Kim) 80c:20081 20M20 (05A19)
- Inverse elements and their average number in a finite symmetric semigroup. *Semigroup Forum* 18 (1979), no. 3, 279-281. (Eckehart Hotzel) 80m:20050 20M20
- Todorov, Todor Stefanov (with Pavlov, R.) Algebras of unbounded operators and their application in relativistic quantum field theory. (Bulgarian. English summary) *Annuaire Univ. Sofia Fac. Phys.* 66 (1974/75), 53-56 (1978). (Authors' summary) 80c:81014 81C10 (47D40)
- An irreducibility criterion for operator algebras in a Hilbert space. (Bulgarian. Russian and English summaries) *Godišnik Viss. Učebn. Zaved. Priložna Mat.* 12 (1976), no. 2, 157-162 (1978). (Author's summary) 80a:46030 46K10 (47D25)
- An algorithm describing all pairs  $(L, R)$  of factors in the decomposition  $P = LR$  for a class of infinite numerical matrices. (Bulgarian. Russian and English summaries) *Godišnik Viss. Učebn. Zaved. Priložna Mat.* 12 (1976), no. 3, 173-184 (1978). (Author's summary) 80c:65099 65F30 (15A23)
- On the commutativity of superselection rules in axiomatic quantum field theory. *C. R. Acad. Bulgare Sci.* 31 (1978), no. 4, 393-395. (From the introduction) 80a:81007 81B10 (47D45, 81E10)
- Toffin, Philippe Un exemple d'utilisation de la méthode de Vinogradov. *Séminaire Delange-Pisot-Poitou, 18e année: 1976/77, Théorie des nombres, Fasc. 2, Exp. No. G7*, 3 pp. *Secrétariat Math., Paris*, 1977. (J. S. Joel) 80k:10035 10G10 (10J15)
- Toffoli, Tommaso Integration of the phase-difference relations in asynchronous sequential networks. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978)*, pp. 457-463. *Lecture Notes in Comput. Sci.*, 62, Springer, Berlin, 1978. (Author's summary) 80d:68067 68D20 (68D90)
- Toft, Bjarne An investigation of colour-critical graphs with complements of low connectivity. *Advances in graph theory (Cambridge Combinatorial Conf., Trinity Coll. Cambridge, 1977)*. *Ann. Discrete Math.* 3 (1978), 279-287. (Paul A. Catlin) 80a:05098 05C15 (05C40)
- Toger, A. V. The  $\epsilon$ -entropy of the unit sphere of the Hölder space  $H^{k,p}$  in the space  $L_p$ . (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 30 (1978), 139-143, v. (Author's summary) 80d:46062 46E35 (41A46)
- Togliani, Luigi Morphology of plane hexagons. (Italian) *Archimede* 30 (1978), no. 4,



- 201-206. (H. W. Guggenheimer) **80j:52006** 52A25
- Topon, Alberto** (with Giulio, Eraldo) Topological property and initial topologies. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **64** (1978), no. 2, 163-169. (O. T. Alas) **80m:54019** 54C05
- (with Adkins, William A.; Gianni, P.) A Nullstellensatz for an algebraically non-closed field. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **15** (1978), no. 1, 338-343. (G. A. Efroymsen) **80d:14013** 14G05 (03C60, 32C05)
- (with Benedetti, Riccardo) Sur les fibrés vectoriels algébriques réels. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 12, A831-A833. (Authors' summary) **80g:14025** 14G30 (14F05, 32C05)
- (with Acquistapace, F.; Broglia, F.) An embedding theorem for real analytic spaces. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) **6** (1979), no. 3, 415-426. (J. Bochnak) **80m:32009** 32C05
- Togô, Shigeaki** Maximal conditions for ideals in Lie algebras. *Hiroshima Math. J.* **9** (1979), no. 2, 469-471. (James F. Hurley) **80j:17012** 17B65
- Tohma, Yoshihiro** (with Furuya, Kiyoshi) Input-output relationship of asynchronous circuit operating in spike-free mode. *Systems-Comput.-Controls* **8** (1977), no. 3, 35-42 (1979). (Jan Grabowski) **80d:94033** 94C10 (68D20)
- (with Matsuzawa, Kazumitsu) A method of multiple-error-correction for computer main memory. *Systems-Comput.-Controls* **8** (1977), no. 5, 71-78 (1978). (Authors' summary) **80h:68001** 68A05 (94B35)
- (with Wakimura, Yoshiaki) Design of checking experiments based on the ordering relation of state transitions. *Systems-Comput.-Controls* **8** (1977), no. 5, 79-87 (1978). (Authors' summary) **80h:68047** 68D50 (68D15, 94C10)
- Toi, Kazuo** (with Takeda, Tatsuo; Tsunematsu, Toshihide) Application of nonlinear optimization algorithms to the problems in plasma physics and thermonuclear fusion research. *Computing methods in applied sciences and engineering (Proc. Third Internat. Sympos., Versailles, 1977)*, II, pp. 329-343. *Lecture Notes in Phys.*, **91**, Springer, Berlin, 1979. (From the introduction) **80g:93028** 93B30 (65R20, 76W05)
- Toint, Ph. L.** (with Strodiet, Jean-Jacques) On the rate of convergence of unconstrained optimization algorithms that use a decomposition in uniformly independent subspaces. *Ann. Soc. Sci. Bruxelles Sér. I* **92** (1978), no. 3, 127-141. (D. J. van Wyk) **80a:65138** 65K05 (90C30)
- (with Callier, F. M.) Errata corrigé: "On the accelerating property of an algorithm for function minimization without calculating derivatives" (*J. Optim. Theory Appl.* **23** (1977), no. 4, 531-547). *J. Optim. Theory Appl.* **26** (1978), no. 3, 465-467. (Authors' summary) **80e:65128** 65K05 (90C99)
- (with Powell, M. J. D.) On the estimation of sparse Hessian matrices. *SIAM J. Numer. Anal.* **16** (1979), no. 6, 1060-1074. (A. Barraud) **80m:65013** 65D25 (65K10)
- Tokarczyk, Czesława** The Podkoryn connections with a torsion. (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska Sect. A* **30** (1976), 75-84 (1978). (V. Dumitrag) **80i:53011** 53B15
- General Podkoryn connections. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 5(192), 148-151. (Jacek Ganczarewicz) **80e:53012** 53B05
- Tokarenko, A. I.** Engel groups and Lie algebras. (Russian) *A collection of papers on algebra (Russian)*, pp. 317-328. *Minist. Oborony SSSR*, 1978. (B. Hartley) **80k:17011** 17B65
- The group-theoretic properties  $N_p$ ,  $N$  and  $\bar{N}$  are not axiomatizable. (Russian) *A collection of papers on algebra (Russian)*, pp. 329-331. *Minist. Oborony SSSR*, 1978. (O. V. Belegradskii) **80i:03047** - 03C60 (20A15)
- Tokarev, E. V.** Quotient spaces of Marcinkiewicz spaces. (Russian) *Sibirsk. Mat. Ž.* **19** (1978), no. 3, 704-707, 720. (O. I. Reinov) **80c:46040** 46E30
- Subspaces of symmetric function spaces. (Russian) *Funktsional. Anal. i Prilozhen.* **13** (1979), no. 2, 93-94. (Aleksandr Mekler) **80j:46049** 46E30
- Tokarev, V. F.** (with Krasnikov, N. V.; Rubakov, V. A.) Dynamic spontaneous breaking of symmetry. (Russian. English summary) *Teoret. Mat. Fiz.* **37** (1978), no. 3, 319-325. (Authors' summary) **80h:81082** 81E15
- Tokareva, T. A.** Chuquet's algebra. (Russian) *Istor.-Mat. Issled.* No. 23 (1978), 270-283, 359. (Stanislav Glusko) **80k:01021** 01A40
- Tokarz, Marek** Degrees of maximality of three- and four-valued RM-extensions. *Rep. Math. Logic* No. 9 (1977), 63-69. (V. V. Gorlov) **80c:03105** 03G20 (03B50)
- The existence of matrices strongly adequate for E, R and their fragments. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **7** (1978), no. 3, 121-127. (Charles F. Kielkopf) **80a:03031** 03B45
- The existence of matrices strongly adequate for E, R and their fragments. *Studia Logica* **38** (1979), no. 1, 75-85. (Leo Esakia) **80h:03034** 03B45 (03B99)
- Tokarzewski, Jerzy** Controllability of a class of locally symmetric nonlinear dynamical systems. (Polish and Russian summaries) *Arch. Automat. Telemekh.* **24** (1979), no. 1, 29-41. (Author's summary) **80g:93021** 93B05
- Tokl, Katsuke** Some remarks on invariants of abelian varieties concerning the reduction theory. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 25* (1978), 1-16. (Loren D. Olson) **80f:14023** 14K15 (10D35, 14K07)
- Toki, Yasunori** (with Narita, Fumio; Takahashi, Takao; Yamagata, Masahiro) On some relation of curvature between Brieskorn manifolds and standard sphere. *Sci. Rep. Hiroaki Univ.* **26** (1979), no. 1, 1-6. (R. E. Stong) **80j:53048** 53C25 (57R15)
- Tokmen, V. H.** Some properties of the spectra of ternary logic functions. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979)*, pp. 88-93. *IEEE, Long Beach, Calif.*, 1979. (Author's summary) **80m:94116** 94C99 (03B50)
- (with Hurst, S. L.) A consideration of universal-logic-modules for ternary synthesis, based upon Reed-Muller coefficients. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979)*, pp. 248-256. *IEEE, Long Beach, Calif.*, 1979. (Authors' summary) **80m:94117** 94C99 (94C10)
- The evaluation of the spectrum of multilevel logic networks. *Comput. Electr. Engng.* **6** (1979), no. 4, 233-237. (Author's summary) **80c:94054** 94C10
- Tokumaru, Hidekatsu** (with Sakai, Hideaki; Soeda, Takashi) Optimal linear coding schemes for feedback communication with noisy side information. *IEEE Trans. Inform. Theory* **24** (1978), no. 3, 381-384. (Michele Elia) **80a:94021** 94A24
- (with Takeuchi, Yasuhiro; Adachi, Norihiko) Global stability of ecosystems of the generalized Volterra type. *Math. Biosci.* **42** (1978), no. 1-2, 119-136. (Authors' summary) **80i:92019** 92A15
- (with Sakai, Hideaki; Soeda, Takashi) On the relation between fitting
- autoregression and periodogram with applications. *Ann. Statist.* **7** (1979), no. 1, 96-107. (E. J. Hannan) **80b:62106** 62M10
- Tokunaga, Shoshi** (with Furushima, Mikio; Ishimura, Ryuichi; Toyo-oka, Manabu) Domaines où les germes sont engendrés par les sections globales. *Mem. Fac. Sci. Kyushu Univ. Ser. A* **33** (1979), no. 1, 113-119. (W. Thimm) **80i:32043** 32E05
- (with Furushima, Mikio; Ishimura, Ryuichi; Toyo-oka, Manabu) Sur un théorème de Grauert. *Mem. Fac. Sci. Kyushu Univ. Ser. A* **33** (1979), no. 1, 121-126. (W. Thimm) **80i:32044** 32E10
- Tokuoka, T.** One-dimensional plastic materials with work-hardening. I. Constitutive equations and stress-strain relations. *J. Engrg. Math.* **13** (1979), no. 1, 7-17. (Francois Sidoroff) **80j:73026a** 73E99 (73D99)
- One-dimensional plastic materials with work-hardening. II. Acceleration waves. *J. Engrg. Math.* **13** (1979), no. 1, 19-31. (Francois Sidoroff) **80j:73026b** 73E99 (73D99)
- Tokuyama, Michio** (with Oppenheim, Irwin) Statistical-mechanical theory of Brownian motion—translational motion in an equilibrium fluid. *Phys. A* **94** (1978), no. 3-4, 501-520. (Authors' summary) **80d:82043** 82A30
- Toland, J. F.** Duality in nonconvex optimization. *J. Math. Anal. Appl.* **66** (1978), no. 2, 399-415. (Author's summary) **80a:49025** 49B05
- On the stability of rotating heavy chains. *J. Differential Equations* **32** (1979), no. 1, 15-31. (T. K. Caughey) **80d:49016** 49A50 (70H30)
- Tolar, J.** Quantization as deformation: identical particles. Symposium on Mathematical Models in the Theory of Elementary Particles (Liblice, 1978). II. *Czechoslovak J. Phys. B* **29** (1979), no. 3, pp. 319-322. (J. S. Joel) **80e:81026** 81C40 (58F06)
- (with Niederle, J.) Quantization as mapping and as deformation. *Czechoslovak J. Phys. B* **29** (1979), no. 12, 1358-1368. (F. J. Bloore) **80i:81055** 81C99 (58F06)
- Toledo, Domingo** (with Tong, Yue Lin Lawrence) Duality and intersection theory in complex manifolds. II. The holomorphic Lefschetz formula. *Ann. of Math.* (2) **108** (1978), no. 3, 519-538. (Bang-yen Chen) **80j:32045** 32H99 (32C10, 58G10)
- (with Tong, Yue Lin Lawrence) Duality and intersection theory in complex manifolds. I. *Math. Ann.* **237** (1978), no. 1, 41-77. (Bang-yen Chen) **80d:32068** 32C10
- Tolev, B. D.** (with Hristov, N. N.) Some cubature formulas for regular pentagons and octagons. (Bulgarian. Russian and French summaries) *Godišnik Visl. Učebn. Zaved. Prirodna Mat.* **12** (1976), no. 3, 125-136 (1978). (Walter Gautschi) **80b:65032** 65D32
- Tollmieri, R.** (with Auslander, L.) Algebraic structures for  $\oplus_{n \in \mathbb{Z}} L^2(\mathbb{Z}/n)$  compatible with the finite Fourier transform. *Trans. Amer. Math. Soc.* **244** (1978), 263-272. (Leonard F. Richardson) **80b:22012** 22E25 (14K20, 43A80)
- Tolpov, V.** (with Mamažanov, Ž. M.) Numerical solution of a multipoint boundary value problem of the theory of filtration in a multilayer stratum under elastic water pressure. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 50 (1978), 88-101, 161-162. (Authors' summary) **80d:76095** 76G05
- Tolkačev, E. A.** (with Kruglov, S. I.; Stražev, V. I.) Symmetries of the classical theory of a vector field of general type. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1978**, no. 6, 117-120, 143. (N. V. Mickevič) **80d:78014** 78A25 (15A33, 83A05)
- Tölke, Jürgen** Eine äquifforme Kennzeichnung der euklidischen und pseudo-euklidischen Zwangsläufe. *Abh. Braunschweig. Wiss. Ges.* **29** (1978), 121-125. (O. Bottema) **80e:53007** 53A17
- Sphärische Zwangsläufe mit verschwindenden Integralvektoren. *Anz. Österreich. Akad. Wiss. Math.-Natur. Kl.* **1978**, no. 6, 152-154. (O. Bottema) **80g:70001** 70B05 (53A17)
- Eine kennzeichnende Eigenschaft der isotropen Bewegungen. *Anz. Österreich. Akad. Wiss. Math.-Natur. Kl.* **1978**, no. 7, 165-168. (Hellmuth Stachel) **80h:53010a** 53A17
- Zu einem Satz von O. Bottema. *Anz. Österreich. Akad. Wiss. Math.-Natur. Kl.* **1978**, no. 7, 172-174. (Hellmuth Stachel) **80h:53010c** 53A17
- Bewegungsvorgänge mit einem zu den Polbahnen gleichähnlichen Hüllkurvenpaar. (Serbo-Croatian summary) *Glas. Mat. Ser. III* **13**(33) (1978), no. 2, 311-315. (O. Bottema) **80h:53005** 53A17
- Eine äquifforme Charakterisierung der Cardan-Bewegung mittels der höheren Wendepole. (English summary) *Monatsh. Math.* **86** (1978/79), no. 2, 167-170. (H. R. Müller) **80e:53004** 53A17 (53A15, 70B10)
- Die isotropen Gegenstücke der Darboux-Bewegungen. *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* **187**, no. 4-7, 289-296 (1978). (K. Strubecker) **80i:51027** 51N25 (53A17)
- Steiner-Formeln für die Bahnflächen geschlossener Äquifformbewegungen. *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* **187** (1978), no. 8-10, 325-337. (Hellmuth Stachel) **80h:53014** 53A17
- Isotrope Kegelschnittsbewegungen. (English summary) *J. Geom.* **13** (1979), no. 1, 31-48. (K. Strubecker) **80i:51028** 51N25 (53A17)
- Tolley, H. Dennis** A non-parametric test for composite hypotheses in survival analysis. *Ann. Inst. Statist. Math.* **30** (1978), no. 2, 281-295. (S. Blumenthal) **80a:62031** 62F03 (62G10, 62N05, 62P10)
- Tolokonnikov, G. K.** Associative Hamiltonian algebras. (Russian. English summary) *Teoret. Mat. Fiz.* **31** (1977), no. 2, 250-255. (Author's summary) **80f:70014** 70C99 (58F06, 81C05)
- Hamiltonian algebras. (Russian. English summary) *Teoret. Mat. Fiz.* **37** (1978), no. 3, 336-346. (G. Lassner) **80i:17015** 17B65 (81E05)
- Tolstikov, A. V.** Application of fields generated by Gauss periods to the study of cyclic Diophantine equations. II. (Russian) Studies in number theory. *S. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **82** (1979), 149-157, 168. (T. Metsänkylä) **80h:10024** 10B15 (12A35)
- Tolstov, V. N.** (with Ašerova, R. M.; Smirnov, Ju. F.; Šustov, A. P.) An algebraic approach to the analysis of the geometry of deformed nuclei in the Hartree-Fock method with projections. (Russian. Kazakh summary) Materials of the 28th Meeting on Nuclear Spectroscopy and the Structure of Atomic Nuclei (Alma-Ata, 1978) (Russian). *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat. 1978*, no. 6, 67-75, 95. (Authors' summary) **80e:81124** 81G35 (22E70)
- Tolstunogov, A. A.** Differential inclusions in Banach spaces and continuous selectors.

- (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 5, 1088–1092. (Pavel Krbec) 80a:34011 34A60 (34G20)
- Properties of solutions of differential inclusions in a Banach space. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 1, 42–46. (Pavel Krbec) 80m:34065 34G99 (34A60)
- el Tom, M. E. A. On best cubature formulas and spline interpolation. *Numer. Math.* 32 (1979), no. 3, 291–306. (C. de Boor) 80e:41007 41A15 (41A55, 65D32)
- Toman, E. The geometric structure of random Boolean functions. (Russian) *Problemy Kibernet. No. 35* (1979), 111–132, 208. (A. K. Keltmans) 80j:94053 94C15 (03G05, 05C99)
- Tomanov, G. M. The Frattini subgroup of algebraic groups. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 3, 205–208, 283. (Yasuhiro Asao) 80h:20053 20F26
- Tomars, Alexander Oscillatory behaviour of first order delay differential equations. *Bull. Austral. Math. Soc.* 19 (1978), no. 2, 183–190. (Bhagat Singh) 80a:34112 34K15
- Tomarelli, Franco Un problème de fluidodynamique résolu avec les inéquations variationnelles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 21, A999–A1002. (Author's summary) 80a:76019 76C99 (49A99)
- Tomaru, Tadashi (with Higuchi, Teichi) Some properties of holomorphic mappings into algebraic manifolds. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 24* (1977), 1–6. (Tosiaki Kori) 80j:32044 32H99
- (with Takijima, Kunio) Local properties of quotient analytic spaces. *Proc. Amer. Math. Soc.* 72 (1978), no. 3, 461–467. (O. Riemenschneider) 80b:32011 32C40 (32G11)
- (with Higuchi, Teichi) On the degree of determinacy of homogeneous polynomials in complex variables. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 25* (1978), 27–31. (Peter Giblin) 80a:14002 14B05 (32C40)
- Tomasi, Peter A. (with Stanton, Robert J.) Pointwise inversion of the spherical transform on  $L^p(G/K)$ ,  $1 < p < 2$ . *Proc. Amer. Math. Soc.* 73 (1979), no. 3, 398–404. (Kenneth Johnson) 80e:43011 43A85 (22E30)
- (with Kenig, Carlos E.) The weak behavior of spherical means. *Proc. Amer. Math. Soc.* 78 (1980), no. 1, 48–50. (Harald E. Krogstad) 80e:42021 42B15
- Tomassini, G. (with Ferreira, Artur V.) Finiteness properties of topological algebras. I. *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* 5 (1978), no. 3, 471–488. (H. G. Dales) 80d:46101 46J20 (32E25, 46H20)
- An embedding theorem for  $q$ -strongly pseudoconvex manifolds. *Quart. J. Math. Oxford Ser. (2)* 29 (1978), no. 115, 363–366. (Klaus Fritzsche) 80c:32019 32F10
- Structure theorems for modifications of complex spaces. *Rend. Sem. Mat. Univ. Padova* 59 (1978), 295–306 (1979). (H. B. Laufer) 80m:32015 32C45
- (with Ancona, Vincenzo) Théorèmes d'existence pour les modifications analytiques. *Invent. Math.* 51 (1979), no. 3, 271–286. (G. Trautmann) 80g:32021 32C45 (32G11)
- Tomata, Pavel On decompositions of complete  $k$ -uniform hypergraphs. (Russian summary) *Czechoslovak Math. J.* 28(103) (1978), no. 1, 120–126. (A. Rosa) 80a:05159 05C65
- Tomazewski, B. On weakly  $n$ -dimensional spaces. *Fund. Math.* 103 (1979), no. 1, 1–8. (J. M. Aarts) 80e:54067 54F45
- Tombeault, E. (with Pagels, Heinz) Vacuum of the quantum Yang-Mills theory and magnetostatics. *Nuclear Phys. B* 143 (1978), no. 3, 485–502. (Tuan W. Chen) 80d:81080 81E10
- Tomczak-Jaegermann, Nicole The Banach-Mazur distance between the trace classes  $c_r^n$ . *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 305–308. (Yehoram Gordon) 80f:46017 46B20
- On the Banach-Mazur distance between symmetric spaces. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 3–4, 273–276. (Hermann König) 80j:46028 46B05
- Tom Dieck, Tammo See tom Dieck, Tammo
- Tomescu, Anca Trial functions for the Dirichlet problem of the Poisson equation in polygonal domains. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énergét.* 24 (1979), no. 2, 263–268, v. vi. (A. Elcrat) 80j:49041 49G10 (65N30)
- Tomescu, Ioan Le nombre minimal de colorations d'un hypergraphe  $k$ -chromatique. *Discrete Math.* 25 (1979), no. 2, 179–188. (Jean-Claude Fournier) 80e:05088 05C65 (05C35)
- On a theorem of K. Zarankiewicz. (Romanian. French summary) *Stud. Cerc. Mat.* 31 (1979), no. 3, 353–358. (R. A. Melter) 80i:05064 05C38 (05C35)
- Toml, Friedrich Plateau's problem for embedded minimal surfaces of the type of the disc. *Arch. Math. (Basel)* 31 (1978/79), no. 4, 374–381. (R. Osserman) 80c:58008 58E12 (53A10)
- (with Tromba, Anthony J.) Extreme curves bound embedded minimal surfaces of the type of the disc. *Math. Z.* 158 (1978), no. 2, 137–145. (Robert Gulliver) 80a:53011 53A10 (49F10, 58E12)
- Tomšić, Milob Remarques sur l'approximation locale par les sommes partielles et par les sommes de Fejér de séries de Fourier. *Theory of the approximation of functions* (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 367–375, "Nauka", Moscow, 1977. (Darell J. Johnson) 80m:42005 42A10
- Angular approximation of functions with a dominated mixed modulus of smoothness. (Russian) *Publ. Inst. Math. (Beograd) (N.S.)* 23(37) (1978), 193–206. (Gheorghe Coman) 80e:41012 41A30
- Tomita, Hisao (with Murase, Ichiro) On powers of Artinian rings without identity. *Math. J. Okayama Univ.* 20 (1978), no. 2, 131–140. (V. C. Cateforia) 80a:16029 16A35
- A generalization of a theorem of A. Kertész. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 3–4, 323. (Kazuo Kishimoto) 80f:16016 16A45
- (with Hirano, Yasuyuki) Regular rings,  $V$ -rings and their generalizations. *Hiroshima Math. J.* 9 (1979), no. 1, 137–149. (Gertrude Ehrlich) 80e:16012 16A30
- (with Hongan, Motoshi) A commutativity theorem for  $s$ -unit rings. *Math. J. Okayama Univ.* 21 (1979), no. 1, 11–14. (Howard E. Bell) 80k:16043 16A70
- (with Ikehata, Shūichi) A commutativity theorem. *Math. Japon.* 24 (1979/80), no. 1, 29–30. (William D. Blair) 80k:16044 16A70
- Tomita, Kazuhisa (with Kai, Toru) Chaotic response of a limit cycle. *J. Statist. Phys.* 21 (1979), no. 1, 65–86. (Richard C. Churchill) 80i:58031 58F13 (28D99, 34C05, 82A99)
- (with Murakami, Chikara) Giant transitory excitation—a thermokinetic model. *J. Theoret. Biol.* 79 (1979), no. 2, 203–222. (Authors' summary) 80e:92011 92A09
- Tomita, Sadahiro (with Shindo, Yasuhide) Thermoelastic Rayleigh waves with thermal relaxation in the magnetic field normal to the surface. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 1, 9–15. (Authors' summary) 80m:73074 73L05
- Tomita, Shogo (with Hinamoto, Takao; Maekawa, Sadao) Canonical minimal realization problem for bilinear systems. *Systems-Comput.-Controls* 8 (1977), no. 3, 1–8 (1979). (Arie Feuer) 80d:93027 93B20
- Tomita, Yoshitomo On a mixed problem for the multi-dimensional Hamilton-Jacobi equation in a cylindrical domain. *Hiroshima Math. J.* 8 (1978), no. 3, 439–468. (Piero de Mottoni) 80c:35053 35K60
- Tomlik, Bohdan J. (with Yood, Bertram) Topological algebras with dense socle. *J. Funct. Anal.* 28 (1978), no. 2, 254–277. (P. Civin) 80f:46052 46H05
- On some properties of Segal algebras and their multipliers. *Manuscripta Math.* 31 (1979), no. 1, 1–18. (Michael Leinert) 80k:46072 46H10
- Tomiyama, Jun (with Yabuta, Kōzō) General short exact sequence theorem for Toeplitz operators of uniform algebras. *C\*-algebras and applications to physics* (Proc. Second Japan-USA Sem., Los Angeles, Calif., 1977), pp. 126–130, *Lecture Notes in Math.*, 650, Springer, Berlin, 1978. (R. G. Douglas) 80i:47042 47B35 (46J10, 46M20)
- Tomková, Mária On the  $b$ -equivalence of multitilates. (Russian summary) *Math. Slovaca* 27 (1977), no. 4, 331–336. (R. Balbes) 80i:06007 06B10
- Tomlik, G. N. (with Vitthi, V. A.; Kuklin, G. N.; Cybatov, V. A.) Optimization of the structures of experimental data acquisition systems. (Russian) *Automat. i Vychisl. Tehn. (Riga)* 1978, no. 2, 64–71, 93. (Authors' summary) 80b:90063 90B10
- Tomonaga, Yasurō Solutions of Einstein's field equations. *Bull. Fac. Ed. Utsunomiya Univ. Sect. 2* 28 (1978), 1–6. (Marcos Rosenbaum) 80e:83009 83C20 (53B50)
- Tomov, I. Minimax synthesis of linear discretely continuous systems. (Bulgarian. Russian and English summaries) *Automat. i Vychisl. Tehn.* 12 (1978), no. 2, 5–12, 2, 4. (From the summary) 80c:93090 93C99 (49B40)
- (with Toškov, A.) Decoupling of linear multidimensional systems (autonomous control). (Bulgarian. Russian and English summaries) *Automat. i Vychisl. Tehn.* 12 (1978), no. 6, 48–61, 2, 3. (From the text) 80b:93008 93A10 (93C05)
- Tomová, Eliška Decomposition of complete bipartite graphs into factors with given radii. (Russian summary) *Math. Slovaca* 27 (1977), no. 3, 231–237. (Š. Známs) 80i:05058 05C35
- Tomšik, G. V. Piecewise synthesizing strategies in differential games. (Russian) *Control of dynamical systems* (Russian), pp. 238–244, 322–323, *Leningrad. Univ., Leningrad*, 1978. (Author's summary) 80f:90167 90D25
- Tom, Bul An Initial-value problems for the Boussinesq equations of water waves. *Nonlinear Anal.* 4 (1980), no. 1, 15–26. (J. Thomas Beale) 80k:76019 76B15 (35Q20)
- Tomčev, N. S. (with Brankov, I. G.; Zagrebnov, V. A.) On a class of exactly soluble statistical mechanical models with nonpolynomial interactions. *J. Statist. Phys.* 20 (1979), no. 3, 317–330. (Authors' summary) 80e:82026 82A30 (47D45)
- Tomčev, V. D. On block designs arising from rank 3 graphs. *C. R. Acad. Bulgare Sci.* 31 (1978), no. 8, 945–948. (Peter J. Cameron) 80a:05029 05B05
- Tomchev, N. S. See Tomčev, N. S.
- Tomchev, V. D. See Tomčev, V. D.
- Tomdeur, Philippe (with Kamber, Franz W.) Characteristic classes and Koszul complexes. *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 2, pp. 159–166, *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (D. B. Fuks) 80i:57039 57R32 (58H10)
- (with Kamber, Franz W.)  $G$ -foliations and their characteristic classes. *Bull. Amer. Math. Soc.* 84 (1978), no. 6, 1086–1124. (D. B. Fuks) 80b:57024 57R30
- (with Kamber, Franz W.) Semi-simplicial Weil algebras and characteristic classes. *Tohoku Math. J. (2)* 30 (1978), no. 3, 373–422. (J. Stasheff) 80e:57031 57R32 (58R55, 57R30)
- (with Kamber, Franz W.) On the linear independence of certain cohomology classes of  $BT_q$ . *Studies in algebraic topology*, pp. 213–263, *Advances in Math., Suppl. Studies*, 5, Academic Press, New York, 1979. (D. B. Fuks) 80e:57028 57R30
- Tomov, Toma V. Generalized analytic structure in the spectrum of a uniform algebra. *C. R. Acad. Bulgare Sci.* 31 (1978), no. 7, 799–802. (R. B. Burckel) 80d:46102 46J20
- (with Lambow, D. L.) Some function-algebraic properties of the algebra of generalized analytic functions. (Russian) *C. R. Acad. Bulgare Sci.* 31 (1978), no. 7, 803–806. (T. W. Gamelin) 80d:43006 43A25 (46J10)
- Positive-definite functions on discrete commutative semigroups. *Semigroup Forum* 17 (1979), no. 2, 175–183. (James Stewart) 80b:43009 43A35
- Tong, Christopher H. (with Brayton, Robert K.) Stability of dynamical systems: a constructive approach. *IEEE Trans. Circuits and Systems* 26 (1979), no. 4, 224–234. (Authors' summary) 80d:93053 93D05 (15A60, 34D20)
- Tong, Fu (with Wu, Lian Da; Wang, Chang Bin) A seminumerical method for computing the second-order perturbation of artificial satellites. *Chinese Astronom. J.* 3 (1979), no. 3, 238–257. (Authors' summary) 80f:70027 70M05
- Tong, H. The asymptotic joint distribution of the estimated autoregressive coefficients. *Internat. J. Control* 27 (1978), no. 5, 801–807. (S. M. Pandit) 80a:93159 93E10 (62M10)
- Tong, Hing (with Lorch, E. R.) On the automorphisms of the group of Baire equivalences of a complete separable metric space. Memorial issue for Marston Morse. *Bull. Int. Math. Acad. Sinica* 6 (1978), no. 2, part 1, 333–336. (V. V. Milkin) 80b:54048 54H05
- Tong, Po (with Chan, Y. K.; Siu, M. K.) Two-dimensional binary arrays with good autocorrelation. *Inform. and Control* 42 (1979), no. 2, 125–130. (L. D. Baumert) 80j:94029 94B25 (05B30)
- Tong, Wen Ting A bound for the dominance ratio of a nonnegative matrix. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 2, 185–194. (Yik-Hoi Au-Yang) 80g:15018 15A42
- Tong, Y. L. Counterexamples to a result of Broemeling on simultaneous inferences for variance ratios of some mixed linear models. *Comm. Statist. A—Theory Methods* 8 (1979), no. 12, 1197–1204. (Lyle D. Broemeling) 80e:62065 62J05
- Tong, Yue Lin Lawrence (with Toledo, Domingo) Duality and intersection theory is



- complex manifolds. II. The holomorphic Lefschetz formula. *Ann. of Math.* (2) **108** (1978), no. 3, 519–538. (Bang-yen Chen) **80j:32045** 32H99 (32C10, 58G10)  
(with Toledo, Domingo) Duality and intersection theory in complex manifolds. I. *Math. Ann.* **237** (1978), no. 1, 41–77. (Bang-yen Chen) **80d:32008** 32C10  
Weighted intersection numbers on Hilbert modular surfaces. *Compositio Math.* **38** (1979), no. 3, 299–310. (G. van der Geer) **80i:10034** 10D21 (14J25)
- Tonge, Andrew** The von Neumann inequality for polynomials in several Hilbert-Schmidt operators. *J. London Math. Soc.* (2) **18** (1978), no. 3, 519–526. (Hermann König) **80d:47034** 47B10  
(with Mantero, Anna Maria) Some remarks on the injective tensor product and Banach algebras. (Italian summary) *Boll. Un. Mat. Ital. A* (5) **16** (1979), no. 1, 109–114. (J. R. Holub) **80d:46123** 46M05 (46J35)  
(with Mantero, Anna Maria) Banach algebras and von Neumann's inequality. *Proc. London Math. Soc.* (3) **38** (1979), no. 2, 309–334. (E. R. Lorch) **80d:46081** 46J05 (47A30)
- Tong-Fu** See **Tong, Fu**
- Tong Van Duc** Connexions induites et classes caractéristiques. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **63** (1977), no. 6, 513–517 (1978). (Virgil Obădeanu) **80i:57052** 57R30 (53C05)  
Connexions induites et classes caractéristiques. *Acta Math. Vietnam.* **3** (1978), no. 2, 23–27. (D. B. Fuka) **80m:57023** 57R30 (53C05, 57R20)  
Fibres vectorielles feuilletées. *Kodai Math. J.* **1** (1978), no. 2, 205–212. (Adrian C. Albu) **80b:57027** 57R30
- Nguyen To Nhu** See **Nguyen To Nhu**
- Tonks, V. S.** (with Rvačov, V. L.; Škrljar, L. I.) A set of prime closing functions of three-valued logic. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **No. 2** (1979), 90–94, 155. (V. V. Gorlov) **80j:03093** 03G99 (03B50, 26B40)
- Tonin, M.** (with Bonora, L.; Pasti, P.; Zizzi, P.) Extended Higgs models and 't Hooft algebra. (Italian summary) *Nuovo Cimento A* (11) **54** (1979), no. 4, 507–522. (From the text) **80m:81062** 81E99 (58E20)
- Tonkov, E. L.** A remark on the controllability of a linear periodic system. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 9, 1715–1717, 1727. (Robert Staniszewski) **80c:93034** 93B05  
Second-order linear equation with periodic coefficients. (Russian) *Mat. Fiz. No. 24* (1978), 58–69, 122. (D. Izjumova) **80d:34018** 34B05
- Tonojan, V. S.** (with Minasjan, A. F.) A contact problem for an elastic composite half-plane. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* **32** (1979), no. 3, 3–17, 89. (Authors' summary) **80i:73066** 73T05
- Tong Ton That** See **Tuong Ton That**
- Toom, A. L.** Monotonic evolutions in real spaces. Locally interacting systems and their application in biology. (Proc. School-Sem. on Markov Interaction Processes in Biology, Pushchino, 1976), pp. 1–14. *Lecture Notes in Math.*, **653**, Springer, Berlin, 1978. (E. Ikaunieks) **80d:68072** 68D35 (68D20)
- Toomarian, M.** Characterization of an isometry. *Proceedings of the Eighth National Mathematics Conference (Arya-Mehr Univ. Tech., Tehran, 1977)*, pp. 340–342. *Arya-Mehr Univ. Tech., Tehran, 1977*. (Shigeo Akiba) **80c:53051** 53C20  
Nonisomorphism of Riemann extension ( $T^*M, g$ ) and complete lift ( $TM, \nabla^*$ ). *Proceedings of the Seventh National Mathematics Conference (Dept. Math., Azarabadegan Univ., Tabriz, 1976)*, pp. 380–383. *Azarabadegan Univ., Tabriz, 1977*. (Shigeo Akiba) **80c:53052** — 53C20 (53C05)  
Killing vectorfields and infinitesimal affine transformations on a generalised Riemann extension. *Tensor (N.S.)* **32** (1978), no. 3, 335–338. (Elhanan Leibowitz) **80c:53021** 53B20
- Topol'nikov, Vladimir V.** (with Peeva, K. G.) On the  $X$ -reduction of  $S$ -automata. (Bulgarian. Russian and English summaries) *Godišnik Vist. Učebn. Zased. Prilozna Mat.* **12** (1976), no. 4, 19–30 (1977). (V. Ju. Meitus) **80m:68053** 68D25 (68D30)  
(with Lozanov, Roumen L.) Sur l'intersection des langages algébriques. *Ann. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **24** (1978), no. 1, 179–181. (V. Ju. Meitus) **80m:68071** 68F05  
(with Peeva, K. G.) Mathematical theory of automata—a categorical approach. (Russian) *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 2, 299–313. (Jiří Adámek) **80c:68043** 68D30 (18B20)
- Topol'skii, N. G.** (with Boič, V. I.) Simultaneous minimization of functions and decomposition optimization of automata. (Russian) *Avtomat. i Vychisl. Tehn. (Riga)* **1978**, no. 4, 8–15, 91. (I. E. Strazdiņš) **80b:94045** 94C10 (94C15)
- Topor, R. W.** The correctness of the Schorr-Waite list marking algorithm. *Acta Inform.* **11** (1978/79), no. 3, 211–221. (Author's summary) **80c:68014** 68B10 (68C05)
- Topsoe, Flemming** The naive approach to the Hahn-Banach theorem. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue 1* (1978), 315–330. (S. Simons) **80b:46006** 46A15 (20Mxx)  
An information theoretic game in relation to the maximum entropy principle. (Danish. English summary) *Nordisk Mat. Tidsskr.* **25/26** (1978), no. 3–4, 157–172, 209–210. (Author's summary) **80m:94030** 94A17 (80A10)  
Information-theoretical optimization techniques. *Kybernetika (Prague)* **15** (1979), no. 1, 8–27. (Author's summary) **80b:62007** 62B10 (94A17)
- Topuz, Elena** Properties of the accessible set in a Hilbert space. (Romanian. English summary) *Bul. Ştiinţ. Tehn. Inst. Politehn. "Traian Vuia" Timişoara 23(37)* (1978), no. 1, 18–21 (1979). (Author's summary) **80i:93036** 93C25
- Toranzo, Fausto A.** (with Nanclares, Jorge H.) Inscribing simplices in convex bodies. *Rev. Un. Mat. Argentina* **28** (1977/78), no. 3–4, 215–219. (L. M. Kelly) **80a:52004** 52A20
- Torchinsky, Alberto** Restrictions and extensions of potentials of  $H^p$  distributions. *J. Funct. Anal.* **31** (1979), no. 1, 24–41. (H. Triebel) **80b:46047** 46E35 (42B25, 42B30)  
The  $K$ -functional for rearrangement invariant spaces. *Studia Math.* **64** (1979), no. 2, 175–190. (A. Kufner) **80b:46032** 46E30 (46M35)
- Torelli, Francesco** (with Brucoli, Michele; Maione, Bruno) Algorithm for identification of multivariable discrete-time linear systems. *Electron. Lett.* **14** (1978), no. 10, 313–315. (Authors' summary) **80d:93028** 93B30
- Torelli, Mauro** (with Bertoni, Alberto; Haus, G.; Mauri, Gian Carlo) Analysis and compacting of musical texts. *J. Cybernet.* **8** (1978), no. 3–4, 257–272. (N. G. Zagoruilko) **80a:68077** 68G05 (68C25)  
(with Bertoni, Alberto; Mauri, Gian Carlo) Three efficient algorithms for counting problems. *Inform. Process. Lett.* **8** (1979), no. 1, 50–53. (From the introduction) **80c:68055** 68C25 (68E10, 68F05)
- Torgašev, Aleksandar** Concept of the spectral sets in Wachs spaces. I. Definitions and basic properties. *Publ. Inst. Math. (Beograd) (N.S.)* **23(37)** (1978), 213–222. (Chandler Davis) **80b:47008** 47A25  
On the symmetric quaternionic Banach algebras. I. Gelfand theory. *Publ. Inst. Math. (Beograd) (N.S.)* **24(38)** (1978), 173–188. (T. W. Palmer) **80b:46067** 46J20 (46H20)  
Characteristic matrix functions of Wachs spaces. I. Livšits definition. *Publ. Inst. Math. (Beograd) (N.S.)* **25(39)** (1979), 225–239. (E. R. Cekanovskij) **80c:47016** 47A45
- Toriwaki, Junichiro** (with Yokoi, Shigeki; Fukumura, Teruo) Algebraic structure of the operation system of digitized pictures and its application. I. Formulation and properties of fundamental operations. *Systems-Comput.-Controls* **8** (1977), no. 3, 51–58 (1979). (W. W. Armstrong) **80i:68106** 68G10
- Törner, Günter** Bewertungsränge. *Jahrbuch Überblicke Mathematik*, 1978, pp. 9–26. *Bibliographisches Inst., Mannheim*, 1978. (M. E. Shanks) **80i:12031** 12J20 (13A18)  
(with Brungs, H. H.) Embedding right chain rings in chain rings. *Canad. J. Math.* **30** (1978), no. 5, 1079–1086. (E.-A. Behrens) **80a:16009** 16A10 (51C05)
- Törnig, Willi** See *Numerical treatment of differential equations in applications*, **80a:65014**
- Toro, J.** (with Kartsatos, Athanasios G.) Comparison and oscillation theorems for equations with middle terms of order  $n-1$ . *J. Math. Anal. Appl.* **66** (1978), no. 2, 297–312. (B. S. Lalli) **80d:34038** 34C10  
(with Kartsatos, Athanasios G.) Oscillation and asymptotic behavior of forced nonlinear equations. *SIAM J. Math. Anal.* **10** (1979), no. 1, 86–95. (N. Onuchic) **80b:34091** 34K15 (34K25)
- Toro, T.** Spin as a new source of gravitation. Application in cosmology and astrophysics. (Romanian. English summary) *An. Univ. Timişoara Ser. Ştiinţ. Fiz.-Chim.* **15** (1977), no. 1, 19–31 (1978). (Author's summary) **80d:83082** 83D05 (53B50)
- Torondžadze, A. F.** A method of estimating the structural and incidental parameters of distributions. (Russian) *Sakharth. SSR Mecn. Akad. Gamotnol. Centr. Šrom.* **18** (1978), no. 2 Voprosy Vychisl. Tehn. i Upravlenija, 110–122. (A. L. Rukhin) **80c:62041** 62F10 (62F12)
- Törös, Róbert** (with Fáy, Gyula) ★Kvantumlogika. (Hungarian.) [Quantum logic] *Gondolat, Budapest*, 1978. 386 pp. ISBN 963-280-331-0 (Manfred Stern) **80b:81009** 81B10 (03G12, 06-02)
- Torojan, B. E.** (with Aslanjan, L. A.; Karabanjan, V. M.) The compactness of subsets of vertices of an  $n$ -dimensional unit cube. (Russian) *Dokl. Akad. Nauk SSSR* **241** (1978), no. 1, 11–14. (Ju. A. Šaklin) **80a:52014** 52A45 (50A05)
- de la Torre, Alberto** Ergodic  $H^1$  spaces. *Bol. Soc. Mat. Mexicana* (2) **22** (1977), no. 1, 10–22. (R. H. Cox) **80i:46029** 46E30 (28D05)  
An ergodic theorem for vector valued positive contractions. *Ann. Sci. Math. Québec* **2** (1978), no. 2, 281–288. (R. J. Nagel) **80c:47015** 47A35  
The square function for  $L_1, L_\infty$  contractions. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 2*, pp. 435–438. *Proc. Sympos. Pure Math.*, XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979. (U. Krengel) **80c:47008** 47A35
- Torre, Anna** (with Scotti, Fernanda) Characterizations of the line graph of BIB designs. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) **15** (1978), no. 3, 660–666. (N. Ito) **80c:05058** 05C99 (05B05)
- Torrence, R. J.** (with Couch, W. E.) An approximation scheme for scalar waves in a Schwarzschild geometry. *Gen. Relativity Gravitation* **9** (1978), no. 12, 1119–1128. (R. A. d'Inverno) **80a:83024** 83C35 (65R20)  
(with Couch, W. E.) An approximation scheme for scalar waves in a Reissner-Nordström geometry. *Gen. Relativity Gravitation* **11** (1979), no. 1, 71–77. (A. F. de F. Teixeira) **80b:83015** 83C25  
(with Couch, W. E.) A particular  $N$ -soliton solution and scalar wave equations. *J. Math. Phys.* **20** (1979), no. 12, 2423–2426. (Author's summary) **80m:35064** 35Q20 (76B25, 83F05)
- Torres, P. L.** Equilibrium states in quantum statistical mechanics. (Spanish. English summary) *Acta Cient. Venezolana* **29** (1978), no. 5, 367–369. (Author's summary) **80b:82011** 82A05
- Torres Iglesias, M.** (with Martínez Verduch, J. R.) Existence and conjugation of certain injectors in finite  $\pi$ -solvable groups. (Spanish) *Rev. Mat. Hisp.-Amer.* (4) **38** (1978), no. 1, 38–45. (M.ª Jesús Iranzo) **80c:20033** 20D25 (20D10)
- Torretti, Roberto** ★Philosophy of geometry from Riemann to Poincaré. *Episteme, D. D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London*, 1978. xiii + 459 pp. ISBN 90-277-0920-3 (H. Treder) **80b:01021** 01A55 (03-03, 51-03, 53-03)  
Mathematical theories and philosophical insights in cosmology. *Einstein Symposium, Berlin* (1979), pp. 320–335. *Lecture Notes in Phys.*, **100**, Springer, Berlin, 1979. (Lawrence Sklar) **80a:83054** 83F05 (00A25)
- Torrez, William C.** The birth and death chain in a random environment: instability and extinction theorems. *Ann. Probab.* **6** (1978), no. 6, 1026–1043. (Anthony G. Pakes) **80b:60114** 60J80  
Calculating extinction probabilities for the birth and death chain in a random environment. *J. Appl. Probab.* **16** (1979), no. 4, 709–720. (Dean H. Fearn) **80b:60121** 60J80
- Tor** On a genetics model of Moran evolving in random environments. *Conference on Deterministic Differential Equations and Stochastic Processes Models for Biological Systems (San Cristobal, N.M., 1977)*. *Rocky Mountain J. Math.* **9** (1979), no. 1, 153–161. (Author's summary) **80c:92040** 92A15
- Torstensson, H.** Small deformations superposed on a finite cylindrical deformation of a cord reinforced rubber belt. *Appl. Sci. Res.* **35** (1979), no. 5–6, 317–331. (Author's summary) **80m:73044** 73G05
- Tort, Jean-René** Sur deux invariants d'un corps de niveau fini. *Bull. Soc. Math. France* **106** (1978), no. 2, 161–168. (Ezra Brown) **80a:10035** 10C05 (12C15)
- Tortora, Robert D.** A note on sample size estimation for multinomial populations. *Amer. Statist.* **32** (1978), no. 3, 100–102. (Author's summary) **80b:62050** 62F25
- Tortora, Roberto** (with Criscuolo, Giovanni) Duals of intuitionistic tableaux. (Italian

- summary) *Ricerche Mat.* 27 (1978), no. 2, 355-365. (Dirk van Dalen) **80k:03016** 03B20
- Tortorella, Michael** (with O'Bryan, Thomas E.) Estimation of the prior distribution by best approximation in uniformly convex function spaces. *Bull. Inst. Math. Acad. Sinica* 7 (1979), no. 1, 69-85. (Eswar G. Phadia) **80d:62008** 62C12 (62G05)
- Tortrat, Albert** Atomes et lois indéfiniment divisibles dans un espace vectoriel. (English summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* 14 (1978), no. 3, 343-347. (N. N. Vahanja (Vakhania)) **80e:60008** 60B11
- Second complément sur le support des lois indéfiniment divisibles. (English summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* 14 (1978), no. 3, 349-354. (N. N. Vahanja (Vakhania)) **80e:60009** 60B11
- (with Rajput, Balam) Un théorème de probabilité zéro ou un dans un groupe mesurable ou topologique quelconque. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 5, A251-A254. (Authors' summary) **80m:60013** 60B12 (60B15)
- Tortrat, Robert** Sur un théorème d'algèbre élémentaire et ses applications à l'algèbre supérieure, la géométrie métrique, l'analyse. With a preface by Paul Vincensini. *Nathan Information, Paris*, 1978. vii + 143 pp. (Aristide Sanini) **80e:53009** 53A20
- Tornużyk, H.** Concerning locally homotopy negligible sets and characterization of  $l_2$ -manifolds. *Fund. Math.* 101 (1978), no. 2, 93-110. (R. J. Daverman) **80g:57019** 57N20
- Tosa, Yasumari** (with Okubo, Susumu) Duffin-Kemmer formulation of gauge theories. *Phys. Rev. D* (3) 20 (1979), no. 2, 462-473. (M. Carmeli) **80f:81083** 81E15 (53C05)
- Toscano, Raffaele** (with Biancardi, Mirella) The regularity of the solution to a variational inequality. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) 45 (1979), 121-136. (Giovanni M. Troianello) **80m:35016** 35D10 (35J99, 73C50)
- Totić, D. Đ.** (with Mihailović, D.) ★Elementi matematičke analize. II. (Serbo-Croatian) [Elements of mathematical analysis. II] Functions of several variables. Vector analysis. Multiple integrals. Theory of fields. Second edition. *Naučna knjiga, Beigrade*, 1979. xi + 351 pp. (Editors) **80g:26002** 26-01
- Tolkskov, A.** (with Tomov, I.) Decoupling of linear multidimensional systems (autonomous control). (Bulgarian. Russian and English summaries) *Automat. Izliš. Tehn.* 12 (1978), no. 6, 48-61, 2, 3. (From the text) **80h:93006** 93A10 (93C05)
- Tosser, A. J.** (with Lofti, Z.; Dubus, D.) Implementation of a transcribed exclusive OR operator. *Internat. J. Electron.* 45 (1978), no. 2, 129-145. (B. Hazeltine) **80a:94054b** 94C10
- (with Dubus, D.) Heuristic unloading procedure for NAND and NOR gates. *Internat. J. Electron.* 45 (1978), no. 2, 147-159. (B. Hazeltine) **80a:94054a** 94C10
- (with Lotfi, Z. M.) Overlapping loops for Reed-Muller expansions in Karnaugh maps. *Internat. J. Electron.* 46 (1979), no. 6, 563-567. (Authors' introduction) **80m:94091** 94C10
- Fejes Tóth, G.** See Fejes Tóth, G.
- Tóth, K.** Modal logics with function symbols. *Acta Cybernet.* 4 (1978/79), no. 3, 291-302. (David Makinson) **80j:03034** 03B45
- (with Susuki, Y.) On the role of some subgroups of the Poincaré group in models of high-energy physics. I. (Italian and Russian summaries) *Nuovo Cimento A* (11) 52 (1979), no. 4, 479-499. (S. Sankaranarayanan) **80i:81064** 81G20
- csedi-Tóth, P.** See Ecsedi-Tóth, P.
- Totik, V.** On the strong summation of Fourier series with variable exponents. (Russian summary) *Anal. Math.* 5 (1979), no. 4, 287-299. (K. Tandori) **80m:42014** 42A24
- Totkov, G. A.** Variations in spline-approximations of multidimensional functions. (Russian) *C. R. Acad. Bulgare Sci.* 31 (1978), no. 2, 159-162. (A. S. Cavaretta) **80m:41008** 41A15
- Totten, Jim** A classification of linear spaces based on quadrangles. II. *J. Combin. Theory Ser. A* 27 (1979), no. 1, 38-49. (T. G. Room) **80g:05022** 05B25
- Tou, Julius T.** DYNOC—a dynamic optimal cluster-seeking technique. *Internat. J. Comput. Inform. Sci.* 8 (1979), no. 6, 541-547. (Author's summary) **80k:68062** 68G10 (68C05)
- (with Gonzalez, Rafael C.) ★Принципы распознавания образов. (Russian) [Pattern recognition principles] Translated from the English by I. B. Gurevič. Edited by Ju. I. Žuravlev. "Mir", Moscow, 1978. 411 pp. (Editors) **80g:68115** 68G10
- Tong, Sam** (with Steiglitz, Kenneth) The design of small-diameter networks by local search. *IEEE Trans. Comput.* 28 (1979), no. 7, 537-542. (Authors' summary) **80g:94107** 94C15 (68E10)
- Tougeron, Jean-Claude** Sur l'anneau des germes de fonctions holomorphes qui appartiennent à la classe de Bernstein. (English summary) *Bull. Soc. Math. France* 106 (1978), no. 2, 207-224. (J. G. Timourian) **80e:32005** 32B05
- abé-Tougeron, Monique** See Sabbé-Tougeron, Monique
- Toulouse, G.** (with Derrida, B.; Pomeau, Y.; Vannimenus, J.) Fully frustrated simple cubic lattices and phase transitions. (French summary) *J. Physique* 41 (1980), no. 3, 213-221. (Authors' summary) **80m:82020** 82A25
- Touminoux, D.** Information apportée par un ensemble d'expériences: une extension d'un résultat de Rényi. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 275-285. Reidel, Dordrecht, 1978. (J. M. Bernardo) **80m:62005** 62B10
- Tourge, R. A.** (with Rao, A. N. V.; Tsokos, Chris P.) Stochastic systems and integral inequalities. *J. Math. Phys.* 19 (1978), no. 12, 2634-2640. (Authors' summary) **80e:93139** 93E20 (60H10)
- Tourigny, J.** (with Sen, A. R.; Smith, G. E. J.) Corrections to: "On the line transect sampling method" (*Biometrics* 30 (1974), 329-340). *Biometrics* 34 (1978), no. 2, 328-329. (Editors) **80b:62119** 62P99
- Tourmarie, M.** Evaluations optimales des inconnues d'un système statistique. Optimisation de la mesure. *Cybernetica* 21 (1978), no. 3, 227-262. (From the text) **80b:93172** 93E20 (82A60)
- Tourneine, Georges** (with Ciavaldini, Jean-François; Pogu, Marc) A method for computing compressible flows past a profile set between permeable walls. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* 30 (1978), no. 4-5, 367-381. (J. F. Heyda) **80a:76037** 76G99 (76M05)
- (with Ciavaldini, Jean-François; Pogu, Marc) Sur l'existence et l'unicité d'écoulements compressibles autour d'un profil en présence de parois à perméabilité variable. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 2, A177-A179. (Authors' summary) **80h:76009a** 76B99 (49H05)
- (with Ciavaldini, Jean-François; Pogu, Marc) Erratum: "Sur l'existence et l'unicité d'écoulements compressibles autour d'un profil en présence de parois à perméabilité variable" [*C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 2, 177-179]. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 9, A523-A525. (Editors) **80h:76009b** 76B99
- (with Ciavaldini, Jean-François; Pogu, Marc) Nouvelle estimation de l'erreur de troncature pour le calcul d'écoulements compressibles portants. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 4, B79-B82. (V. Girault) **80m:76058** 76N10
- Tourne, P.** Effect of a gravitational wave on electromagnetic radiation confined in a cavity. I. Boundary coupling. *Gen. Relativity Gravitation* 9 (1978), no. 2, 123-140. (Lawrence S. Kegeles) **80b:83020a** 83C35
- Effect of a gravitational wave on electromagnetic radiation confined in a cavity. II. Intrinsic coupling. *Gen. Relativity Gravitation* 9 (1978), no. 2, 141-153. (Lawrence S. Kegeles) **80b:83020b** 83C35
- Toutenburg, Helge** (with Rödel, Egmar) ★Mathematisch-statistische Methoden in der Ökonomie. Modellwahl—Parameteridentifikation—Vorhersage. *Akademie-Verlag, Berlin*, 1978. 192 pp. (G. Tintner) **80e:62073** 62P20
- (with Wargowske, B.) On restricted 2-stage-least-squares (2SLS) in a system of structural equations. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 9 (1978), no. 2, 167-177. (C. R. Rao) **80b:62082** 62J05 (90A19)
- Tovstik, P. E.** (with Gol'denveizer, A. L.; Lidskii, V. B.) ★Собственные колебания тонких упругих оболочек. (Russian) [Free oscillations of thin elastic shells] "Nauka", Moscow, 1979. 383 pp. (Z. Kępczowski) **80i:73051** 73L20 (35Qxx)
- Towler, Jacob** Tangent bundles to affine quadric surfaces over local and global fields. *Comm. Algebra* 7 (1979), no. 5, 525-532. (T. Ono) **80g:10022** 10C02 (14J20)
- (with Lancaster, Glenn) Representation-functors and flag-algebras for the classical groups. I. *J. Algebra* 59 (1979), no. 1, 16-38. (V. L. Popov) **80i:14020** 14M15 (15A72, 20G05)
- Towers, David A.** Dualisms of Lie algebras. *J. Algebra* 59 (1979), no. 2, 490-495. (Bernard Kolman) **80i:17003** 17B05
- Town, Hsiang Sheng** See Tang, Hsiang Sheng
- Townsend, James T.** A clarification of some current multiplicative confusion models. *J. Math. Psych.* 18 (1978), no. 1, 25-38. (J. J. Buckley) **80e:92048** 92A25
- Townsend, P.** A computer model of hole-pressure measurement in Poiseuille flow of viscoelastic liquids. *Rheol. Acta* 19 (1980), no. 1, 1-11. (From the summary) **80m:76009** 76A10
- Townsend, P. K.** (with van Nieuwenhuizen, P.) Simplifications of conformal supergravity. *Phys. Rev. D* (3) 19 (1979), no. 10, 3166-3169. (Authors' summary) **80i:81140** 81M05 (53C80, 81E10)
- (with van Nieuwenhuizen, P.) Anomalies, topological invariants, and the Gauss-Bonnet theorem in supergravity. *Phys. Rev. D* (3) 19 (1979), no. 12, 3592-3601. (Authors' summary) **80f:83040** 83C99 (57R20, 57R25)
- Townsend, Robert M.** Market anticipations, rational expectations, and Bayesian analysis. *Internat. Econom. Rev.* 19 (1978), no. 2, 481-494. (A. L. Nagar) **80h:90030** 90A14
- Toyma, Yoshihito** (with Kimura, Masayuki) On learning automata in nonstationary random environments. *Systems-Comput.-Controls* 8 (1977), no. 6, 66-73 (1979). (Authors' summary) **80f:68067** 68D27
- Toyoda, Toshitsugu** (with Ohtani, Kazuhiro) Optimal critical values for a preliminary test in pooling means. *Austral. J. Statist.* 21 (1979), no. 2, 157-161. (Chien-Pai Han) **80m:62031** 62F10
- Toyoda, Toshiyuki** (with Yasue, Kunio) A new approach to the theory of elementary domains. *Internat. J. Theoret. Phys.* 17 (1978), no. 12, 993-1002. (R. L. Ingraham) **80k:81076** 81E05
- Theorem on plane wave solutions. *Amer. J. Phys.* 47 (1979), no. 9, 823-824. (Junkichi Satsuma) **80i:35110** 35L05
- Toyooka, Manabu** (with Furushima, Mikio; Ishimura, Ryuichi; Tokunaga, Shoshi) Domaines où les germes sont engendrés par les sections globales. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 33 (1979), no. 1, 113-119. (W. Thimm) **80i:32043** 32E05 (32E15)
- (with Furushima, Mikio; Ishimura, Ryuichi; Tokunaga, Shoshi) Sur un théorème de Grauert. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 33 (1979), no. 1, 121-126. (W. Thimm) **80i:32044** 32E10
- Toyooka, Yasuyuki** Weak and strong consistency of simple least squares estimators in regression models and uniform strong consistency of residual sample spectral density in the error process. *Keio Engrg. Rep.* 31 (1978), no. 10, 107-121. (M. A. Mirzakhmedov) **80f:62087** 62M10 (62M15)
- Tracy, Derrick S.** (with Samaan, Jacob E.) Properties of some estimators for the simple queue  $M/M/1$ . *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 3, pp. 377-387, *Operations Research Verfahren*, 33, Hain, Meisenheim, 1979. (Carl M. Harris) **80b:60117** 60K25
- (with Srivankataramana, T.) On ratio and product methods of estimation in sampling. *Statist. Neerlandica* 33 (1979), no. 1, 37-49. (Mankal N. Murthy) **80k:62022** 62D05
- Traczyk, Tadusz** Completeness of ideals of a Boolean algebra. *Demonstratio Math.* 11 (1978), no. 1, 253-259. (R. LaGrange) **80a:06013** 06E10
- Common extension of Boolean informational systems. *Fund. Inform.* (4) 2 (1978), no. 1, 63-70. (Witold Lipski) **80d:68133** 68H05 (68B15)
- Traczyk, Wiesław** Multiplexers in combinational circuits. (Polish. Russian and English summaries) *Arch. Automat. Telemekh.* 24 (1979), no. 3, 371-383. (Author's summary) **80j:94043** 94C10
- Trud, A.** Ondes thermo-acoustiques dans un tube poreux. Le cas limite du tube de Rijke. (English summary) *J. Mécanique* 18 (1979), no. 4, 613-632. (From the summary) **80k:76069** 76Q05
- Trademann, Peter** (with Simon, Friedemann) Eine Beziehung zwischen cons-freiem LISP und Stackautomaten. (English and Russian summaries) *Elektron. Informatsionnaya Kybernet.* 14 (1978), no. 12, 619-638. (Authors' summary) **80e:68136** 68C40 (68D35)
- Trager, Barry M.** (with Wang, Paul S.) New algorithms for polynomial squarefree decomposition over the integers. *SIAM J. Comput.* 8 (1979), no. 3, 300-305. (Authors' summary) **80e:68093** 68C20 (68C05)



- Tragesser, R. S. (with Zucker, J. I.) The adequacy problem for inferential logic. *J. Philos. Logic* 7 (1978), no. 4, 501-516. (Ayda I. Arruda) **80c:03031** 03B60
- Traban, R. (with Polak, Elijah; Mayne, D. Q.) Combined phase I-phase II methods of feasible directions. *Math. Programming* 17 (1979), no. 1, 61-73. (Michael Minkoff) **80b:90131** 90C30 (90C05)
- (with Gonzaga, C.; Polak, Elijah) An improved algorithm for optimization problems with functional inequality constraints. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 49-54. (Authors' summary) **80m:90075** 90C30
- (with Polak, Elijah) A derivative-free algorithm for a class of infinitely constrained problems. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 54-61. (Authors' summary) **80m:90080** 90C30 (49D37)
- Trabaca, C. G. (with Balachandran, A. P.; Stern, A.) Nonlinear models as gauge theories. *Phys. Rev. D* (3) 19 (1979), no. 8, 2416-2425. (A. Rouet) **80c:81052** 81E10 (55R10)
- Trabonolovskaja, R. A. (with Arsenin, V. Ja.; Zagonov, V. P.) Numerical solution of convolution-type integral equations of the first kind on nonuniform grids. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 141* (1978), 26 pp. (Authors' summary) **80c:65123** 65R20 (45L10)
- Trachtenbrot, B. A. ★ *Algoritmusok és absztrakt automaták*. (Hungarian) [Algorithms and abstract automata] Translated from the Russian original by János Urbán. *Műszaki Könyvtár, Budapest; "Mir", Moscow*, 1978. 207 pp. ISBN 963-10-1755-9 (Editors) **80i:68001** 68-01
- Trajdos, Tadeusz See Schwartz, Laurent, **80m:26004**
- Tramov, M. I. Some questions of the theory of oscillation of solutions of differential equations with deviating argument. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 4, 46-52. (D. Bařnov) **80j:34099** 34K15
- Tran, Lanh T. (with Pitt, Loren D.) Local sample path properties of Gaussian fields. *Ann. Probab.* 7 (1979), no. 3, 477-493. (Robert J. Adler) **80g:60035** 60G15 (60G60)
- The range of Lévy's  $N$ -parameter Brownian motion in  $d$ -space. *Ann. Probab.* 7 (1979), no. 3, 532-536. (W. E. Pruitt) **80f:60040** 60G17
- Lê Đình Tráng See Lê Đình Tráng
- Trangostein, J. A. (with Gragg, W. B.; LeVeque, R. J.) Numerically stable methods for updating regressions. *J. Amer. Statist. Assoc.* 74 (1979), no. 365, 161-168. (Kenneth N. Berk) **80k:65109** 65U05 (62-04)
- phan Tran Nhu See Phan Tran Nhu
- Transler, René Verallgemeinerte formal  $p$ -adische Körper. *Arch. Math. (Basel)* 32 (1979), no. 6, 572-584. (G. Cherlin) **80m:12030** 12J10 (03C60, 12L10)
- Tran Van Trung Finite simple groups in which the centralizer  $M$  of some involution is solvable and the generalized Fitting group of  $M$  is extraspecial. *Arch. Math. (Basel)* 31 (1978/79), no. 6, 545-553. (W. J. Wong) **80h:20026** 20D05
- Trane, Sekou An open problem on slender semigroups. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 2, 207. (From the text) **80i:20068** 20M10
- Trapani, C. (with Epifanio, G.) On the matrix representation of closed linear operators: an extension of von Neumann's theory. *J. Math. Phys.* 20 (1979), no. 1, 148-152. (V. V. Peller) **80f:47014** 47A67 (47B25)
- (with Epifanio, G.) Remarks on a theorem by G. Epifanio: "On the matrix representation of unbounded operators" *J. Math. Phys.* 17 (1976), no. 9, 1688-1691; MR 55 #8879. *J. Math. Phys.* 20 (1979), no. 8, 1673-1675. (Erik G. F. Thomas) **80h:47048** 47B99
- Trapenik, L. P. Thermodynamic potentials in the theory of creep of aging media. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* 13 (1978), no. 1, 103-112. (Russian); translated as *Mech. Solids* 13 (1978), no. 1, 95-103. (W. Kosinski) **80f:73046** 73F20
- Trapp, George E. (with Anderson, William N., Jr.; Morley, T. D.) Fenchel duality of nonlinear networks. Special issue on the mathematical foundations of system theory. *IEEE Trans. Circuits and Systems* 25 (1978), no. 9, 762-765. (Ernest S. Kuh) **80a:94042** 94C05
- Trapp, Heinz Wilhelm (with Reiffen, Hans-Jörg) Ein Beitrag zur Whitney-Regularität im unendlichdimensionalen Fall. *Comment. Math. Helv.* 54 (1979), no. 1, 159-172. (K. Lamotte) **80g:58008** 58A35 (32K05, 58C27)
- Trapp, Rainer W. Exaktheit in der Philosophie. *Z. Allgemeine Wissenschaftstheorie* 9 (1978), no. 2, 307-336. (Editors) **80i:03017** 03A05
- Trapp, Robert See Progress in cybernetics and systems research, **80c:68005**
- Trub, J. F. (with Kung, H. T.) All algebraic functions can be computed fast. *Analyse et contrôle de systèmes (Papers, IRIA Sem., Rocquencourt, 1977)*, pp. 133-172. *IRIA, Rocquencourt, 1977*. (G. A. Watson) **80c:65022** 65D20 (68C25)
- Recent results and open problems in analytic computational complexity.
- Mathematical models and numerical methods (Papers, Fifth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975), pp. 269-272. *Banach Center Publ.*, 3, PWN, Warsaw, 1978. (Editors) **80j:68034** 68C25
- (with Kung, H. T.) All algebraic functions can be computed fast. *J. Assoc. Comput. Mach.* 25 (1978), no. 2, 245-260. (Hale F. Trotter) **80a:68042** 68C25
- (with Woźniakowski, H.) Convergence and complexity of Newton iteration for operator equations. *J. Assoc. Comput. Mach.* 26 (1979), no. 2, 250-258. (A. Ramm) **80c:65061** 65J15 (68C25)
- Truber, Philip (with Brooks, Robert) The van Est theorem for groups of diffeomorphisms. *Hadronic J.* 1 (1978), no. 3, 916-934. (D. B. Fuchs) **80b:58020** 58D05 (57R50)
- Un théorème de Stone-von Neumann formel. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 5, A355-A356. (J. S. Joel) **80i:58090** 58G07 (16A33, 16A49, 16A53)
- Trueman, Andrzej The geometry of gauge fields. Symposium on Mathematical Methods in the Theory of Elementary Particles (Liblice, 1978). *Czechoslovak J. Phys. B* 29 (1979), no. 1, 107-116. (Eckehard W. Mielke) **80k:81111** 81E10 (53C05, 55R10, 58E20, 83E05)
- A class of null solutions to Yang-Mills equations. *J. Phys. A* 13 (1980), no. 1, L1-L4. (A. Crumeyrolle) **80m:81055** 81E10 (53C80)
- Trueman, Günther Deformations and moduli of coherent analytic sheaves with finite singularities. *Fonctions de plusieurs variables complexes, III (Sém. François Norguet, 1975-1977)*, pp. 233-302. *Lecture Notes in Math.*, 670, Springer, Berlin, 1978. (D. Lieberman) **80h:32042** 32G13
- Deformations of sheaves and bundles. *Variétés analytiques compactes (Colloq., Nice, 1977)*, pp. 29-41. *Lecture Notes in Math.*, 683, Springer, Berlin, 1978. (C. Bănică) **80c:32026** 32G13 (14D15, 32G99)
- Moduli for vectorbundles on  $P_n(C)$ . *Math. Ann.* 237 (1978), no. 2, 167-186. (G. Horrocks) **80a:14008** 14F05 (32G13)
- Trutner, R. (with Luh, Wolfgang) On the Hausdorff-overconvergence of power series. *Arch. Math. (Basel)* 30 (1978), no. 5, 498-507. (William T. Sledd) **80c:30004** 30B30 (40G05)
- (with Kratz, W.) On the summability of function series. Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 1-2, 101-104. (A. Sharma) **80c:42012** 42C20
- Travis, C. C. (with Keener, M. S.) Positive cones and focal points for a class of  $n$ th-order differential equations. *Trans. Amer. Math. Soc.* 237 (1978), 331-351. (Richard Brown) **80i:34050** 34C10 (34B25)
- (with Post, Wilfred M., III) Dynamics and comparative statics of mutualistic communities. *J. Theoret. Biol.* 78 (1979), no. 4, 553-571. (Authors' summary) **80d:92035** 92A15
- (with Post, Wilfred M., III) Quantitative stability in models of ecological communities. *J. Theoret. Biol.* 79 (1979), no. 4, 547-553. (From the text) **80g:92038** 92A17
- (with Webb, G. F.) An abstract second-order semilinear Volterra integro-differential equation. *SIAM J. Math. Anal.* 10 (1979), no. 2, 412-424. (A. Ramm) **80c:45018** 45N05 (34Gxx)
- Travkin, Ju. I. A system of dual integral equations with trigonometric kernels. (Russian) *Prikl. Meh.* 14 (1978), no. 8, 102-109. (D. P. Gupta) **80a:45014** 45F10
- A system of double trigonometric series and its applications to the solution of contact problems in elasticity theory. (Russian) *Prikl. Meh.* 15 (1979), no. 3, 30-35, 110. (Authors' summary) **80h:73056** 73T05 (42B05)
- Trávníček, L. (with Gröger, Konrad; Nečas, Jindřich) Dynamic deformation processes of elastic-plastic systems. (German and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 10, 567-572. (Authors' summary) **80m:73036** 73E99
- Traxler, R. (with Le Cam, L.) On the asymptotic behavior of mixtures of Poisson distributions. *Z. Wahrsch. Verw. Gebiete* 44 (1978), no. 1, 1-45. (Reinhard Michel) **80c:62033** 62F05 (60F05, 62E20)
- Traynor, Tim The group-valued Lebesgue decomposition. *Pacific J. Math.* 80 (1979), no. 1, 273-277. (V. N. Aleksjuk) **80c:28016** 28B10
- Treder, Hans-Jürgen ★ Isaac Newton und die Begründung der mathematischen Prinzipien der Naturphilosophie. On the 250th anniversary of Newton's death, March 21, 1977. Sitzungsberichte der Akademie der Wissenschaften der DDR, Mathematik-Naturwissenschaften-Technik, Jahrgang 1977, 12. Akademie-Verlag, Berlin, 1977. 19 pp. (C. J. Scriba) **80h:01007** 01A45 (70-03, 83-03)
- Einsteins Feldtheorie mit Fernparallelismus und Diracs Elektrodynamik (unitäre Feldtheorie mit dem Vektorpotential als Bezugstetraeder). (English summary) *Ann. Physik* (7) 35 (1978), no. 5, 377-388. (Z. Janković) **80d:83048** 83C50
- (with V. Borzeszkowski, H.; Yourgrau, W.) Gravitational field equations of fourth order and supersymmetry. (German summary) *Ann. Physik* (7) 35 (1978), no. 6, 471-480. (R. Behari) **80a:83003** 83C05 (53B30)
- Die Asymmetrie der kosmischen Zeit und Riemanns Gravitationstheorie. (English summary) *Astronom. Nachr.* 299 (1978), no. 4, 165-169. (Hans Stephani) **80c:83051** 83D05 (01A55)
- Zur Struktur der allgemein-relativistischen Gravitationsgleichungen. *Tensor (N.S.)* 32 (1978), no. 1, 51-61. (R. Rosga) **80c:83007** 83C05 (53A45)
- (with Mercier, André; Yourgrau, W.) ★ On general relativity. An analysis of the fundamentals of the theory of general relativity and gravitation. *Akademie-Verlag, Berlin*, 1979. 154 pp. (C. B. Collins) **80c:83028** 83C99 (53C80)
- (with von Borzeszkowski, H.-H.; Yourgrau, W.) On singularities in electrodynamics and gravitational theory. *Astronom. Nachr.* 300 (1979), no. 2, 57-62. (Richard Sigal) **80c:83008** 83C10 (53A40)
- On expanding Mach-Einstein universes. (German summary) *Astronom. Nachr.* 300 (1979), no. 4, 177-179. (Authors' summary) **80c:83043** 83F05 (83C10)
- See also Albert Einstein in Berlin 1913-1933, **80a:01060a** and Albert Einstein in Berlin 1913-1933, **80i:01060b**
- Treger, Robert On  $p$ -torsion in étale cohomology and in the Brauer group. *Proc. Amer. Math. Soc.* 78 (1980), no. 2, 189-192. (David J. Saltman) **80k:14032** 14F20 (16A16)
- Trehan, Swaran (with Ahuja, G. C.; Narang, T. D.) Certain results on best approximation and continuity of metric projections. *Nanta Math.* 11 (1978), no. 1, 103-107. (G. Albinus) **80a:41033** 41A65
- Trehel, Michel Notes sur le couplage direct—couplage dans les combinaisons. *Cahiers Centre Études Rech. Opér.* 20 (1978), no. 2, 147-161. (R. Balakrishnan) **80m:05100** 05C99
- Treitl, Sven (with Gutowski, Paul R.; Robinson, Enders A.) Empirical spectral analysis revisited. *Topics in numerical analysis, III (Proc. Roy. Irish Acad. Conf., Trinity Coll., Dublin, 1976)*, pp. 429-446. Academic Press, London, 1977. (From the text) **80b:62109** 62M15
- Tretnin, L. A.  $S$ -integral solutions of Diophantine equations of hyperbolic type. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 22 (1978), no. 10, 881-884, 955. (R. Steiner) **80h:10025** 10B15
- (with Kotov, S. V.)  $S$ -ganze Punkte auf elliptischen Kurven. *J. Reine Angew. Math.* 306 (1979), 28-41. (David Lee Hilliker) **80b:10024** 10B15 (14G05, 14G25, 14K07)
- Tremaine, Scott (with Goldreich, Peter) The excitation of density waves at the Lindblad and corotation resonances by an external potential. *Astrophys. J.* 233 (1979), no. 3, part 1, 857-871. (George Contopoulos) **80i:85002** 85A05
- Tremblay, A.-M. (with Landsberg, Peter T.; Tykodi, R. J.) Systematics of Carnot cycles at positive and negative Kelvin temperatures. *J. Phys. A* 13 (1980), no. 3, 1063-1074. (Authors' summary) **80m:80002** 80A10
- Tremblay, Richard Some operational formulas involving the operators  $x\partial$ ,  $x\partial$  and fractional derivatives. *SIAM J. Math. Anal.* 10 (1979), no. 5, 933-943. (B. Bongiorno) **80c:26013** 26A33
- Tremmel, Thomas See Braun, Martin, **80h:34001**
- Trench, W. F. (with Greville, T. N. E.) Band matrices with Toeplitz inverses. *Transactions of the Twenty-Fourth Conference of Army Mathematicians (Univ. Virginia, Charlottesville, Va., 1978)*, pp. 365-375. *ARO Rep.*, 79.1, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (M. Lotkin) **80d:15025** 15A57 (15A09)

- Trendafilov, G. S.** Some quadrature formulas for singular integrals. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 3(190), 81–89. (From the text) **80a:65052** 65D30
- Trenkler, Götz** (with Büning, Herbert) ★Nichtparametrische statistische Methoden. Walter de Gruyter, Berlin-New York, 1978. 435 pp. ISBN 3-11-006678-5 (G. E. Noether) **80h:62028** 62Gxx
- An iteration estimator for the linear model. *Computat* 1978 (Proc. Third Sympos. Comput. Statist., Leiden, 1978), pp. 125–131, *Physica*, Vienna, 1978. (S. John) **80h:62083** 62J05
- Trenkler, Martin** Planar maps with prescribed types of vertices and faces and 1-connected graph. (Slovak. English and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* 32 (1975), 105–118. (Author's summary) **80f:05042** 05C10
- Trenogin, V. A.** Asymptotic expansions on families of Banach spaces. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 191–199, 318, *Irkutsk. Gos. Univ., Irkutsk*, 1976. (From the text) **80j:41051** 41A60
- Trent, Tavan T.** Extension of a theorem of Szegő. *Michigan Math. J.* 26 (1979), no. 3, 373–377. (Shōji Kobayashi) **80j:30050** 30D55 (30H05)
- Trépreau, J. M.** Problème de Cauchy hyperbolique non strict dans des classes d'ultradistributions. *Séminaire Goulaouic-Schwartz 1977/1978: Équations aux dérivées partielles*. Exp. No. 3, 14 pp., *École Polytech., Palaiseau*, 1978. (V.-V. Oliariu) **80e:35039** 35L45 (46F10)
- Le problème de Cauchy hyperbolique dans les classes d'ultrafonctions et d'ultradistributions. *Comm. Partial Differential Equations* 4 (1979), no. 4, 339–387. (V.-V. Oliariu) **80e:35040** 35L45 (46F10)
- Treskov, S. A.** (with Karev, G. P.) On the asymptotic behaviour of the population number. *Biometrical J.* 20 (1978), no. 2, 143–150. (Wolfgang J. Bühler) **80a:92049** 92A15
- Tresser, Charles** (with Couillet, Pierre) Itérations d'endomorphismes et groupe de renormalisation. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 7, A577–A580. (Editors) **80e:58043** 58F13
- Tretjak, A. L.** Asymptotic solution of certain optimal control problems with lags. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 8, 1414–1423, 1530. (G. Zatiašvili) **80a:90019** 49A99
- Tretjakov, N. V.** (with Gol'shtein, E. G.) Modified Lagrangians in convex programming and their generalizations. Point-to-set maps and mathematical programming. *Math. Programming Stud.* No. 10 (1979), 86–97. (Bruce D. Craven) **80e:90124** 90C25 (65K05)
- Tretjakov, S. I.** Algorithms of specialized processes operation for the solution of systems of equations. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 5, 34–36. (Author's summary) **80e:65074** 65F05 (65-04)
- Tretkoff, Carol** (with Tretkoff, Marvin) Solution of the inverse problem of differential Galois theory in the classical case. *Amer. J. Math.* 101 (1979), no. 6, 1327–1332. (K. Okugawa) **80k:12033** 12H05 (34A20)
- (with Tretkoff, Marvin) On a theorem of Rimhak Ree about permutations. *J. Combin. Theory Ser. A* 26 (1979), no. 1, 84–86. (Donald E. Taylor) **80g:20004** 20B05 (05C10)
- Tretkoff, Marvin** (with Tretkoff, Carol) Solution of the inverse problem of differential Galois theory in the classical case. *Amer. J. Math.* 101 (1979), no. 6, 1327–1332. (K. Okugawa) **80k:12033** 12H05 (34A20)
- (with Tretkoff, Carol) On a theorem of Rimhak Ree about permutations. *J. Combin. Theory Ser. A* 26 (1979), no. 1, 84–86. (Donald E. Taylor) **80g:20004** 20B05 (05C10)
- (with Fine, Benjamin) On the SQ-universality of HNN groups. *Proc. Amer. Math. Soc.* 73 (1979), no. 3, 283–290. (R. B. J. T. Allenby) **80d:20032** 20E34
- Tretter, Marietta J.** (with Walster, G. William) Additions and corrections: "Continued fractions for the incomplete beta function" (Ann. Math. Statist. 12 (1941), 218–223) by L. A. Aronson. *Ann. Statist.* 7 (1979), no. 2, 462–465. (Authors' summary) **80d:62019** 62E15
- Tret'yakov, N. V.** See Tretjakov, N. V.
- Treve, Yvain M.** Theory of chaotic motion with application to controlled fusion research. *Topics in nonlinear dynamics (Proc. Workshop, La Jolla Inst., La Jolla, Calif., 1977)*, pp. 147–220. *AIP Conf. Proc.*, 46, *Amer. Inst. Physics, New York*, 1978. (D. L. Rod) **80f:78015** 70H05 (58F05, 58F13, 76F05)
- Treves, F.** (with Baouendi, M. S.; Zachmanoglou, E. C.) Flat solutions and singular solutions of homogeneous linear partial differential equations with analytic coefficients. *Duke Math. J.* 46 (1979), no. 2, 409–440. (Alexander A. Pankov) **80h:35034** 35H05 (35A07, 58G15)
- Treybig, L. B.** (with Murray, W. O.) Triangulations with the free cell property. *Pacific J. Math.* 75 (1978), no. 2, 487–496. (I. Ivanišić) **80g:57022** 57Q05 (57Q15)
- (with Borosh, Itzhak) Bounds on positive integral solutions of linear Diophantine equations. II. *Canad. Math. Bull.* 22 (1979), no. 3, 357–361. (E. L. Cohen) **80m:15006** 15A24
- Tribois, Myron** See Maximum entropy formalism. **80b:82001**
- Tribozy, Ivan** Convexity in Riemannian manifolds. *An. Acad. Brasil. Ciênc.* 50 (1978), no. 3, 269–271. (H. Jacobowitz) **80e:53053** 53C20
- A characterization of  $\mathbb{R}^n$ . *Arch. Math. (Basel)* 31 (1978/79), no. 5, 517–519. (Themistocles M. Rassias) **80d:53030** 53C20
- Tribozy, Renato** Hopf's method and deformations of surfaces preserving mean curvature. *An. Acad. Brasil. Ciênc.* 50 (1978), no. 4, 447–450. (Themistocles M. Rassias) **80e:53002** 53A10 (53C40)
- Tricarico, Mariarosaria** Nonlinear perturbations for a class of elliptic-parabolic operators of order 2m. (Italian) *Ricerche Mat.* 27 (1978), no. 1, 131–154. (M. Biroli) **80a:35055** 35J65
- Tricerrí, Franco** (with Vanhecke, Lieven) An example of a 6-dimensional flat almost Hermitian manifold. *Colloq. Math.* 40 (1978/79), no. 1, 111–117. (A. Gray) **80e:53037** 53C15 (53C55)
- On the differential geometry of multifoliated manifolds. (Italian. English summary) *Boll. Un. Mat. Ital. A (5)* 16 (1979), no. 1, 76–84. (Luis A. Cordero) **80e:57030** 57R30 (53C05)
- (with Vanhecke, Lieven) Decomposition of a space of curvature tensors on a quaternionic Kähler manifold and spectrum theory. *Simon Stevin* 53 (1979), no. 1–2, 163–173. (Shūichi Tanno) **80e:53063** 53C55
- Trick, Timothy N.** (with Mayeda, Wataru; Sakia, Adel A.) Calculation of parameter values from node voltage measurements. Special issue on automatic analog fault diagnosis. *IEEE Trans. Circuits and Systems* 26 (1979), no. 7, 466–474. (Author's summary) **80h:94049** 94C05
- Triebel, Hans** Remarks on Lebesgue-Besov spaces (representations, multipliers, embeddings). *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 375–382, "Nauka", Moscow, 1977. (J. Musielak) **80e:46023** 46E30 (46E35)
- ★Interpolation theory, function spaces, differential operators. *VEB Deutscher Verlag der Wissenschaften, Berlin*, 1978. 528 pp. (Robert D. Brown) **80i:46032a** 46E35 (35Jxx, 46M35)
- ★Interpolation theory, function spaces, differential operators. North-Holland Mathematical Library, 18. North-Holland Publishing Co., Amsterdam-New York, 1978. 528 pp. ISBN 0-7204-0710-9 (Robert D. Brown) **80i:46032b** 46E35 (35Jxx, 46M35)
- Multipliers for Besov spaces. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 861–870, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (Angelo Favini) **80i:46032** 46E35
- On spaces of  $B_{p,q}^s$  type and  $B^s$  type. *Math. Nachr.* 85 (1978), 75–90. (Jöran Bergh) **80d:46063** 46E35
- On Haar bases in Besov spaces. *Serdica* 4 (1978), no. 4, 330–343. (Alberto Torchinsky) **80h:46048** 46E35
- General function spaces. V. The spaces  $B_{p,q}^{s(\cdot)}$  and  $F_{p,q}^{s(\cdot)}$ : the case  $0 < p < \infty$ . *Math. Nachr.* 87 (1979), 129–152. (Jöran Bergh) **80j:46060** 46E35
- Trifonov, A. P.** Reception of a discontinuous quasideterministic signal on a Gaussian noise background. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 4, 146–153 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 4, 99–106 (1979). (Author's summary) **80h:94012** 94A12
- Efficiency of discrimination algorithm for orthogonal signals with unknown parameters. *Problemy Peredači Informacii* 15 (1979), no. 2, 85–96 (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 2, 144–152. (Author's summary) **80j:94006** 94A12
- Trifonov, Ju. V.** File placement in direct access storage. (Russian) *Avtomat. i Vychisl. Tehn. (Riga)* 1978, no. 3, 63–67, 93. (Author's summary) **80k:68012** 68B15
- Trifonović, Milomir** Asymptotic behaviour of the spectral function of the integro-differential operator  $L = B^{-1}A$ . *Math. Balkanica* 6 (1976), 252–257 (1978). (J. Wiesner) **80i:34038** 34B25 (45P05)
- Triggiani, Roberto** On the relationship between first and second order controllable systems in Banach spaces. *Distributed parameter systems: modelling and identification (Proc. IFIP Working Conf., Rome, 1976)*, pp. 370–393, *Lecture Notes in Control and Information Sci.*, 1, Springer, Berlin, 1978. (P. K. C. Wang) **80a:93046** 93B05
- On the relationship between first and second order controllable systems in Banach spaces. *SIAM J. Control Optim.* 16 (1978), no. 6, 847–859. (Marshall Slemrod) **80a:93047** 93B05 (34G10, 47A50)
- On Nambu's boundary stabilizability problem for diffusion processes. *J. Differential Equations* 33 (1979), no. 2, 189–200. (G. N. Mil'shtein) **80i:93052** 93D15 (35B37)
- (with Nelson, S.) Analytic properties of cosine operators. *Proc. Amer. Math. Soc.* 74 (1979), no. 1, 101–104. (S. Kurepa) **80h:47051** 47D05
- Trigante, Donato** (with Casulli, V.) Multipoint iterative parallel methods for solving equations. (Italian summary) *Calcolo* 15 (1978), no. 2, 147–160. (J. W. Schmidt) **80i:65051** 65H05
- On some comparison results useful in numerical analysis. *Nonlinear Anal.* 2 (1978), no. 4, 465–472. (Jacques Lemordant) **80a:65158** 65L05 (65Q05)
- Trigub, R. M.** Linear methods for the summation of simple and multiple Fourier series and their approximate properties. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 383–390, "Nauka", Moscow, 1977. (L. Gogoladze) **80j:42016** 42A24 (42B05)
- Trillas Ruiz, Enrique** (with Riera, T.) Entropies in finite fuzzy sets. *Inform. Sci.* 15 (1978), no. 2, 159–168. (Abraham Kandel) **80k:94065** 94D05 (03E72, 94A17)
- Trimeche, Khélifa** Probabilités indéfiniment divisibles et théorème de la limite centrale pour une convolution généralisée sur la demi-droite. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 1, A63–A66. (Author's summary) **80b:60018** 60B15 (22E30)
- (with Achour, Abdennebi) Opérateurs de translation généralisée associés à un opérateur différentiel singulier sur un intervalle borné. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 7, A399–A402. (Authors' summary) **80i:47064** 47E05 (46J99)
- Trinks, Wolfgang** Berechnung von Einheiten nach Lagrange. *J. Reine Angew. Math.* 299/300 (1978), 125–137. (G. H. Wenzel) **80k:12003** 12A25
- Triolo, L.** (with Marchioro, C.; Pellegrinotti, A.; Pulvirenti, M.) Velocity of a perturbation in infinite lattice systems. *J. Statist. Phys.* 19 (1978), no. 5, 499–510. (Authors' summary) **80b:82053** 82A60 (58F05)
- Triome, Susana Elena** (with González Domínguez, Alberto) On the Laplace transforms of retarded, Lorentz-invariant functions. *Adv. in Math.* 31 (1979), no. 1, 51–62. (Hans-Jürgen Glaeske) **80h:44001** 44A10
- Tripathi, Amarendra Nath** Conformal correspondence of the space external to spherically symmetric distribution of matter. *Math. Ed. (Sivan)* 12 (1978), no. 2, A31–A35. (B. K. Datta) **80e:83016** 83C20 (53B30)
- Tripathi, L. M.** (with Singh, K. N.) On the Nörlund summability of the conjugate derived series of the Fourier series. *Acta Cienc. Indica* 4 (1978), no. 4, 413–417. (L. Gogoladze) **80k:42015** 42A24
- Tripathi, R. S.** (with Lukes, T.) A new approach to the density of eigenvalues and localization in a general disordered system. *Proc. Roy. Soc. London Ser. A* 362 (1978), no. 1708, 79–95. (Robin Hudson) **80k:82048** 82A42 (81C35)
- Tripathi, Ram C.** (with Gurland, John) Some aspects of the Kemp families of distributions. *Comm. Statist. A—Theory Methods* 8 (1979), no. 9, 855–869. (J. K. Ord) **80m:62015** 62E10
- Tripciano, Giulia** Some properties of convex curves in  $\mathbb{R}^2$ ; application to the calculation of approximations of volumes of convex sets. (Italian) *Atti Sem. Mat. Fis. Univ. Modena*



- 26 (1977), no. 2, 329-338 (1979). (W. J. Firey) **80d:52006** 52A15
- Trilenko, E. K. Estimation of the mean in a multivariate normal population with discontinuous a priori density. *Problemy Peredachi Informatsii* 15 (1979), no. 1, 56-60 (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 1, 42-45. (Author's summary) **80j:94007** 94A12
- Trivedi, H. P. Improved matrix elements of  $6(r_1)$  using approximate wavefunctions. *J. Phys. B* 13 (1980), 5, 839-A66. (Author's summary) **80m:81111** 81G55
- Trivedi, Kishor S. (with Rusnak, Joseph G.) Higher radix on-line division. *Proceedings of the 4th IEEE Symposium on Computer Arithmetic (Santa Monica, Calif., 1978)*, pp. 164-174, IEEE, Long Beach, Calif., 1978. (Authors' summary) **80g:68042** 68C05 (with Wagner, Robert A.) A decision model for closed queueing networks. *IEEE Trans. Software Engrg.* 5 (1979), no. 4, 328-332. (Authors' summary) **80e:68245** 68J10 (68C15)
- Trivedi, T. N. (with Dwivedi, A. P.) Triple series equations involving Jacobi and Laguerre polynomials. *Indian J. Pure Appl. Math.* 7 (1976), no. 9, 951-960. (Authors' summary) **80e:45009** 45F10
- Trifaj, L. New approach to the solution of the scattering of spinless particles by central potentials. *Czechoslovak J. Phys. B* 30 (1980), no. 1, 33-46. (Author's summary) **80m:81070** 81F05
- Trnková, V. Isomorphism of products and representation of commutative semigroups. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 657-683, Colloq. Math. Soc. János Bolyai, 20, North-Holland, Amsterdam, 1979. (László Lovász) **80i:20054** 20M30 (18B40)
- Trnková, Věra See Šedivá-Trnková, Věra
- Truic, Jean-Pierre Fonctions à valeurs dans des espaces fonctionnels généraux: théorèmes de R. Ellis et de I. Namioka. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 2, A63-A66. (Author's summary) **80d:54012** 54C35 (22D99) (with Hansel, G.) Mesures marginales et théorème de Ford-Fulkerson. *Z. Wahrsch. Verw. Gebiete* 43 (1978), no. 3, 245-251. (Vladimir I. Levin) **80f:28005** 28A35 (60A10) (with Calbrix, Jean) Applications séparément continues. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 13, A647-A648. (Authors' summary) **80e:54009** 54C10
- Trocan, V. A. Nonaxially symmetric oscillations of a hyperelastic circular membrane under finite perturbations. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 37* (1978), 48 pp. (Author's summary) **80j:73017** 73D30 (49A99, 73K12)
- Troelstra, A. S. Completeness and validity for intuitionistic predicate logic. *Colloque International de Logique (Clermont-Ferrand, 1975)*, pp. 39-58, Colloques Internat. CNRS, 249, CNRS, Paris, 1977. (Dirk van Dalen) **80i:03017** 03B20 (03F55) On Ashvinkumar's principle of microscopic completeness. *Nederl. Akad. Wetensch. Indag. Math.* 41 (1979), no. 1, 77-81. (B. van Rootselaar) **80i:03066** 03F55 See also van Dalen, D., **80i:03067**
- Troelstra, R. See Krein, M. G.; et al., **80d:47026** and Krein, M. G.; et al., **80h:47022**
- Troesch, Albert (with Urlacher, Émile) Perturbations singulières et analyse non standard. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 14, A937-A939. (Authors' summary) **80e:34047** 34C99 (03H05)
- Troesch, B. A. (with Searcy, J. L.) A cyclic inequality and a related eigenvalue problem. *Pacific J. Math.* 81 (1979), no. 1, 217-226. (Authors' summary) **80f:15019** 15A39 (26D15, 65F15)
- Trofimenko, S. C. (with Sampson, J. R.) Aspects of shape. (French summary) *INFOR—Canad. J. Oper. Res. Inform. Process.* 17 (1979), no. 2, 138-150. (Fred L. Bookstein) **80k:52003** 52A37 (05B50, 62H25, 92A25)
- Trofimov, V. V. Euler equations on Borel subalgebras of semisimple Lie algebras. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 3, 714-732, 735. (A. Morimoto) **80i:58039** 58F05
- Trogon, Alain (with Mazodier, Pascal) Heteroscedasticity and stratification in error components models. (French and Spanish summaries) *Colloque International du CNRS sur l'Économétrie des Données Individuelles Temporelles (Paris, 1977)*. *Ann. I.N.S.E.E.* No. 30-31 (1978), 451-482, 729, 743. (Jerry A. Hausman) **80d:62094** 62P20 Miscellaneous asymptotic properties of ordinary least squares and maximum likelihood estimators in dynamic error components models. (French and Spanish summaries) *Colloque International du CNRS sur l'Économétrie des Données Individuelles Temporelles (Paris, 1977)*. *Ann. I.N.S.E.E.* No. 30-31 (1978), 631-657, 732, 746. (Andrew Harvey) **80e:62074** 62P20
- Trochimuk, Ju. Ju. Differential properties of functions. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 3, 289-294, 335. (A. Precupanu) **80i:26009** 26A24 Differential properties of real and complex functions. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 4, 465-469, 479. (D. Preiss) **80i:26016** 26B35 (30A99) See also Complex analysis and manifolds, **80d:00004**
- Trochimuk, Valentin S. Some algebras of Menger relations. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 2(189), 87-95. (Author's introduction) **80a:03089** 03G25 (with Schein, Boris M.) Algebras of multiplicity functions. *Semigroup Forum* 17 (1979), no. 1, 1-64. (Gilbert Crombez) **80e:08002** 08A05 (20N15)
- Troianello, Giovanni Maria On weak subalgebras for parabolic second-order operators. *Comm. Partial Differential Equations* 3 (1978), no. 10, 933-948. (V.-V. Olariu) **80e:35028** 35K10 (with Charrier, Pierre) On strong solutions to parabolic unilateral problems with obstacle dependent on time. *J. Math. Anal. Appl.* 65 (1978), no. 1, 110-125. (J. W. Bebernes) **80j:35048** 35K20 (with Platone Garroni, Maria Giovanna) Some regularity results and a priori estimates for solutions of variational and quasi-variational inequalities. A survey. *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis (Rome, 1978)*, pp. 493-518, Pitagora, Bologna, 1979. (Alexander A. Pankov) **80g:35060** 35J65 (35K60, 47H05, 49A29) On a class of unilateral evolution problems. *Manuscripta Math.* 29 (1979), no. 2-4, 353-384. (W. F. Ames) **80g:35067** 35K22
- Troickii, S. A. (with Kelbert, M. Ja.; Kreinin, A. Ja.) One class of queueing system. *Problemy Peredachi Informatsii* 15 (1979), no. 1, 105-107 (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 1, 80-81. (Authors' summary) **80i:68026** 68C15 (60K25, 90B22, 94C10)
- Trold, Mario (with Matarasso, Silvano) Elliptic differential operators in Sobolev spaces with a weight. (Italian) *Ricerche Mat.* 27 (1978), no. 1, 83-108. (G. Geymonat) **80k:35035** 35J40
- Troitskii, S. A. See Troitskii, S. A.
- Troján, Jan (with Vanžura, Jiří) A characterization of hyperspheres in the quaternionic space. *Czechoslovak Math. J.* 29(104) (1979), no. 2, 284-286. (Engelbert Dornfeld) **80g:53002** 53A05
- Trojan, Allan (with Spiegel, Eugene) The Schur subgroup of a  $p$ -adic field. *Canad. J. Math.* 31 (1979), no. 2, 300-303. (Jürgen Ritter) **80e:20007** 20C11 (12B17)
- Trojan, Jerzy How to decrease the combinatory complexity. *Demonstratio Math.* 11 (1978), no. 3, 807-811. (Irene Gargantini) **80i:65054** 65H05 (65D15, 68C25) Index of convergence. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. No. 30* (1979), 301-308. (J. Mafik) **80m:40003** 40A05
- Tromba, Anthony J. The Euler characteristic of vector fields on Banach manifolds and a globalization of Leray-Schauder degree. *Adv. in Math.* 28 (1978), no. 2, 148-173. (Christian Fenske) **80e:58006** 58B15 (47A53, 58E10) (with Tomi, Friedrich) Extreme curves bound embedded minimal surfaces of the type of the disc. *Math. Z.* 158 (1978), no. 2, 137-145. (Robert Gulliver) **80k:53011** 53A10 (49F10, 58E12) The beer barrel theorem. A new proof of the asymptotic conjecture in fixed point theory. *Functional differential equations and approximation of fixed points (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978)*, pp. 484-488, *Lecture Notes in Math.*, 730, Springer, Berlin, 1979. (Ju. G. Borisov) **80k:58029** 58C30 (58B15)
- Trombetti, Guido (with Alvino, Angelo) Some observations on a class of nonlinear integral equations. (Italian) *Rend. Accad. Naz. XL* (5) 3 (1977/78), 193-208 (1979). (A. Corduneanu) **80i:45010** 45G10 (with Alvino, Angelo) The best majorization constants for a class of degenerate elliptic equations. (Italian) *Ricerche Mat.* 27 (1978), no. 2, 413-428. (G. Geymonat) **80k:35040** 35J70 (with Alvino, Angelo) The Dirichlet problem in a cone of  $\mathbb{R}^n$  in  $L^p$ . (Italian. English summary) *Ann. Mat. Pura Appl.* (4) 120 (1979), 269-291. (Pavel Doktor) **80k:35032** 35J40 (46E35)
- vũ Trọng Tuấn See Vũ Trọng Tuấn
- majewska-Tronowicz, Jadwiga See Majewska-Tronowicz, Jadwiga
- Trossmann, Ernst Singular optimal controls in a prey-predator model. (German summary) *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 5, pp. 563-576, *Operations Research Verfahren*, 35, Hain, Meisenheim, 1979. (Brian D. Sleeman) **80f:92023** 92A15
- Trotman, D. J. A. Stability of transversality to a stratification implies Whitney (a)-regularity. *Invent. Math.* 50 (1978/79), no. 3, 273-277. (C. G. Gibson) **80b:58015** 58C27
- Trotter, L. E., Jr. (with Baum, S.) Integer rounding and polyhedral decomposition for totally unimodular systems. *Optimization and operations research (Proc. Workshop, Univ. Bonn, Bonn, 1977)*, pp. 15-23, *Lecture Notes in Econom. and Math. Systems*, 157, Springer, Berlin, 1978. (Z. Waksman) **80a:52006** 52A25 (90C10) (with Weinberger, D. B.) Symmetric blocking and anti-blocking relations for generalized circulations. *Polyhedral combinatorics. Math. Programming Stud.* No. 8 (1978), 141-158. (K. V. Sahbazjan) **80c:90144** 90C33 (with Bland, Robert G.; Huang, H. C.) Graphical properties related to minimal imperfection. *Discrete Math.* 27 (1979), no. 1, 11-22. (Alan Tucker) **80g:05034** 05C15 (with Monma, Clyde L.) On perfect graphs and polyhedra with  $\{0, 1\}$ -valued extreme points. *Math. Programming* 17 (1979), no. 2, 239-242. (Ethan D. Bolker) **80i:90070** 90C10 (52A25)
- Trotter, P. G. Normal partitions of idempotents of regular semigroups. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 1, 110-114. (T. E. Hall) **80c:20083** 20M10
- Trotter, William T., Jr. Combinatorial problems in dimension theory for partially ordered sets. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 403-406, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Author's summary) **80g:06002** 06A10 Order preserving embeddings of aographs. *Theory and applications of graphs (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976)*, pp. 572-579, *Lecture Notes in Math.*, 642, Springer, Berlin, 1978. (David P. Sumner) **80a:05006** 05C10 (05C20) (with Erdős, Paul) When the Cartesian product of directed cycles is Hamiltonian. *J. Graph Theory* 2 (1978), no. 2, 137-142. (J. A. Bondy) **80e:05063** 05C20 (05C45, 10A05)
- Troudet, T. (with Arvieu, R.) Complete solution of the cranked harmonic oscillator. *Z. Phys. A* 291 (1979), no. 2, 183-188. (Authors' summary) **80c:81029** 81C10
- Trounman, J. L. (with Jurkat, W. B.) Maximal inequalities related to generalized a.e. continuity. *Trans. Amer. Math. Soc.* 252 (1979), 49-64. (Peter W. Day) **80k:46038** 46E30 (26D15)
- Troy, William C. Errata: "Oscillations in a third-order differential equation modeling a nuclear reactor" (*Siam J. Appl. Math.* 32 (1977), no. 1, 146-153). *SIAM J. Appl. Math.* 35 (1978), no. 3, 616. (Editors) **80k:34033** 34C10 (82A75) Nonmonotonic solutions of the Falkner-Skan boundary layer equation. *Quart. Appl. Math.* 37 (1979/80), no. 2, 157-167. (W. D. Lakin) **80j:34020** 34B15 (76D10) (with Field, Richard J.) The existence of solitary traveling wave solutions of a model of the Belousov-Zhabotinskii reaction. *SIAM J. Appl. Math.* 37 (1979), no. 3, 561-587. (J. P. Kernevez) **80k:35044** 35K55 (92A09, 92A40)
- Trubnin, V. A. An effective algorithm for the Weber problem with a rectangular metric. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 6, 67-70. (S. Zlobec) **80g:90074** 90C05 (90B10)
- Trubnik, R. L. Discrete principle of the maximum for systems with delay. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 6, 20-25. (Editors) **80c:93052** 93C99
- Trubnikov, Ju. V. Accretive differential equations. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 4, 835-853, 927. (Hans Kaper) **80m:47049** 47H05 (34G20)

- Trubowitz, E. (with McKean, H. P.) Hill's surfaces and their theta functions. *Bull. Amer. Math. Soc.* **84** (1978), no. 6, 1042-1085. (Alexander A. Pankov) **80b:30039** 30F30 (14H45, 34B30, 35Q20)
- (with Deift, P.) Inverse scattering on the line. *Comm. Pure Appl. Math.* **32** (1979), no. 2, 121-251. (R. C. Gilbert) **80c:34011** 34B25 (35P25, 58F07)
- Truckenbrodt, A. Schwingungsverhalten hybrider Mehrkörpersysteme bei Führungsbewegungen der elastischen Körper. *Z. Angew. Math. Mech.* **59** (1979), no. 5, T160-T162. (Author's summary) **80b:70008** 70E99
- Trudinger, Neil S. On the positivity of weak supersolutions of nonuniformly elliptic equations. *Bull. Austral. Math. Soc.* **19** (1978), no. 3, 321-324. (Boris Pavlov) **80i:35057** 35J15
- True, Hans Bifurcation of stationary solutions for the quasi-geostrophic equation with nonlinear boundary conditions. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Star.)* **30** (1978), no. 4-5, 657-661. (J. S. Joel) **80c:86003** 86A10 (35B32, 76E15)
- (with Iooss, Gérard; Nielsen, Hans Bruun) Bifurcation of the stationary Ekman flow into a stable periodic flow. *Arch. Rational Mech. Anal.* **68** (1978), no. 3, 227-256. (F. Milinazzo) **80c:76023** 76E20 (35B32)
- The direction of the secondary wave motion in the Ekman boundary layer. *Math. Methods Appl. Sci.* **1** (1979), no. 4, 491-497. (E. G. Broadbent) **80m:76041** 76D99
- Truesdinger, E. (with Chandrasekaran, R.) Local unimodularity of matrix-vector pairs. *Linear Algebra Appl.* **22** (1978), 65-78. (M. Gondran) **80f:15018** 15A36 (90C05)
- Truesdell, C. Some challenges offered to analysis by rational thermomechanics. *Contemporary developments in continuum mechanics and partial differential equations (Proc. Internat. Sympos., Inst. Mat., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 495-603. North-Holland Math. Studies, 30, North-Holland, Amsterdam, 1978. (Kolumban Hutter) **80c:80001** 80-02 (01A65)
- Absolute temperatures as a consequence of Carnot's general axiom. *Arch. Hist. Exact Sci.* **20** (1979), no. 3-4, 357-380. (Gérard A. Maugin) **80m:80001** 80A05 (01A55, 80-03)
- A conceptual sketch of thermodynamics for the study of mechanics. (Italian. English summary) *Boll. Un. Mat. Ital. A (5)* **16** (1979), no. 1, 1-20. (D. Ieşan) **80d:80005** 80A10
- Trushanovskii, N. N. (with Kononenko, A. M.) Transportation polytopes with a maximum number of vertices. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1978**, no. 5, 23-28, 141. (Authors' summary) **80a:90091** 90C08 (52A25)
- (with Kononenko, A. M.) The enumeration of maximal trees of a class of bipartite graphs. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1978**, no. 6, 111-113, 143. (G. N. Kopylov) **80c:05063** 05C05 (05C20)
- Truhil'o, R. (with Vasilevskii, N. L.) On  $\Phi_R$ -operators in matrix algebras of operators. (Russian) *Dokl. Akad. Nauk SSSR* **245** (1979), no. 6, 1289-1292. (S. G. Gindikin) **80k:47049** 47D30
- Trullinger, S. E. (with Lee, K. C.) Generalized susceptibility of a solitary wave. *J. Math. Phys.* **20** (1979), no. 6, 1093-1098. (Authors' summary) **80d:82054** 82A55 (35Q99)
- (with DeLeonardis, R. M.) Statistical mechanics of the double-quadratic chain: exact results and ideal-gas phenomenology for nonreflectionless solitary waves. *Phys. Rev. A (3)* **20** (1979), no. 5, 2225-2234. (W. Güttinger) **80k:82017** 82A05
- Truman, Aubrey Some applications of vector space measures to non-relativistic quantum mechanics. *Vector space measures and applications (Proc. Conf., Univ. Dublin, Dublin, 1977)*, 1, pp. 418-441. *Lecture Notes in Math.*, 644, Springer, Berlin, 1978. (Author's summary) **80a:81047** 81C99 (28C20)
- Erratum: "The Feynman maps and the Wiener integral" (*J. Math. Phys.* **19** (1978), no. 8, 1742-1750). *J. Math. Phys.* **20** (1979), no. 8, 1832-1833. (Editors) **80f:81035** 81C30 (58D30)
- ngo viet Trung See Ngo Viet Trung
- tran van Trung See Tran Van Trung
- Trunov, N. N. (with Mamaev, S. G.) Vacuum averages of the quantum field energy momentum tensor on manifolds of varying topology and geometry. I. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* **1979**, no. 7, 88-93. (From the text) **80m:81065a** 81E99 (57R20, 81G05)
- (with Mamaev, S. G.) Vacuum averages of the quantum field energy-momentum tensor on manifolds of varying topology and geometry. II. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* **1979**, no. 9, 51-54. (From the text) **80m:81065b** 81E99 (57R20, 81G05)
- (with Mamaev, S. G.) The dependence of vacuum expectation values of the stress-energy tensor upon the geometry and the topology of the manifold. (Russian. English summary) *Theoret. Mat. Fiz.* **38** (1979), no. 3, 345-354. (G. Lassner) **80i:83028** 83C99 (53C80, 81E99)
- Truong, T. K. (with Reed, Irving S.; Miller, Robert L.) Fast algorithm for computing a primitive  $2^{2^k}$ th root of unity in  $GF(2^p - 1)^2$ . *Electron. Lett.* **14** (1978), no. 15, 493-494. (Authors' summary) **80c:68076** 68C05 (94A05)
- (with Reed, Irving S.; Miller, Robert L.) Simple method for computing elements of order  $2^n$ , where  $n|2^p - 1$  and  $2 < k < p + 1$ , in  $GF(2^p - 1)^2$ . *Electron. Lett.* **14** (1978), no. 21, 697-698. (Authors' summary) **80c:68077** 68C05 (94A05)
- (with Reed, Irving S.) Fast Mersenne-prime transforms for digital filtering. *Proc. Inst. Electr. Engrs.* **125** (1978), no. 5, 433-440. (B. D. Donevski) **80g:94010** 94A11 (65C05, 65R10, 94Bxx)
- (with Reed, Irving S.; Miller, Robert L.) Decoding of B.C.H. and R.S. codes with errors and erasures using continued fractions. *Electron. Lett.* **15** (1979), no. 17, 542-544. (Authors' introduction) **80h:94032** 94B15
- (with Reed, Irving S.) A new hybrid algorithm for computing a fast discrete Fourier transform. *IEEE Trans. Comput.* **28** (1979), no. 7, 487-492. (Authors' summary) **80c:68078** 68C05 (94A05)
- Truong, T. T. (with Schroer, B.) The order/disorder quantum field operators associated with the two-dimensional Ising model in the continuum limit. *Nuclear Phys. B* **144** (1978), no. 1, 80-122. (Authors' summary) **80b:82019** 82A15 (47B99)
- (with Schroer, B.)  $Z_2$  duality algebra in  $D=2$  quantum field theory. *Nuclear Phys. B* **154** (1979), no. 1, 125-139. (L. Streit) **80c:82045** 82A67 (81E99)
- Trushin, D. (with Allen, H. P.) Coproper coalgebras. *J. Algebra* **54** (1978), no. 1, 203-215. (David E. Radford) **80a:16016** 16A24 (16A64)
- Trushin, A. V. (with Lebedev, D. C.) Solution of a system of linear equations with an incomplete cyclic matrix by means of a discrete Fourier transform. (Russian) *Z. Vychisl. Mat. i Mat. Fiz.* **19** (1979), no. 5, 1333-1336, 1359-1360. (Authors' summary) **80i:65040** 65F20
- Truskova, N. F. Linear algebra of integrals in the quantum-mechanical two-center problem. *Jadernaja Fiz.* **28** (1978), no. 3, 850-859. (Russian); translated as *Soviet J. Nuclear Phys.* **28** (1978), no. 3, 435-439. (C. J. Eliezer) **80b:81082** 81H05
- Elementary solutions of the quantum-mechanical two-center problem and representations of the group  $O(4) \otimes O(2, 2)$ . *Jadernaja Fiz.* **29** (1979), no. 1, 243-248. (Russian); translated as *Soviet J. Nuclear Phys.* **29** (1979), no. 1, 122-124. (Author's summary) **80i:81031** 81C40 (22E70)
- Trushnikov, V. N. A stable nonlinear iteration process. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 5, 58-62. (S. Burýšek) **80i:65065** 65J10 (47A50)
- A nonlinear regularizing algorithm and some of its applications. (Russian) *Z. Vychisl. Mat. i Mat. Fiz.* **19** (1979), no. 4, 822-829, 1080. (V. V. Vasin) **80i:65066** 65J10 (47A50)
- Truss, J. A note on increasing sequences of constructibility degrees. *Higher set theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1977)*, pp. 473-476. *Lecture Notes in Math.*, 669, Springer, Berlin, 1978. (U. Felgner) **80d:03055a** 03E45
- Trybala, S. Minimax prediction of a sample distribution function. (Polish summary) *Zastoi-Mat.* **16** (1978/79), no. 2, 167-174. (Benjamin Zehnwirth) **80d:62011** 62C01
- Trybus, Leszek Nonzero-sum feedback differential game with a linear, symmetric, hyperbolic system. *J. Optim. Theory Appl.* **26** (1978), no. 4, 645-652. (Emmanuel Nicholas Barron) **80b:90167** 90D25
- Control of a first-order linear hyperbolic system with uncertain parameters described by an inventory process. (Polish. English and Russian summaries) *Podstawy Sterowania* **9** (1979), no. 1, 3-16. (Author's summary) **80c:93118** 93E10 (93C99)
- Trzepsz, A. Stability and Lyapunov functions in generalized local pseudodynamical systems. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* **20** (1979), 135-144. (W. R. Utz) **80c:54054** 54H20 (34D20)
- Trzepsowski, A. The asymptotic motion of the concentrated defect. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Star.)* **30** (1978), no. 6, 769-775. (V. Gheorghij) **80i:73063** 73S99 (34E05, 73M05)
- Tsagas, Grigorios Harmonic and Killing tensor fields in pinched Riemannian manifolds with boundary. *Math. Balkanica* **6** (1976), 258-264 (1978). (J. R. Vanstone) **80i:53022** 53C20 (58A14)
- (with Ledger, A.) Riemannian  $s$ -manifolds. *J. Differential Geom.* **12** (1977), no. 3, 333-343. (J. L. Koszul) **80c:53051** 53C35
- The spectrum of the Bochner-Laplace operator on the 1-forms on a compact Riemannian manifold. *Math. Z.* **164** (1978), no. 2, 153-157. (R. S. Millman) **80b:58067** 58G25 (35P20, 53C25)
- On the spectrum of the Laplacian on the 1-forms on a compact Riemannian manifold. *Tensor (N.S.)* **32** (1978), no. 2, 140-144. (R. S. Millman) **80b:58066** 58G25 (58C25)
- The cohomology groups of a special Einstein manifold. *Ann. Mat. Pura Appl. (4)* **119** (1979), 273-280. (Huei-Shyong Lue) **80k:53077** 53C25
- (with Kokinos, C.) The geometry and the Laplace operator on the exterior 2-forms on a compact Riemannian manifold. *Proc. Amer. Math. Soc.* **73** (1979), no. 1, 109-116. (P. Günther) **80b:58068** 58G25 (53C20)
- Tsai, Chun Ping (with Fleming, Wendell H.) Minimum exit probabilities and differential games. *Differential games and control theory (Proc. Third Kingston Conf., Part A, Univ. Rhode Island, Kingston, R.I., 1978)*, pp. 67-75. *Lecture Notes in Pure and Appl. Math.*, 44, Dekker, New York, 1979. (Authors' summary) **80g:90131** 90D25
- Tsai, Han Ping (with Hsiao, Sherman H. C.) On Cartan-Sternberg's example of the reduction of  $G$ -structure. *Tamkang J. Math.* **8** (1977), no. 2, 251-257. (Editors) **80c:58030** 58H05 (53C50)
- Ts'ai, Lung 1 Periodic solutions of parabolic equations with functional arguments. *Chinese J. Math.* **6** (1978), no. 1, 77-86. (Piero de Mottoni) **80b:35010** 35B10 (35R10)
- Existence of periodic solutions for  $n$ th order ordinary differential equations. *Bull. Inst. Math. Acad. Sinica* **7** (1979), no. 1, 59-67. (J. A. Marlin) **80b:34051** 34C25
- Tsai, Paul J. (with Chen, Hubert J.; Wang, Mike W.) Confidence intervals for the largest mean from  $k$  correlated normal populations. *Comm. Statist. B—Simulation Comput.* **7** (1978), no. 3, 205-222. (Khurshed Alam) **80b:62048** 62F25
- Ts'ai, Yueh Hsia (with Ko, Hwei Mei) Fixed-point theorems for point-to-set mappings in locally convex spaces and characterizations of complete metric spaces. *Bull. Inst. Math. Acad. Sinica* **7** (1979), no. 4, 461-470. (Ky Fan) **80m:47056** 47H10 (54H25)
- Tsamassophros, G. J. (with Theocaris, Pericles S.) Numerical solution of systems of singular integral equations with variable coefficients. *Applicable Anal.* **9** (1979), no. 1, 37-52. (Authors' summary) **80f:65148** 65R20 (45L10)
- (with Theocaris, Pericles S.) A general bi-orthogonality condition: application to plane elasticity problems. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* **24** (1979), no. 2, 241-248. (Clarence M. Ablow) **80c:35020** 35J40 (73C35)
- Tsang, L. (with Kong, J. A.) Modified modal theory of transient response in layered media. *J. Math. Phys.* **20** (1979), no. 6, 1170-1182. (G. P. Bava) **80b:78008** 78A40
- Tsang, S. K. Square lattice variational approximations applied to the Ising model. *J. Statist. Phys.* **20** (1979), no. 1, 95-114. (Author's summary) **80b:82049** 82A55
- Tsanov, V. V. See Canov, V. V.
- Ts'ao, Liang Chi A collinear theorem for quadrilaterals. *Chinese J. Math.* **6** (1978), no. 2, 177-178. (Author's summary) **80b:51011** 51M05
- Saturation problem for Hilbert modular groups. *Chinese J. Math.* **6** (1978), no. 2, 205-214. (J. Spilker) **80i:10028** 10D07 (32N05)
- Tsao, Nai Kuan On "accurate" evaluation of extended sums. *J. Franklin Inst.* **308** (1979), no. 1, 39-55. (Author's summary) **80b:68045** 68C05 (65B10, 65G05)
- Error analysis of splitting algorithms for polynomials. *Numer. Math.* **32** (1979), no. 4, 409-421. (W. Borch-Supan) **80i:65047** 65G05
- Tsay, Y. T. (with Chen, C. F.; Yates, R. E.) A generalization of Bessel's approximation and its application to model reduction. *Internat. J. Electron.* **45** (1978), no. 3, 321-331. (Authors' summary) **80a:93171** 93E11 (94C30)
- Tscharnutter, W. M. (with Rózycka, M.; Winkler, K.-H.; Yorke, H. W.) Fragmentation



- of interstellar clouds: three-dimensional hydrodynamical calculations. *Astronom. and Astrophys.* **83** (1980), no. 1-2, 118-128. (Authors' summary) **80m:85005** 85A20 (65N05)
- Tscherning, C. C.** On the convergence of least squares collocation. (Italian summary) *Boll. Geod. Sci. Affini* **37** (1978), no. 2-3, 507-516. (Jifi Nedoma) **80c:86004** 86A20
- Tschirhart, John** (with Jen, Frank) Behavior of a monopoly offering interruptible service. *Bell J. Econom.* **10** (1979), no. 1, 244-258. (Authors' summary) **80c:90005** 90A05 (90A12)
- Tschupik, Josef Peter** Systeme simultaner Projektionen in projektiven Räumen. *Ber. Math.-Statist. Sect. Forsch. Graz* **1978**, no. 92-95, Ber. No. 94, 14 pp. (Dov Avishalom) **80d:51018** 51N15 (51A45)
- Tse, Edison** (with Arbel, Ami) Observer design for large-scale linear systems. *IEEE Trans. Automat. Control* **24** (1979), no. 3, 469-476. (Arlid Thowson) **80d:93014** 93A15 (with Arbel, Ami) Reduced-order models, canonical forms and observers. *Internat. J. Control* **30** (1979), no. 3, 513-531. (B. Pondělíček) **80i:93016** 93B07
- Tetrekos, Panayotis C.** Some applications of the L-constants and M-constants on Banach lattices. *J. London Math. Soc.* (2) **18** (1978), no. 1, 133-139. (G. J. O. Jameson) **80d:46037** 46B30 (46A40)
- Tetshchev, V.** See **Celližev, V. V.**
- Teng, Wei** On transonic flow in a nozzle. *J. Math. Anal. Appl.* **70** (1979), no. 1, 85-100. (H. K. Cheng) **80c:76051** 76H05 (35Q20)
- Teytlin, G. E.** See **Celližev, G. E.**
- Tingas, A.** (with Porter, B.) Singular perturbation methods in the design of linear multivariable tracking systems for plants with polynomial command inputs. *Internat. J. Control* **27** (1978), no. 4, 639-650. (B. Wittenmark) **80c:93066** 93B99 (93C05)
- Tintaras, George A.** (with Klamkin, Murray S.) The circumradius-inradius inequality for a simplex. *Math. Mag.* **52** (1979), no. 1, 20-22. (O. Bottema) **80d:52010** 52A20 (52A40)
- Tirlin, A. M.** See **Celližev, A. M.**
- Tirumilov, Bella** On the locally convex noncomplete quasi-distinguished spaces. (French summary) *Bull. Soc. Roy. Sci. Liège* **47** (1978), no. 5-8, 147-152. (N. J. Kalton) **80j:46003** 46A05
- Sur les topologies tonnelles et bornologiques associées à une topologie d'espace localement convexe. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 17, A821-A822. (Author's summary) **80b:46004** 46A09 (46A30)
- Sur la conservation des propriétés de tonnellage dans les espaces localement convexes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 18, A875-A876. (Author's summary) **80d:46006** 46A20
- Titsias, Leonidas** On the semiflexibility of bijective tensor product spaces. *J. Math. Anal. Appl.* **69** (1979), no. 2, 505-510. (W. H. Ruckie) **80i:46061** 46M05 (46A25)
- Tisk, A. C.** Recent advances in the algebraic system theory of delay-differential equations. With discussion. *Recent theoretical developments in control* (Proc. Conf., Univ. Leicester, Leicester, 1976), pp. 67-127. Academic Press, London, 1978. (From the summary) **80f:93012** 93A10 (93B05, 93D15)
- Titos, Chris P.** (with Schultz, George W.; Rao, A. N. V.) Statistical properties of a linear stochastic system. *Inform. and Control* **39** (1978), no. 1, 92-117. (T. Tobias) **80c:93144** 93E10 (with Rao, A. N. V.; Tourge, R. A.) Stochastic systems and integral inequalities. *J. Math. Phys.* **19** (1978), no. 12, 2634-2640. (Authors' summary) **80c:93139** 93E20 (60H10) (with Smith, Truett L.) On extending a method of Puri for the study of certain integral functionals of stochastic processes. (Russian summary) *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* **7** (1978), no. 2, 57-71. (Prem S. Puri) **80c:60092** 60J25 (with Hess, James; Kagiwada, Harriet; Kalaba, Robert E.) Cooperative dynamic programming. *Appl. Math. Comput.* **5** (1979), no. 1, 69-74. (Authors' summary) **80c:90132** 90C40 (with Welch, R. L. W.) Multivariate non-Gaussian Bayes discriminant analysis. (French and Italian summaries) *Statistica (Bologna)* **39** (1979), no. 1, 13-24. (Authors' summary) **80c:62086** 62H30 (62C10)
- Tsibol, Yanko** (with Yano, Mayumi; Asou, Motoko) Analysis of two types of the master and the Langevin equations. *Natur. Sci. Rep. Ochanomizu Univ.* **29** (1978), no. 1, 61-69. (T. Kahan) **80j:82005** 82A05 (45K05)
- Tsushima, Yasuhiko** (with Oku, Kentaro) Back-reaction in the moving mirror effects. *Progr. Theoret. Phys.* **62** (1979), no. 6, 1756-1767. (Authors' summary) **80c:81229** 81M05
- Tsuchiya, Masaaki** On an extension of Itô's formula and its application. *Ann. Sci. Kanazawa Univ.* **14** (1977), 7-13 (1978). (Michael Sharpe) **80m:60069** 60H05
- Tsuchiya, Toru** (with Shida, Seiya) On the design of broad-band 90° phase-splitting networks. *IEEE Trans. Circuits and Systems* **27** (1980), no. 1, 30-36. (Authors' summary) **80m:94080** 94C05
- Tsuda, Takeo** An elementary proof of Pascal's theorem. (Japanese) *Math. Rep. Kyushu Univ.* **11** (1977/78), no. 1, 1-2. (S. Hitotumatu) **80c:51020** 51M05
- Tsui, Mikio** Solution globale et propagation des singularités pour l'équation de Hamilton-Jacobi. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 6, A397-A400. (Author's summary) **80i:35041** 35F20
- Tsui, Takumi** (with Kageyama, Sanpei) Inequality for equireplicated  $n$ -ary block designs with unequal block sizes. *J. Statist. Plann. Inference* **3** (1979), no. 2, 101-107. (Damaraju Raghavarao) **80j:62073** 62K10
- Tsuji, Masaaki** (with Ohta, Hiroshi; Kase, Shigeo) A preliminary test of significance for the extreme-value distribution. *Bull. Univ. Osaka Prefect. Ser. A* **27** (1978), no. 2, 187-193 (1979). (Authors' summary) **80m:62033** 62F10 (62N05)
- Tsukada, Etsuo** (with Washiyama, Ryo)  $S^1$ -actions on cohomology complex projective spaces with three components of the fixed point sets. *Hiroshima Math. J.* **9** (1979), no. 1, 41-46. (Steven H. Weintraub) **80j:57043** 57S25
- Tsukada, Kazumi** Locally symmetric Einstein-Kaehler manifolds and spectral geometry. *Tôhoku Math. J.* (2) **31** (1979), no. 2, 255-259. (R. S. Millman) **80c:58051** 58G25 (58C25)
- Tsukiji, Michiko** (with Okamoto, Masahiro; Katsurayama, Atsuko; Aso, Yoichi; Hayashi, Katsuya) Dynamic behavior of enzymatic system realizing two-factor model. *J. Theoret. Biol.* **83** (1980), no. 1, 1-16. (Authors' summary) **80m:92004** 92A09
- Tsukiyama, Shuji** (with Shirakawa, Isao; Anahara, Shigeo) An algorithm for the via assignment problem in multilayer backboard wiring. *IEEE Trans. Circuits and Systems* **26** (1979), no. 6, 369-377. (Authors' summary) **80c:68126** 68C25 (94C99)
- Tsun, Tsou Sheng** A short introduction to the mathematical formulation of gauge theory. *Acta Phys. Polon. B* **10** (1979), no. 3, 219-227. (Eckehard W. Mielke) **80c:81112** 81E10
- Tsunematsu, Toshihide** (with Takeda, Tatsuoki; Toi, Kazuo) Application of nonlinear optimization algorithms to the problems in plasma physics and thermonuclear fusion research. *Computing methods in applied sciences and engineering* (Proc. Third Internat. Sympos., Versailles, 1977), II, pp. 329-343. *Lecture Notes in Phys.* **91**, Springer, Berlin, 1979. (From the introduction) **80c:93028** 93B30 (65R20, 76W05)
- Tsumo, Yoshimichi** Holomorphic continuation of solutions of degenerate partial differential equations in two variables. *Proc. Japan Acad. Ser. A Math. Sci.* **54** (1978), no. 8, 226-229. (J. Kajiwara) **80j:35004** 35A20 (32A40)
- Tsurumi, K.** On spaces of Baire functions over nonarchimedean valued fields. *Arch. Math. (Basel)* **30** (1978), no. 2, 165-174. (L. Narici) **80c:54012** 54C50 (26A21, 26E30)
- Tsushima, Ryuji** Rational maps to varieties of hyperbolic type. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 3, 95-100. (Andrew J. Sommese) **80j:14019** 14E05 (32H99)
- Tsushima, Yukio** Some notes on the radical of a finite group ring. *Osaka J. Math.* **15** (1978), no. 3, 647-653. (P. Donovan) **80c:20010** 20C20 (16A21)
- Tsutsumi, Masayoshi** (with Matsuhashi, Tomomi) On a periodic problem for pseudo-parabolic equations of Sobolev-Galpern type. *Math. Japon.* **22** (1977/78), no. 5, 535-553. (D. Ramakrishna Rao) **80c:34086** 34G10 (35K99)
- Periodic linear systems and a class of nonlinear evolution equations. *Mem. School Sci. Engrg. Waseda Univ.* No. 41 (1977), 73-94 (1978). (G. L. Lamb, Jr.) **80c:35119** 35Q20 (with Fukuda, Isamu) On coupled Klein-Gordon-Schrödinger equations. II. *J. Math. Anal. Appl.* **66** (1978), no. 2, 358-378. (R. Glassey) **80d:35127** 35Q20 (81C99) (with Matsuhashi, Tomomi) Periodic solutions of semilinear pseudoparabolic equations in Hilbert space. *Funkcial. Ekvac.* **22** (1979), no. 1, 51-66. (R. E. Showalter) **80j:34085** 34G99 (34A60, 35K99, 47H05) (with Matsuhashi, Tomomi) On some nonlinear pseudoparabolic equations. *J. Differential Equations* **32** (1979), no. 1, 65-75. (R. E. Showalter) **80c:34083** 34G20 (35K70, 47H17) (with Fukuda, Isamu) On coupled Klein-Gordon-Schrödinger equations. III. Higher order interaction, decay and blow-up. *Math. Japon.* **24** (1979/80), no. 3, 307-321. (R. Glassey) **80j:35064** 35L60 (35B40, 35Q20)
- Tsyptkin, Ya. Z.** See **Cypkin, Ja. Z.**
- le van Tu** See **Le Van Tu**
- Tu, Dz.** See **Tou, Julius T.**
- Tu, N. A.** Lokale topologische Eigenschaften der auf Banachmannigfaltigkeiten definierten differenzierbaren Funktionen. *Math. Nachr.* **86** (1978), 283-289. (Ju. G. Borisovič) **80d:58013** 58C27
- Tu, Tung Sheng** See **Du, Dong Sheng**
- pham dinh Tuan** See **Pham Dinh Tuan**
- tu trong Tuan** See **Vũ Trọng Tuấn**
- Tuan, P. D.** (with Hamilton, D. H.) An extremal problem for functions of positive real part with application to a radius of convexity problem. *Proc. Amer. Math. Soc.* **72** (1978), no. 2, 313-318. (L. A. Aksent'ev) **80c:30007** 30C45
- Tuan Dinh Pham** See **Pham Dinh Tuan**
- Tuann, Shih Yu** (with Olson, Mervyn D.) Review of computing methods for recirculating flows. *J. Comput. Phys.* **29** (1978), no. 1, 1-19. (Robert Pearson) **80c:76023** 76D99 (65Nxx)
- Tubaro, Luciano** (with Da Prato, Giuseppe; Iannelli, Mimmo) Linear stochastic differential equations in Hilbert spaces. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **64** (1978), no. 1, 22-29. (Ludwig Arnold) **80j:60091** 60H10 (with Da Prato, Giuseppe; Iannelli, Mimmo) Some results on existence, uniqueness and continuous dependence for abstract stochastic differential equations. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **15** (1978), no. 3, 771-786. (Ludwig Arnold) **80d:60080** 60H10 (with Da Prato, Giuseppe; Iannelli, Mimmo) Dissipative functions and finite-dimensional stochastic differential equations. *J. Math. Pures Appl.* (9) **57** (1978), no. 2, 173-180. (Gunter Ritter) **80c:60075** 60H10 (34F05, 47H06) (with Da Prato, Giuseppe; Iannelli, Mimmo) Semilinear stochastic differential equations in Hilbert spaces. (Italian summary) *Boll. Un. Mat. Ital. A* (5) **16** (1979), no. 1, 168-177. (J. A. Goldstein) **80i:47056** 47D05 (60H15)
- Tucci, Maria** On a continuous selection problem for a multivalued mapping with  $n$  values that are not all distinct. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) **45** (1979), 291-301. (O. T. Alas) **80m:54029** 54C65
- Tucel, S.** (with Mikou, N.) Analyse et optimisation d'une procédure de reprise dans un système de gestion de données centralisées. (English summary) *Acta Inform.* **12** (1979), no. 4, 321-338. (Authors' summary) **80j:68007** 68A05
- Tucke, V.** See **Tutschke, Wolfgang**
- Tucker, C. T.** Representation of Baire functions as continuous functions. *Fund. Math.* **101** (1978), no. 3, 181-188. (Richard D. Mauldin) **80c:54018** 54C50
- Tucker, H. G.** See **Hall, Peter**, **80c:60028**
- Tucker, R. W.** (with Howe, Paul) Scale invariance in superspace. *Phys. Lett. B* **80** (1978/79), no. 1-2, 138-140. (Edwin Ihrig) **80c:83029** 83C45 (with Howe, Paul) A note on the linearisation of supergravity. *J. Phys. A* **12** (1979), no. 1, L21-L24. (J. Lawrynowicz) **80f:83019** 83C25
- Tucker, Thomas W.** (with Gross, Jonathan L.) Fast computations in voltage graph theory. *Second International Conference on Combinatorial Mathematics* (New York, 1978), pp. 247-253. Ann. New York Acad. Sci., 319, New York Acad. Sci., New York, 1979. (Authors' summary) **80m:94111** 94C15 (68E10)
- Tuckin, Ju. A.** (with Vinogradov, S. S.; Šestopalov, V. P.) An effective solution to paired summator equations with the kernel in the form of adjoint Legendre functions. (Russian) *Dokl. Akad. Nauk SSSR* **242** (1978), no. 1, 80-83. (B. A. Bondarenko) **80c:33014** 33A45 (39B40)

- (with Šestopalov, V. P.) A numerical method for the solution of operator equations. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 3, 570-573. (I. K. Marek) 80a:65124 65J15 (47A50)
- Tuckwell, H. C. (with Hanson, Floyd B.) Persistence times of population with large random fluctuations. *Theoret. Population Biol.* 14 (1978), no. 1, 46-61. (Colin W. Clark) 80f:92017 92A15
- Nguyễn Tu' Cu'ung See Nguyễn Tu' Cu'ung
- Tudor, Constantin A theorem concerning the existence of the solution of the martingale problem. *Math. Balkanica* 6 (1976), 265-272 (1978). (S. R. S. Varadhan) 80f:60109 60J60
- (with Ciucu, George) ★ Probabilități și procese stocastice. Vol. I. (Romanian) [Probabilities and stochastic processes. Vol. I] Editura Academiei Republicii Socialiste România, Bucharest, 1978. 336 pp. (Harry I. Cohn) 80d:60001 60-01
- Tudor, Gh. M. Sur les zéros des quelques fonctions analytiques. *Bul. Științ. Tehn. Inst. Politehn. "Traian Vuia" Timișoara* 23(37) (1978), no. 1, 9-11 (1979). (Y. Komatu) 80a:30007 30C15
- Tudose, Constantin On a differential equation from the dynamics of machines. *Acta Tech. CSAV* 24 (1979), no. 4, 397-401. (From the summary) 80b:70006 70B15
- On some vector operators. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 1, 85-98. (Author's summary) 80b:26010 26B12 (70E99)
- Tuganbaev, A. A. Pseudoinjective modules and extension of automorphisms. (Russian) *Trudy Sem. Petrovsk. No. 4* (1978), 241-248. (L. A. Koifman) 80g:16028 16A52 (16A12, 16A14, 16A46)
- Characterizations of rings using poorly injective and poorly projective modules. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 3, 48-51, 86. (C. Niță) 80m:16002 16A04 (16A50, 16A52)
- Tugnait, Jitendra K. (with Haddad, Abraham H.) A detection-estimation scheme for state estimation in switching environments. *Automatica—J. IFAC* 15 (1979), no. 4, 477-481. (O. Ibdapo-Obe) 80j:93114 93E10
- (with Haddad, Abraham H.) State estimation under uncertain observations with unknown statistics. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 201-210. (Kenneth Wickwire) 80c:93121 93E10
- (with Haddad, Abraham H.) Adaptive estimation in linear systems with unknown Markovian noise statistics. *IEEE Trans. Inform. Theory* 26 (1980), no. 1, 66-78. (Authors' summary) 80c:93053 93E10
- buclu-Tugules, Aurora See Buclu-Tugules, Aurora
- Tuhrator, M. B. Weight functions and their basic properties. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 12, 15-17. 80a:90160 90C99
- Tulvetov, F. T. (with Porodnov, B. T.) The calculation of the profile of the rate and flow in the case of nonisometric flow of a rarefied gas in a cylindrical capillary by the Krylov-Bogoljubov method. (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1978, no. 6, 143-150. (From the introduction) 80f:76031 76N99
- Tuite, M. (with Baaklini, N. S.) Dirac quantisation of spin-2 field. *J. Phys. A* 12 (1979), no. 1, L13-L15. (From the summary) 80b:81016 81C05
- Tukačinskí, L. I. An estimate of the probability of failure of an element, based on test results of a series-connected system. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 3, 205-209 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 3, 172-176. (Author's summary) 80k:62104 62N05 (62G05)
- Tukay, John W. Obituary: Harold F. Dodge, 1893-1976. *J. Roy. Statist. Soc. Ser. A* 142 (1979), no. 3, 394. (Editors) 80m:01038 01A70
- See also Gray, H. L.; et al., 80c:62059
- Tukczyjew, Włodzisław M. (with Menzio, Maria Rosa) Infinitesimal symplectic relations and generalized Hamiltonian dynamics. (French summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* 28 (1978), no. 4, 349-367. (Richard Cushman) 80a:58027 58F05 (70H05)
- A generalization of jet theory. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 7, 611-615. (I. Kolář) 80a:58003 58A20
- (with Christodoulou, Demetrios; Francaviglia, Mauro) General relativity as a generalized Hamiltonian system. *Gen. Relativity Gravitation* 10 (1979), no. 7, 567-579. (H. Treder) 80i:83016 83C35 (58F05)
- Tulenbaev, M. S. The Schur multiplier of the group of elementary matrices of finite order. (Russian) Algebraic numbers and finite groups. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 86 (1979), 162-169, 191-192. (G. Pic) 80j:18019 18F25
- Tulipani, Sauro The Hanf number for classes of algebras whose largest congruence is always finitely generated. *Algebra Universalis* 9 (1979), no. 2, 221-228. (M. M. Richter) 80c:03033 03C52 (08C10)
- Tuljaganova, M. I. A generalization of a theorem of Halász. (Russian. Uzbek summary) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1978, no. 4, 35-40, 95. (J. Kubilius) 80c:10050 10K20
- Tulkens, Henry (with Zamir, Shmuel) Surplus-sharing local games in dynamic exchange processes. *Rev. Econom. Stud.* 46 (1979), no. 2, 305-313. (Y. C. Ho) 80j:90018 90A08 (90A16)
- Tull, Jack (with Parson, L. Alayne) Asymptotic behavior of multiplicative functions. *J. Number Theory* 10 (1978), no. 4, 395-420. (Don Redmond) 80f:10055 10H25
- de Tullio, M. (with Godolphin, E. J.) Invariance properties of uncorrelated residual transformations. *J. Roy. Statist. Soc. Ser. B* 40 (1978), no. 3, 313-321. (Takeaki Kariya) 80g:62047 62J05
- Tulsani, V. (with Karade, T. M.) On axially symmetric fields in general relativity. *RAAG Res. Notes No. 81* (1978), 8 pp. (Brian O. J. Tupper) 80a:83018 83C20 (53C25)
- (with Karade, T. M.) On spherical symmetry in general relativity. III. (Japanese summary) *RAAG Res. Notes No. 96* (1979), 10 pp. (Authors' summary) 80g:83033 83D05
- Tulsh, A. V. (with Nudel'man, A. A.) Extremal problems in the theory of van der Waals forces. (Russian. English summary) *Theoret. Mat. Fiz.* 39 (1979), no. 3, 359-367. (Authors' summary) 80c:81103 81G55
- Tumanov, V. S. NMR spectra in the region of strong couplings. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* 19 (1978), no. 6, 49-56. (Tetz Yoshimura) 80i:81023 81C05
- Tumalev, G. G. (with Hasanova, A. Ju.) Heating of the potential flow of an ideal liquid by rigid walls. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 6(193), 109-116. (Authors' summary) 80d:76006 76B99
- An inverse problem in the theory of supersonic gas flow. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 12, 99-104. (Simona Popp) 80e:76031 76J99
- Tamura, Yoshio (with Ishikawa, Akihiko) Numerical calculation of the tandem queueing system. *TRU Math.* 14 (1978), no. 1, 57-70. (From the introduction) 80a:60124 60K25
- Tuncer, Yalçın Generalized intraclass correlation. *Proceedings of Applied Statistics Seminars (Middle East Tech. Univ., Ankara, 1976/77)*. *Stud. Develop. Special Issue* 1977, 157-189 (1978). (Alain Pousse) 80a:62084 62H20
- Tung, Chia Chi Equidistribution theory in higher dimensions. *Pacific J. Math.* 78 (1978), no. 2, 525-548. (H. Wu) 80b:32047 32H30
- Pseudoconvexity and value distribution for Schubert zeroes. *Michigan Math. J.* 26 (1979), no. 2, 243-256. (Marcus Wright) 80b:32046 32H30
- Tung, Immanuel L. (with Edmundson, H. P.) A characterization of the recursiveness of an  $m$ -adic probabilistic language. *Inform. and Control* 39 (1978), no. 2, 143-148. (P. Turakainen) 80b:68099 68F10 (68D25)
- (with Edmundson, H. P.) The notion of a probabilistic cellular acceptor. *Internat. J. Comput. Inform. Sci.* 8 (1979), no. 3, 181-208. (Authors' summary) 80c:68146 68D25 (68D20)
- Tung, Ka Kit (with Lindzen, Richard S.) Wave overreflection and shear instability. *J. Atmospheric Sci.* 35 (1978), no. 9, 1626-1632. (J. W. Miles) 80c:80002 86A10 (76C20)
- (with Lindzen, Richard S.; Farrell, Brian) The concept of wave overreflection and its application to baroclinic instability. *J. Atmospheric Sci.* 37 (1980), no. 1, 44-63. (From the summary) 80m:76043 76E20 (86A10)
- Tung, Leonard J. (with Saeks, Richard; DeSantis, Romano M.) Wiener-Hopf filtering in Hilbert resolution space. Special issue on the mathematical foundations of system theory. *IEEE Trans. Circuits and Systems* 25 (1978), no. 9, 702-705. (William A. Porter) 80b:93152 93E11 (47B35)
- (with DeSantis, Romano M.; Saeks, Richard) Basic optimal estimation and control problems in Hilbert space. *Math. Systems Theory* 12 (1978/79), no. 2, 175-203. (R. S. Bucy) 80c:93138 93E20 (93E10)
- Tung, Sui Yin (with Berger, Toby; Housewright, Kim B.; Omura, Jim K.; Wolfowitz, J.) An upper bound on the rate distortion function for source coding with partial side information at the decoder. *IEEE Trans. Inform. Theory* 25 (1979), no. 6, 664-666. (Authors' summary) 80m:94034 94A29
- Tunjak, V. N. Conservation laws in the tetrad formulation of general relativity. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika No. 2* (1979), 101-105. (B. Z. Moroz) 80c:83013 83C40 (35L65)
- Covariant formulation of the weak conservation law in general relativity without energy-momentum of the gravitational field. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1979, no. 7, 13-16. (Author's summary) 80g:83013 83C35
- Tunnell, J. Report on the local Langlands conjecture for GL(2). *Automorphic forms, representations and L-functions (Proc. Sympos. Pure Math., Oregon State Univ., Corvallis, Ore., 1977)*, Part 2, pp. 135-138. *Proc. Sympos. Pure Math., XXXIII, Amer. Math. Soc., Providence, R.I., 1979*. (Joe Reppka) 80c:12025 12B27
- Tuomela, Raimo On the structuralist approach to the dynamics of theories. *Synthese* 39 (1978), no. 2, 211-231. (Mario Bunge) 80a:03009 03A05
- Tuominen, Pekka (with Tweedie, Richard L.) Exponential decay and ergodicity of general Markov processes and their discrete skeletons. *Adv. in Appl. Probab.* 11 (1979), no. 4, 784-803. (Richard Madsen) 80b:60093 60J25 (60J05)
- (with Tweedie, Richard L.) Exponential ergodicity in Markovian queueing and dam models. *J. Appl. Probab.* 16 (1979), no. 4, 867-880. (Anthony G. Pakes) 80j:60120 60K30 (60J27)
- (with Tweedie, Richard L.) Markov chains with continuous components. *Proc. London Math. Soc.* (3) 38 (1979), no. 1, 89-114. (Serban Grigorescu) 80d:60060 60J10 (28Dxx)
- Tuong Ton That Explicit decomposition of tensor products of certain analytic representations of symplectic groups. *J. Math. Phys.* 19 (1978), no. 12, 2514-2519. (Mitsuo Sugiyara) 80c:22019 22E45
- (with Klink, William H.) Construction explicite non itérative des bases de GL(n, C)-modules. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 6, B115-B118. (Authors' summary) 80c:22038 22E70 (81C40)
- Tupholme, G. E. (with Lardner, R. W.) An indenter moving on an anisotropic elastic half-space. *Acta Mech.* 31 (1978/79), no. 1-2, 117-135. (V. P. Madan) 80c:73013 73C30
- Tupper, B. O. J. (with Dunn, K. A.) Type I, II, and III spatially homogeneous cosmologies with electromagnetic field. *Astrophys. J.* 235 (1980), no. 2, part 1, 307-334. (A. F. de F. Teixeira) 80m:83047 83F05
- Turaev, V. G. Intersections of loops in two-dimensional manifolds. (Russian) *Mat. Sb.* 106(148) (1978), no. 4, 566-588. (I. Ivański) 80d:57019 57R40 (57M25)
- Turakainen, Paavo A note on noncontext-free rational stochastic languages. *Inform. and Control* 39 (1978), no. 2, 225-226. (K. S. Fu) 80a:68007 68F15
- Turán, Pál Remarks on the characters belonging to the irreducible representations of the symmetric group  $S_n$  of  $n$  letters. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 871-875. *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (Jürgen Tappe) 80g:20021 20C30
- On a problem of E. Landau. Completed by János Pintz. *Proceedings of the Rólf Necanlinna Symposium on Complex Analysis (Math. Res. Inst., Univ. Istanbul, Silivri, 1976)*, pp. 131-142. *Publ. Math. Res. Inst. Istanbul*, 7, Univ. Istanbul, Istanbul, 1978. (K. Thanigasalam) 80i:10060 10H15
- See also Fourier analysis and approximation theory, 80d:42001a and Fourier analysis and approximation theory, 80d:42001b
- Turbin, A. F. (with Koroljuk, V. S.; Portenko, M. I.; Skorohod, A. V.) ★ Справочник по теории вероятностей и математической статистике. (Russian) [A manual on probability theory and mathematical statistics] "Naukova Dumka", Kiev, 1978. 582 pp. (R. M. Dudley) 80b:60002 60-01 (62-01)
- (with Plotkin, Ja. D.) Decomposition of singularly perturbed analytic semigroups of operators. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 19* (1978), 44 pp. (A. B. Buche) 80c:47058 47D05 (34E15)
- Turčaninov, V. I. (with Bleher, P. M.) Construction of eigenfunctions of a two-dimensional



- Schrödinger operator with periodic potential. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 1* (1978), 22 pp. (Authors' summary) **80a:65248** 65P05 (81C10)
- Turcat, Claudine** (with Verdillon, André) Symmetry, automorphism, and test. *IEEE Trans. Comput.* **28** (1979), no. 4, 319–325. (Siegmund Gerber) **80d:94032** 94C05
- Turchetti, G.** (with Mainardi, F.; Servi, G.) Application of Padé approximants to elastic wave propagation problems. Modern problems in elastic wave propagation (Proc. IUTAM Symp., Northwestern Univ., Evanston, Ill., 1977), pp. 103–119, Wiley, New York, 1978. (T. Bryant Moodie) **80k:73020** 73D15 (86A15)
- (with Barillon, Victor) On an inverse eigenvalue problem with truncated spectral data. *Inverse and improperly posed problems in differential equations* (Proc. Conf., Math. Numer. Methods, Halle, 1979), pp. 25–34, Math. Research, 1, Akademie-Verlag, Berlin, 1979. (Authors' summary) **80e:34009** 34B25
- The variational approach to the linearized inverse problems. *Lett. Nuovo Cimento* (2) **25** (1979), no. 11, 337–342. (Brian DeFazio) **80j:81077** 81F99
- (with Barnsley, Michael F.) Generalized Padé resummation of the solution of a nonlinear Boltzmann equation. *Lett. Nuovo Cimento* (2) **26** (1979), no. 6, 188–192. (Reinhard Illner) **80i:82004** 82A05 (68B10, 76D05)
- Turčin, V. M.** (with Drozd, Ju. A.) Locally conjugate orders. (Russian) *Mat. Zametki* **24** (1978), no. 6, 871–878, 895. (I. Reiner) **80e:16007** 16A18 (12A80)
- Turda, Ervin** Comparison theorems for a functional inequality. *General inequalities* (Proc. First Internat. Conf., Math. Res. Inst., Oberwolfach, 1976), I, pp. 199–211, Birkhäuser, Basel, 1978. (B. Crstici) **80b:39007** 39C05 (39B10)
- The solutions of an inequality for the  $n$ th iterate of a function. *Amer. Math. Monthly* **86** (1979), no. 4, 281–283. (József Tabor) **80d:39010** 39C05
- Turek, Richard J.** An approach to completely ergodic transformations and a stacking method. *Rocky Mountain J. Math.* **8** (1978), no. 4, 755–758. (E. M. Klimko) **80b:28028** 28D05
- See also Robertson, James B., **80k:28018**
- Turett, Barry** (with Kalton, Nigel; Uhl, J. J., Jr.) Basically scattered vector measures. *Indiana Univ. Math. J.* **28** (1979), no. 5, 803–816. (Robert E. Huff) **80k:28013** 28B05 (46G10)
- (with Smith, Mark A.) Rotundity in Lebesgue-Bochner function spaces. *Trans. Amer. Math. Soc.* **257** (1980), no. 1, 105–118. (K. Sundaresan) **80m:46031** 46E40 (46B20)
- Turgeon, Jean M.** (with Bermond, Jean-Claude; Kotzig, Anton) On a combinatorial problem of antennas in radioastronomy. *Combinatorics* (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. 1, pp. 135–149, Colloq. Math. Soc. János Bolyai, 18, North-Holland, Amsterdam, 1978. (A. Rosa) **80h:05014** 05B30 (05C99)
- (with Kotzig, Anton)  $\beta$ -valuations of regular graphs with complete components. *Combinatorics* (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II, pp. 697–703, Colloq. Math. Soc. János Bolyai, 18, North-Holland, Amsterdam, 1978. (A. Rosa) **80g:05056** 05C99 (05B30)
- Turiel, Francisco Javier** Modèles locaux de 3-formes fermées sur une variété de dimension 5. *Cas transitif*. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 20, A925–A928. (Authors' summary) **80e:58002** 58A10
- Turicini, Mihai** (with Pavel, N.) Positive solutions of a system of ordinary differential equations. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **24** (1978), no. 1, 63–70. (Sadakazu Aizawa) **80k:34009** 34A10
- Maximal elements in partially ordered topological spaces and applications. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **24** (1978), no. 2, 259–264. (Derek C. J. Burgess) **80k:06007** 06B30 (54F05)
- Turisco, JoAnn** Quadratic mappings of spheres. *Linear Algebra Appl.* **23** (1979), 261–274. (O. H. Körner) **80e:55030** 55R15 (10C04, 55R25)
- Turk, Jan** Sets of integers composed of few prime numbers. *Séminaire Delange-Pisot-Poitou, 19e année* (1977/78), *Théorie des nombres, Fasc. 2*, Exp. No. 44, 6 pp., Secrétariat Math., Paris, 1978. (T. N. Shorey) **80k:10007** 10A25 (10H15)
- Turka, H.** (with Švedenko, S. V.) Interpolation of  $P$  sequences by  $H^2$  functions over a half-plane. *Math. Balkanica* **6** (1976), 273–280 (1978). (Knut Øyma) **80k:30056** 30D55 (30E05)
- Turkand, B. D.** (with Peckover, R. S.) The stability of planar melting fronts in two-phase thermal Stefan problems. *J. Inst. Math. Appl.* **25** (1980), no. 1, 1–15. (Authors' summary) **80m:80012** 80A20 (76E99)
- Turlea, Marin** Category theory and the foundations of mathematics. (Romanian) *Problems of logic, Vol. VII (Romanian)*, pp. 229–235, Ed. Acad. RS România, Bucharest, 1977. (N. Popescu) **80g:03009** 03A05 (18A15)
- Turmuhametov, R. N.** Special methods of prescribing a complete residue system in the ring of quaternions. (Russian) *Theoretical and applied problems in mathematics and mechanics* (Russian), pp. 290–291, 317, "Nauka" Kazah. SSR, Alma-Ata, 1977. (Authors' summary) **80e:16015** 16A39 (68C05)
- (with Pak, I. T.) Construction of nonpositional codes for hypercomplex numbers. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* **1979**, no. 5, 44–49, 90–91. (Authors' summary) **80m:94069** 94B60
- Turnbull, Bruce W.** (with Weiss, Lionel) A likelihood ratio statistic for testing goodness of fit with randomly censored data. (French summary) *Biometrics* **34** (1978), no. 3, 367–375. (G. S. Lingappaiah) **80a:62063** 62G10 (62N05)
- (with Bechhofer, Robert E.) Two ( $k+1$ )-decision selection procedures for comparing  $k$  normal means with a specified standard. *J. Amer. Statist. Assoc.* **73** (1978), no. 362, 385–392. (Joseph A. Yahav) **80c:62029** 62F07
- Turner, D. A.** Another algorithm for bracket abstraction. *J. Symbolic Logic* **44** (1979), no. 2, 267–270. (Gerd Mischke) **80i:03021** 03B40
- Turner, Edward C.** (with Goldstein, Richard Z.) Applications of topological graph theory to group theory. *Math. Z.* **165** (1979), no. 1, 1–10. (W. Metzler) **80g:20050** 20F38 (05Cxx, 20F12, 57M05)
- Turner, J. C.** (with Hosking, R. J.; Joyce, D. C.) ★First steps in numerical analysis. *Hodder & Stoughton, London*, 1978. iii + 202 pp. ISBN 0-340-19007-8, 0-340-19008-6 (Raito Lazarov) **80a:65004** 65-01
- Turner, J. K.** On well-bounded and decomposable operators. *Proc. London Math. Soc.* (3) **37** (1978), no. 3, 521–544. (Henry R. Dowson) **80a:47054** 47B40
- Turner, J. W.** (with Malek-Mansour, M.) On the absorbing zero boundary problem in birth and death processes. *Phys. A* **93** (1978), no. 3-4, 517–525. (Authors' summary) **80b:82012** 82A05
- Turner, R. E.** (with Dahler, John S.) From the Zwanzig-Feshbach projection method to the Landau-Zener approximation, a systematic time dependent approach. *J. Phys. B* **13** (1980), no. 1, 161–176. (Authors' summary) **80m:81086** 81F99
- Turner, Robert E.** (with Koper, Chester A., Jr.; Sadeh, Willy Z.) A relation between the Lagrangian and Eulerian turbulent velocity autocorrelations. *AIAA J.* **16** (1978), no. 9, 969–975. (J. D. Atkinson) **80a:76036** 76F99 (00A89)
- Turner, Stuart** Adele rings of global field of positive characteristic. *Bol. Soc. Brasil. Mat.* **9** (1978), no. 1, 89–95. (T. Ono) **80e:12017** 12A70 (12A85)
- Turner, V. L.** (with Ames, W. F.) Two-sided bounds for linked unknown nonlinear boundary conditions of reaction-diffusion. *J. Math. Anal. Appl.* **71** (1979), no. 2, 366–378. (J. P. Kernevez) **80j:92004** 92A09 (35K10)
- Turnovsky, Stephen J.** (with Shalit, Haim; Schmitz, Andrew) Consumer's surplus, price instability, and consumer welfare. *Econometrica* **48** (1980), no. 1, 135–152. (Authors' summary) **80m:90025** 90A12 (90A16)
- Turo, Jan** (with Kwapisz, Marian) On some class of integral-functional equations in locally convex spaces. *Comment. Math. Prace Mat.* **20** (1977/78), no. 2, 377–391. (P. V. Subrahmanyam) **80k:39005** 39B70 (45N05)
- (with Kwapisz, Marian) On the existence and uniqueness of integrable solutions of functional equations in a Banach space. *Aequationes Math.* **19** (1979), no. 1, 53–65. (D. Przeworska-Rolewicz) **80k:39012** 39B70 (45N05, 47H17)
- Turpin, Philippe** Boundedness problems for finitely additive measures. *Vector space measures and applications* (Proc. Conf., Univ. Dublin, Dublin, 1977), II, pp. 180–187, *Lecture Notes in Math.*, 645, Springer, Berlin, 1978. (William H. Graves) **80a:28005** 28B05 (46G10)
- Properties of Orlicz-Pettis or Nikodym type and barreledness conditions. (French summary) *Ann. Inst. Fourier (Grenoble)* **28** (1978), no. 3, vi, 67–85. (D. J. H. Garling) **80d:46080** 46G10 (46A99)
- Fubini inequalities and bounded multiplier property in generalized modular spaces. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* **1** (1978), 331–353. (W. A. Woyczyński) **80b:46044** 46E30 (46A06)
- Turquette, Atwell R.** Alternative axioms for Peirce's triadic logic. *Z. Math. Logik Grundlag. Math.* **24** (1978), no. 5, 443–444. (Tõru Miyama) **80b:03027** 03B50
- Turschner, H.** Exact eigenvalues of the Hamiltonian  $P^2 + A|X|^p$ . *J. Phys. A* **12** (1979), no. 4, 451–457. (L. S. Wollenberg) **80i:81029** 81C10
- Tursanov, G. T.** On the number of served customers in an  $M/G/1$  system with Markovian control of service. (Russian) *Dokl. Akad. Nauk UzSSR* **1978**, no. 9, 9–11. (R. Salia) **80c:60115** 60K25
- (with Sil'vestrov, D. S.) General limit theorems for sums of controlled random variables. II. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist.* **20** (1979), 116–126, 158. (Serban Grigorescu) **80d:60030** 60F05 (60K15)
- Tursynbekov, S.** (with Abdrakhmanov, M. A.) The solvability of a certain problem of joining equations of mixed type. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* **1978**, no. 1, 40–46, 92. (Authors' summary) **80i:35088** 35M05
- Turtol, Adriana** La construction d'une métrique d'espace de Wagner sur une variété produit. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **22**(70) (1978), no. 4, 431–437. (A. P. Stone) **80e:53018** 53B20
- Turzik, Daniel** (with Poljak, Svatopluk) On amalgamation of graphs and essential sets of generators. *Comment. Math. Univ. Carolin.* **19** (1978), no. 2, 359–369. (Jaroslav Nešetřil) **80a:05171** 05C99
- Tuschik, Hans-Peter** (with Baudisch, Andreas) Eine Bemerkung über Vermeidung von Typen in überabzählbaren Modellen. (Russian, English and French summaries) *Wiss. Z. Humboldt-Universität Berlin Math.-Natur. Reihe* **26** (1977), no. 5, 613–614. (Editors) **80e:03025** 03C15
- Elimination verallgemeinerter Quantoren in  $\omega_1$ -kategorischen Theorien. (Russian, English and French summaries) *Wiss. Z. Humboldt-Universität Berlin Math.-Natur. Reihe* **26** (1977), no. 5, 659–661. (Authors' summary) **80d:03035** 03C80 (03B25)
- Tusnady, Gábor** (with Székely, Gábor) Generalized Fibonacci numbers and the number of "pure heads". (Hungarian. English summary) *Mat. Lapok* **27** (1976), no. 1-2, 147–151 (1978). (Péter Kiss) **80j:10016** 10A35 (10H25)
- (with Csörgő, Miklós; Komlós, János; Major, Péter; Révész, Pál) On the empirical process when parameters are estimated. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians* (Tech. Univ. Prague, Prague, 1974), Vol. B, pp. 87–97, Academia, Prague, 1978. (P. K. Sen) **80c:60033** 60F05 (62G99)
- (with Marosi, Judit) On the construction of confidence intervals for the expectation of a Poisson distribution on the basis of censored data. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians* (Tech. Univ. Prague, Prague, 1974), Vol. B, pp. 347–352, Academia, Prague, 1978. (G. K. Bhattacharyya) **80c:62040** 62F10 (62F25)
- Tusupbaev, M. D.** (with Altaiyev, Š. M.; Bakirov, Ž. B.) Nonlinear oscillations of saw disks. (Russian) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* **1979**, no. 3, 48–51, 89–90. (Authors' summary) **80f:73036** 73D35
- Tutek, Z.** (with Limić, N.) On convex and quadratic interval programming. (Serbo-Croatian summary) *Glas. Mat. Ser. III* **14**(34) (1979), no. 1, 181–189. (J. Parida) **80h:90116** 90C20 (90C25)
- Tutschke, Wolfgang** ★Vorlesungen über partielle Differentialgleichungen. With English, French and Russian summaries. Teubner-Texte zur Mathematik. *BS 6 B. G. Teubner Verlagsgesellschaft, Leipzig*, 1978. 240 pp. (Manfred W. Kracht) **80i:35002** 35-01 (35A05, 35C15)
- (with Naas, Josef) Some probabilistic aspects in partial complex differential equations. (Russian summary) *Complex analysis and its applications* (Russian), pp. 409–412, 669, "Nauka", Moscow, 1978. (Jacques Vauthier) **80b:35060** 35J60 (32A99, 35B99)
- The Riemann-Hilbert problem for nonlinear systems of differential equations in the plane. (Russian) *Complex analysis and its applications* (Russian), pp. 537–542, 671, "Nauka", Moscow, 1978. (G. S. Litvinčuk) **80b:30038** 30E25

- Tuttas, F.** (with Lucht, Lutz) Mean-values of multiplicative functions and natural boundaries of power series with multiplicative coefficients. *J. London Math. Soc.* (2) **19** (1979), no. 1, 25-34. (Aleksandar Ivić) **80d:10067** 10H25
- Tutte, William T.** Sommes chromatiques. (English summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 407-409. *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Author's summary) **80m:05048** 05C15
- On a pair of functional equations of combinatorial interest. *Aequationes Math.* **17** (1978), no. 2-3, 121-140. (F. Harary) **80h:05026** 05C15 (39B40)
- Colouring problems. *Math. Intelligencer* **1** (1978/79), no. 2, 72-75. (F. Harary) **80g:05038** 05C15
- Combinatorial oriented maps. *Canad. J. Math.* **31** (1979), no. 5, 986-1004. (Ruth Bari) **80h:05089** 05C99
- See also Graph theory and related topics, **80e:05004**
- Tutubalina, V. N.** A new form of the law of large numbers. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 1, 3-17. (Kazimierz Sobczyk) **80e:60076** 60H10 (78A50)
- Tuomela, L.** The geometry of homogeneous space of  $m$ -pairs and its submanifolds. (Russian. Estonian and English summaries) *Tartu Riikl. Ül. Toimetised No. 464* *Trudy Mat. i Meh.* no. 22 (1978), 98-115. (R. M. Geidel'man) **80f:53011** 53A20
- Tuy, Hoang Tuy** See Hoang Tuy
- Tuzov, V. A.** Language formalization. (Russian) *Programmirovaniye* **1978**, no. 5, 25-35, 95. (A. N. Maslov) **80h:68093** 68F05
- Tverberg, Helge** Squaring the square and other combinatorial geometry. I. (Norwegian. English summary) *Normat No. 1* (1979), 21-26, 48. (E. J. F. Primrose) **80g:51008a** 51D20 (05B25)
- Squaring the square and other combinatorial geometry. II. (Norwegian. English summary) *Normat No. 2* (1979), 68-75, 87-88. (E. J. F. Primrose) **80g:51008b** 51D20 (05B25)
- Tverdokhlebov, V. A.** (with Bogomolov, A. M.) Synchronization of a deterministic finite automaton. *Avtomat. i Telemekh.* **1978**, no. 10, 200-202. (Russian. English summary); translated as *Automat. Remote Control* **39** (1978), no. 10, part 2, 1571-1573 (1979). (Authors' summary) **80e:68140** 68D05
- Tverogor, S. D.** (with Gordov, E. P.) ★ Квантовая теория распространения электромагнитного поля. (Russian) [The quantum theory of the propagation of an electromagnetic field] "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. 173 pp. (Editors) **80h:81119** 81L05 (78A99)
- (with Kalinenko, A. N.) The change of statistics of radiation in an optical communication channel. (Russian) *Kvantovaya Elektronika No. 15* (1978), 110-116, 128. (Authors' summary) **80f:82054** 82A70 (94A05)
- Tvorogor, V. B.** A sharp front and singularities of the solutions of a class of nonhyperbolic equations. (Russian) *Dokl. Akad. Nauk SSSR* **244** (1979), no. 6, 1327-1331. (V. Wünsch) **80g:35034** 35G20 (35B99)
- Trdy, Milan** (with Schwabik, Štefan; Vejvoda, Otto) ★ Differential and integral equations. Boundary value problems and adjoints. *D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London*, 1979. 248 pp. ISBN 90-277-0802-9 (A. M. Krall) **80h:34063** 34-02 (34Bxx, 45-02)
- (with Schwabik, Štefan) On linear problems in the space BV. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977)*, pp. 366-373. *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (James V. Herod) **80m:34013** 34B10 (45P05, 49F20)
- (with Schwabik, Štefan) Boundary value problems for generalized linear differential equations. (Russian summary) *Czechoslovak Math. J.* **29(104)** (1979), no. 3, 451-477. (I. Kiguradze) **80i:34024** 34B05
- Tweddle, I.** (with Popoola, J. O.) Density character, barrelledness and the closed graph theorem. *Colloq. Math.* **40** (1978/79), no. 2, 249-258. (N. Adasch) **80j:46004** 46A07 (46A30)
- Tweddle, Richard L.** (with Laslett, G. M.; Pollard, D. B.) Techniques for establishing ergodic and recurrence properties of continuous-valued Markov chains. *Naval Res. Logist. Quart.* **25** (1978), no. 3, 455-472. (E. Arjas) **80e:60081** 60J05 (60K25, 60K30, 90B05)
- (with Tuominen, Pekka) Exponential decay and ergodicity of general Markov processes and their discrete skeletons. *Adv. in Appl. Probab.* **11** (1979), no. 4, 784-803. (Richard Madsen) **80h:60093** 60J25 (60J05)
- (with Tuominen, Pekka) Exponential ergodicity in Markovian queueing and dam models. *J. Appl. Probab.* **16** (1979), no. 4, 867-880. (Anthony G. Pakes) **80j:60120** 60K30 (60J27)
- (with Tuominen, Pekka) Markov chains with continuous components. *Proc. London Math. Soc.* (3) **38** (1979), no. 1, 89-114. (Serban Grigorescu) **80d:60089** 60J10 (28Dxx)
- Topological aspects of Doebelin decompositions for Markov chains. *Z. Wahrsch. Verw. Gebiete* **46** (1979), no. 3, 299-305. (Martin Jacobsen) **80d:60085** 60J05
- Twersky, Viktor** Multiple scattering of waves by periodic and by random distributions. *Electromagnetic scattering*, pp. 221-251. Academic Press, New York, 1978. (Werner Kohler) **80j:78007** 78A45 (92A09)
- Twilt, F.** (with Jongen, H. Th.; Jonker, P.) On Newton flows in optimization. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section I, pp. 345-359. *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (Carl P. Simon) **80k:58044** 58E15 (34C35, 58F10, 90C30)
- Twizell, E. H.** An explicit difference method for the wave equation with extended stability range. *BIT* **19** (1979), no. 3, 378-383. (Author's summary) **80h:65105** 65P05
- Twomey, John B.** (with Holland, Finbarr) Hardy spaces of close-to-convex functions and their derivatives. *Trans. Amer. Math. Soc.* **246** (1978), 359-372. (J. V. Riff) **80h:30029** 30D55
- Tytkinaja, L. M.** Interior properties of the solutions of some degenerate parabolic equations. (Russian) *Mathematical analysis and probability theory (Russian)*, pp. 175-181, 223. "Naukova Dumka", Kiev, 1978. (E. M. Saak) **80k:35047** 35K65
- Tytko, R. J.** (with Landsberg, Peter T.; Tremblay, A.-M.) Systematics of Carnot cycles at positive and negative Kelvin temperatures. *J. Phys. A* **13** (1980), no. 3, 1063-1074. (Authors' summary) **80m:80002** 80A10
- Tylikowski, A.** Stability of a nonlinear rectangular plate. *Trans. ASME Ser. E J. Appl. Mech.* **45** (1978), no. 3, 583-585. (J. D. Atkinson) **80e:73041** 73H99
- Tymchatyn, Edward D.** (with Grisolakis, Joachim N.) A universal smooth dendroid. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* **26** (1978), no. 12, 991-998 (1979). (B. J. Pearson) **80e:54040** 54F50 (54C25, 54F20)
- (with Grisolakis, Joachim N.) Semi-confluent mappings and acyclicity. *Houston J. Math.* **4** (1978), no. 3, 343-357. (Ju. M. Smirnov) **80e:54051** 54F99
- (with Grisolakis, Joachim N.) Continua which admit only certain classes of onto mappings. Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978), II. *Topology Proc.* **3** (1978), no. 2, 347-362 (1979). (Lewis Lum) **80k:54063** 54F20
- (with Grisolakis, Joachim N.) Embedding smooth dendroids in hyperspaces. *Canad. J. Math.* **31** (1979), no. 1, 130-138. (Józef Krasinkiewicz) **80j:54028** 54F20 (54B20, 54C25)
- (with Grisolakis, Joachim N.; Nadler, Sam B., Jr.) Some properties of hyperspaces with applications to continua theory. *Canad. J. Math.* **31** (1979), no. 1, 197-210. (Józef Krasinkiewicz) **80j:54029** 54F20 (54B20, 54C10)
- (with Grisolakis, Joachim N.) Hereditarily  $\sigma$ -connected continua. *Colloq. Math.* **41** (1979/80), no. 1, 57-65. (John G. Hocking) **80i:54043** 54F20
- (with Grisolakis, Joachim N.) Weakly confluent mappings and the covering property of hyperspaces. *Proc. Amer. Math. Soc.* **74** (1979), no. 1, 177-182. (A. Lelek) **80d:54041** 54F20 (54B20)
- (with Grisolakis, Joachim N.)  $\sigma$ -connectedness in hereditarily locally connected spaces. *Trans. Amer. Math. Soc.* **253** (1979), 303-315. (B. T. Sims) **80i:54012** 54D05
- Tynjanskii, N. T.** (with Arutjunov, A. V.) On the theory of time optimal linear processes. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* **91** (1978), no. 1, 29-32. (E. P. Gil'bo) **80d:93038** 93C05
- (with Arutjunov, A. V.) Time optimal linear processes. (Russian) *Vestnik Msk. Univ. Ser. XV Vychisl. Mat. Kibernet.* **1979**, no. 2, 32-37, 71. (Authors' summary) **80e:49015** 49B10
- Tyškėvič, R. I.** (with Suprunenko, D. A.) The similarity and substitutive equivalence of  $(0, 1)$ -matrices. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **22** (1978), no. 6, 485-487, 571. (A. Lee) **80i:15012** 15A21 (15A36)
- Characterization of  $(0, 1)$ -matrices that are defined by the number of units in rows and columns and of unigraphic sequences. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **22** (1978), no. 7, 592-595, 667. (J. Dénes) **80e:05043** 05C50
- Enumeration of  $(0, 1)$ -matrices defined by the number of ones in rows and columns. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **23** (1979), no. 7, 589-591, 668. (J. B. Roberts) **80m:05011** 05A15
- Tytko, N. M.** Tree-like hierarchy model of control. (Russian) *Control of dynamical system (Russian)*, pp. 244-253, 323. Leningrad. Univ., Leningrad, 1978. (Author's summary) **80e:93076** 93C40 (90D10)
- Tytlek, V. N.** Smoothness of the extremals of variational problems with constraint. (Russian) *Boundary value problems for partial differential equations (Russian)*, pp. 132-137, 167. "Naukova Dumka", Kiev, 1978. (Author's summary) **80j:49012** 49A34
- Tzafestas, Spyros G.** Design of distributed-parameter optimal controllers and filters via Walsh-Galerkin expansions. *Control of distributed parameter systems (Proc. Second IFAC Sympos., Coventry, 1977)*, pp. 201-217. IFAC, Düsseldorf, 1978. (Author's summary) **80e:93043** 93B05 (93E11)
- Multiplayer distributed-parameter differential games with sampled-state feedback control. *Internat. J. Systems Sci.* **10** (1979), no. 9, 989-1005. (Author's summary) **80f:90168** 90D25 (93C20)
- Tzannes, N. S.** (with Averis, T. G.) On reconstituting a process from its quantized form in the presence of noise. *Inform. Sci.* **15** (1978), no. 2, 127-141. (Authors' summary) **80h:94022** 94A34
- Tze, Hsiung Chia** (with Pak, Namik K.) Chiral solitons and current algebra. *Ann. Physics* **117** (1979), no. 1, 164-194. (David H. Sharp) **80j:81038** 81D15 (58A99, 81G25)
- Tzeng, Kenneth K.** (with Yu, Chie Y.) Characterization theorems for extending Goppa codes to cyclic codes. *IEEE Trans. Inform. Theory* **25** (1979), no. 2, 246-250. (Authors' summary) **80f:94018** 94B05 (94B15)
- Tzidon, Adi** (with Berger, Israel; Yoeli, Michael) A practical approach to fault detection in combinational networks. *IEEE Trans. Comput.* **27** (1978), no. 10, 968-973. (A. Thayse) **80a:94071** 94C15
- Trimbalarjo, J.** (with Sharma, A.) Landau-type inequalities for some linear differential operators. *The theory of the approximation of functions (Proc. Internat. Conf., Kuluva, 1975) (Russian)*, pp. 404-408. "Nauka", Moscow, 1977. (C. A. Hall) **80f:41008** 41A15
- (with Sharma, A.) Classes of functions defined by differential inequalities. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 735-745. *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (S. M. Shah) **80j:30036** 30D20
- Interpolation by complex splines. *Trans. Amer. Math. Soc.* **243** (1978), 213-222. (C. A. Micchelli) **80a:41009** 41A15
- Tzeltzeica, G.** See Vranceanu, Gheorghe, **80i:01013**
- Tzung, Fu Chien** Sufficient conditions for the set of Hausdorff compactifications to be a lattice. *Pacific J. Math.* **77** (1978), no. 2, 565-573. (J. van der Slot) **80a:54044** 54D35
- On semigroups of endomorphisms of biregular algebras. *J. Austral. Math. Soc. Ser. A* **27** (1979), no. 2, 239-247. (I. Gy. Maurer) **80e:17007** 17B40 (20M20)
- Tzvetanov, I. P.** (with Dimitrova, N. S.; Dimitrov, II. I.) A method of synthesizing of a coordinated optimal control of a monoresonance system with two levels. *Systems Sci.* **4** (1978), no. 3, 211-221. (Nobuo Sannomiya) **80e:93077** 93C55
- myint-U, Tyn** See Myint-U, Tyn
- Überall, Herbert** (with Gaunaud, G. C.) Acoustics of finite beams. *J. Acoust. Soc. Amer.* **63** (1978), no. 1, 5-16. (Bernard Poiree) **80a:78017** 78A40 (35Q99)
- (with Fiorito, Ralph; Madigosky, Walter) Resonance theory of acoustic waves interacting with an elastic plate. *J. Acoust. Soc. Amer.* **66** (1979), no. 6, 1857-1866. (Authors' summary) **80j:73019** 73D99
- Uberman, V. I.** A completely parallel method of reconstructing regression models by means



- of analog fuzzy perceptions, and its applications. (Russian) *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 309-321, Reidel, Dordrecht, 1978. (Author's summary) **80g:68116** 68G10 (68C05, 94D05)
- Ubertini, Lucio Mathematical model for the study of the pollution in a stream. (Italian) *Atti Accad. Sci. Lett. Atenei Palermo Parte I* (4) **35** (1975/76), 319-335 (1978). (L. G. Chambers) **80f:76043** 76T05 (35L99, 49A99)
- (with Zironi, Fernando) A numerical solution of a system of hyperbolic partial differential equations. An application to the pollution problem. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* **26** (1977), no. 2, 403-419 (1979). **80c:65240** 65P05
- Uchida, L. G. (with Rozenfeld, B. A.) al-Biruni's astronomical treatise on shadows. (Russian) *Istor.-Astronom. Issled.* No. 14 (1978), 303-314. (E. S. Kennedy) **80k:01013** 01A30 (70-03)
- Uchida, Fuchi Classification of compact transformation groups on cohomology complex projective spaces with codimension one orbits. *Japan. J. Math. (N.S.)* **3** (1977), no. 1, 141-189. (R. Schultz) **80b:57036** 57S25
- (with Watabe, Tsuyoshi) A note on compact connected transformation groups on spheres with codimension two principal orbit. *Sci. Rep. Niigata Univ. Ser. A No. 16* (1979), 1-13. (M.-C. Ku) **80f:57017** 57S15
- Uchida, Kenji Certainty equivalence property in discrete time stochastic control problems with nonlinear measurements. *Mem. School Sci. Engrg. Waseda Univ. No. 42* (1978), 1-16 (1979). (Author's summary) **80c:93151** 93E20
- On existence of a Nash equilibrium point in  $N$ -person nonzero sum stochastic differential games. *SIAM J. Control Optim.* **16** (1978), no. 1, 142-149. (G. Duru) **80i:90111** 90D10 (90D15, 90D25, 93E05)
- A note on the existence of a Nash equilibrium point in stochastic differential games. *SIAM J. Control Optim.* **17** (1979), no. 1, 1-4. (Ulrich Rieder) **80c:90177** 90D25 (93E05)
- Uchida, Keno (with Yamanaka, Kazuo; Shimemura, Etsujiro) Optimal control of systems with random delay. *Internat. J. Control* **29** (1979), no. 3, 489-495. (B. Wittenmark) **80g:93095** 93E20
- Uchida, Y. A comparison of dynamic regression models based on the control test criterion. *Computat. 1978 (Proc. Third Sympos. Comput. Statist., Leiden, 1978)*, pp. 132-138. *Physica, Vienna*, 1978. (Andrew Harvey) **80b:62117** 62P20
- Uchiyama, Akihito Weight functions on probability spaces. *Tôhoku Math. J. (2)* **30** (1978), no. 3, 463-470. (Roger L. Jones) **80b:60066** 60G42 (42B25, 60G46)
- Uchiyama, Jun (with Mochizuki, Kiyoshi) Radiation conditions and spectral theory for 2-body Schrödinger operators with "oscillating" long-range potentials. II. *J. Math. Kyoto Univ.* **19** (1979), no. 1, 47-70. (D. M. Eidsu) **80g:35100** 35P25 (35J10)
- Uchiyama, Kôhei The behavior of solutions of some nonlinear diffusion equations for large time. *J. Math. Kyoto Univ.* **18** (1978), no. 3, 453-508. (M. H. Protter) **80g:35016** 35B40 (35K55)
- Uchiyama, Kôichi Caractérisation des problèmes mixtes bien posés pour des opérateurs évolutifs à coefficients constants. *Tokyo J. Math.* **1** (1978), no. 2, 369-388. (A. P. Soldatov) **80j:35052** 35K22
- Uchiyama, Mitsuru Some generalized Toeplitz operators. *Bull. Fukuoka Univ. Ed. III* **28** (1978), 29-34. (R. G. Douglas) **80b:47039** 47B35
- Quasimilarity of restricted  $C_0$  contractions. *Acta Sci. Math. (Szeged)* **41** (1979), no. 3-4, 429-433. (Arthur Lubin) **80k:47011** 47A45
- Double commutants of  $C_0$  contractions. II. *Proc. Amer. Math. Soc.* **74** (1979), no. 2, 271-277. (R. G. Douglas) **80b:47011** 47A45
- Uda, Hirohumi Incomparability in ring extensions. *Hiroshima Math. J.* **9** (1979), no. 2, 451-463. (Stephen McAdam) **80b:13004** 13B02
- Uda, Toshio Complex bases of certain semiprime holomorphic maps. *Pacific J. Math.* **78** (1978), no. 2, 549-552. (W. Thimms) **80j:32055** 32H99
- Udayasakaran, S. (with Srinivasan, S. K.) Canonical extension of a problem in parametric frequency up-conversion with stochastic pumping. (German summary) *Optica Acta* **26** (1979), no. 12, 1535-1540. (Authors' summary) **80b:81126** 81K05
- Udeschini Brinks, Elisa A third-order "potential" tensor of the Riemann tensor. I. (Italian. English summary) *Atti. Lombardo Accad. Sci. Lett. Rend. A* **111** (1977), no. 2, 466-475 (1978). (Author's review) **80c:53016** 53B21 (83C99)
- Udlov, V. V. Group-theoretic approach to problems of autonomy, invariance and sensitivity in controllable dynamical systems. (Russian) *Kibernet. i Vychisl. Tehn.* **1978**, no. 39, 72-83, 115. (Vadim Komkov) **80c:93091** 93C99
- Udlink ten Cate, A. J. (with Verbruggen, H. B.) A least-squares-like gradient method for discrete process identification. *Internat. J. Control* **28** (1978), no. 6, 933-952. (Zbigniew Nahorski) **80c:93130** 93E12
- Udrescu, Valeriu St. On the Diophantine equation  $27y^2 + 4x^3 = D$ . *J. Reine Angew. Math.* **305** (1979), 134-135. (M. J. Cowles) **80c:10033** 10B15
- Udrishte, Constantin Directional derivatives of convex functions on Riemannian manifolds. *Papers from the National Colloquium on Geometry and Topology (Univ. Timișoara, Timișoara, 1977)*, pp. 231-235. *Univ. Timișoara, Timișoara*, 1977. (G. Tsagas) **80a:58038** 58G99 (53C20)
- Uebelacker, James W. Product graphs for given subgroups of the wreath product of two groups. II. *J. Combin. Theory Ser. B* **23** (1977), no. 2-3, 164-167. (C. R. J. Clapham) **80a:05113** 05C25
- Ueda, Takao On the fixing group for a totally pre-ordered Boolean function. *Discrete Math.* **26** (1979), no. 3, 293-295. (From the text) **80b:94060** 94C10
- Ueda, Tetsuo Compactifications of  $C \times C^*$  and  $(C^*)^2$ . *Tôhoku Math. J. (2)* **31** (1979), no. 1, 81-90. (J. A. Morrow) **80c:32029** 32J05
- Ueda, Yoshihiko Randomly transitional phenomena in the system governed by Duffing's equation. *J. Statist. Phys.* **20** (1979), no. 2, 181-196. (P. J. Holmes) **80b:34052** 34C30 (58F13)
- Uehara, Kunihiko (with Hosoya, Akio) A baryon number generation mechanism in the expanding universe. *Progr. Theoret. Phys.* **62** (1979), no. 6, 1596-1605. (Authors' summary) **80c:81173** 81G25 (83F05)
- Uehara, Tsuyoshi Fermat's conjecture and Bernoulli numbers. *Rep. Fac. Sci. Engrg. Saga Univ. Math. No. 6* (1978), 9-14. (Wells Johnson) **80a:12008** 12A35 (10A40, 10B15)
- Ueshima, Yasumasa (with Nishida, Toshio; Yoneyama, Kanji) Two-stage tandem queue with two types of customers. *Tech. Rep. Osaka Univ.* **28** (1978), no. 1430-1458, 343-349. (Authors' summary) **80f:60087** 60K25
- Uesu, Kagumi On cancellation of compact Riemannian manifolds. *Mem. Fac. Sci. Kyushu Univ. Ser. A* **33** (1979), no. 2, 225-236. (R. S. Millman) **80k:53066** 53C20
- Uesu, Tadahiro A system of graph grammars which generates all recursively enumerable sets of labelled graphs. *Tsukuba J. Math.* **2** (1978), 11-26. (From the introduction) **80b:68067** 68F05 (68E10)
- Ufnarowski, V. A. The growth of algebras. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1978**, no. 4, 59-65. (P. M. Cohn) **80b:17011** 17B35
- Ughi, Mauro A priori estimates for the solutions of boundary value problems of fourth and fifth type for a linear parabolic equation. (Italian. English summary) *Atti Sem. Mat. Fis. Univ. Modena* **26** (1977), no. 2, 304-328 (1979). (J. W. Bebernes) **80i:35022** 35B45 (35K20)
- (with Borgioli, Giovanni; di Benedetto, Emmanuele) Stefan problems with nonlinear boundary conditions: the polygonal method. (German and Russian summaries) *Z. Angew. Math. Mech.* **58** (1978), no. 12, 539-546. (Steven M. Serbin) **80a:65208** 65N10
- Uglianov, A. V. On a construction of the Feynman integral. (Russian) *Dokl. Akad. Nauk SSSR* **243** (1978), no. 6, 1406-1409. (R. A. Minlos) **80g:81019** 81C30 (35R15, 58D25, 58D30)
- On a class of Hilbert measures. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 6(204), 235-236. (N. N. Vahanija (Vakhania)) **80j:60015** 60B11 (28C20)
- Ugodnikov, A. G. (with Baženov, V. G.; Sinkarenko, A. P.) Numerical analysis of elastoplastic deformation of shells with curvilinear apertures under impulse loading. (Russian) *Prikl. Meh.* **15** (1979), no. 5, 48-53, 110. (Authors' summary) **80i:73066** 73L15
- Ugowski, Henryk On a random linear parabolic equation. *Demonstratio Math.* **11** (1978), no. 2, 465-498. (G. Papanicolaou) **80c:60082** 60H15 (35R60)
- Ugrin-Sparac, D. Preperiod and period of periodic  $p$ -adic numbers. (Serbo-Croatian summary) *Glas. Mat. Ser. III* **13**(33) (1978), no. 1, 3-14. (Graham Lord) **80h:10013** 10A30
- Uhl, J. J., Jr. The Radon-Nikodým property: a point of view. *Vector space measures and applications (Proc. Conf., Univ. Dublin, Dublin, 1977)*, I, pp. 442-451. *Lecture Notes in Math.*, **644**, Springer, Berlin, 1978. (Igor Klavánek) **80c:28015** 28B05
- (with Kallton, Nigel; Turett, Barry) Basically scattered vector measures. *Indiana Univ. Math. J.* **28** (1979), no. 5, 803-816. (Robert E. Huff) **80a:28013** 28B05 (46G10)
- Uhlenbeck, Karen Keskulla Removable singularities in Yang-Mills fields. *Bull. Amer. Math. Soc. (N.S.)* **1** (1979), no. 3, 579-581. (M. F. Atiyah) **80j:53035** 53B50 (58E20, 81E10)
- Uhlenbrock, D. A. (with Heidenreich, R.; Seiler, R.) The Luttinger model. *J. Statist. Phys.* **22** (1980), no. 1, 27-57. (Authors' summary) **80a:82066** 82A65 (81M05)
- Uhlir, Andreas (with Friedrich, Volkmar) Zur stochastischen Regularisierung linearer Gleichungen in Hilberträumen. *Beiträge Numer. Math.* **7** (1979), 33-48. (Authors' summary) **80d:65069** 65J10 (47A50, 65C20)
- Numerische Vergleiche zwischen stochastischer Regularisierung und Projektionsverfahren am Beispiel der Rekonstruktion vertikaler Temperaturprofile der Erdatmosphäre auf der Grundlage von Satellitenmessungen. *Beiträge Numer. Math.* **7** (1979), 113-119. (Authors' summary) **80c:86007** 86A35
- Uhlir, Dietmar Self-correcting contact schemes that correct a large number of errors. (Russian) *Dokl. Akad. Nauk SSSR* **241** (1978), no. 6, 1273-1276. (Andreas Albrecht) **80a:94064** 94C10
- A function of the algebra of logic with many subfunctions and a small complexity of realization. (Russian) *Problemy Kibernet.* No. 35 (1979), 133-139, 208. (Stephen L. Bloom) **80b:03052** 03D15 (03G05, 94C10)
- Uhlir, Frank A recurring theorem about pairs of quadratic forms and extensions: a survey. *Linear Algebra Appl.* **25** (1979), 219-237. (H. D. Warner) **80b:15015** 15A63 (15-03)
- A rational canonical pair form for a pair of symmetric matrices over an arbitrary field  $F$  with  $\text{char } F \neq 2$  and applications to finest simultaneous block diagonalizations. (German summary) *Linear and Multilinear Algebra* **8** (1979/80), no. 1, 41-67. (J. L. Brenner) **80j:15009** 15A21
- Uhlmann, A. Markov master equation and the behaviour of some entropy-like quantities. *Stochastische Theorie der nichtlinearen irreversiblen Prozesse (Second Rostock Univ. Conf., Wilhelm-Pieck-Univ., Rostock, 1977)*, pp. 45-54. *Rostocker Phys. Manuscripte*, **2**, Wilhelm-Pieck-Univ., Rostock, 1977. (Michael Keane) **80c:82048** 82A70
- Ordnungsstrukturen im Raum der gemischten Zustände und die  $H$ -Theoreme von Felderhof-van Kampen. *Wiss. Z. Karl-Marx-Univ. Leipzig Math.-Natur. Reihe* **27** (1978), no. 3, 213-228. (Authors' summary) **80d:82008** 82A05
- (with Crell, B.; de Paly, T.)  $H$ -Theoreme für die Fokker-Planck-Gleichung. *Wiss. Z. Karl-Marx-Univ. Leipzig Math.-Natur. Reihe* **27** (1978), no. 3, 229-234. (Authors' summary) **80d:82007** 82A05
- Some remarks on reflection positivity. *Symposium on Mathematical Methods in the Theory of Elementary Particles (Liblice, 1978)*. *Czechoslovak J. Phys. B* **29** (1979), no. 1, 117-126. (A. R. Marlow) **80k:82018** 82A05 (78A30)
- (with Crell, B.) An example of a nonlinear evolution equation showing "chaos-enhancement". *Leit. Math. Phys.* **3** (1979), no. 6, 463-465. (Authors' summary) **80c:82007** 82A05 (35Q99)
- See also Proceedings: International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics, **80a:47002**
- Ukobotov, V. I. On a class of differential games with an integral constraint. *Prikl. Mat. Meh.* **41** (1977), no. 5, 819-824. (Russian); translated as *J. Appl. Math. Mech.* **41** (1977), no. 5, 838-844 (1979). (D. J. Wilson) **80c:90178** 90D25
- Uhrin, B. On two combinatorial identities useful in linear inequalities. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 1081-1089. *Colloq. Math. Soc. János Bolyai*, **18**, North-Holland, Amsterdam, 1978. (Jochem Zowe) **80d:53014** 52A40 (05A19)
- Ujihara Fukuda, Masako (with Fukuda, Takuo) Algebras  $Q(f)$  determine the topological types of generic map-germs. *Invent. Math.* **51** (1979), no. 3, 231-237. (James Damon) **80b:58016** 58C27
- Ukai, Hiroyuki (with Iwazumi, Tetsuo; Kando, Hisashi) Suboptimal control of singularly perturbed distributed parameter systems. (Japanese. English summary) *Bull. Nagoya Inst. Tech.* **29** (1977), 325-329. (From the summary) **80a:93111** 93C99

- (with Iwazumi, Tetsuo; Kando, Hisashi) Optimal regulator problem of singularly perturbed evolution equations in Hilbert spaces. (Japanese. English summary) *Bull. Nagoya Inst. Tech.* 30 (1978), 223-229 (1979). (Authors' summary) **80b:93054** 93B99
- Ukawa, A.** (with Konishi, K.; Veneziano, G.) Jet calculus: a simple algorithm for resolving QCD jets. *Nuclear Phys. B* 157 (1979), no. 1, 45-107. (Martin B. Einhorn) **80g:81086** 81G45
- Ukegawa, Takasaburo** Some properties of non-commutative multiplication rings. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 9, 279-284. (J. C. Robson) **80a:16012** 16A14
- Ukhobotov, V. I.** See **Ukhobotov, V. I.**
- Ukkonen, Esko** Transformations to produce certain covering grammars. *Mathematical foundations of computer science, 1978 (Proc. Seventh Sympos., Zakopane, 1978)*, pp. 516-525, *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (Anton Nijholt) **80d:68113** 68F25 (68F05)
- Ula, Nurul** Analogue computer solution of certain zero-one integer programming problems. *Internat. J. Electron.* 46 (1979), no. 6, 555-561. (Author's summary) **80g:90086** 90C10 (90-04)
- Ulam, S. M.** (with Bednarek, A. R.) Projective algebra and the calculus of relations. *J. Symbolic Logic* 43 (1978), no. 1, 56-64. (Stephen L. Bloom) **80i:03070** 03G15
- Ulanov, G. M.** (with Petrov, B. N.; Gol'denblat, I. I.; Ul'janov, S. V.) Informational and thermodynamical aspects of the qualitative theory of evolutionary models of developing dynamical control systems. (Russian) *Engineering cybernetics*, Vol. 10 (Russian), pp. 5-119, 322, *VINITI, Moscow*, 1978. (Vadim Komkov) **80e:93010** 93A10
- (with Petrov, B. N.; Ul'janov, S. V.; Gol'denblat, I. I.) ★Теория моделей в процессах управления. (Russian) [The theory of models in control processes] Информационный и термодинамический аспекты. [Informational and thermodynamic aspects] "Nauka", Moscow, 1978. 223 pp. (From the text) **80i:93003** 93-02 (94D05)
- Ullgen, Oskar M.** (with Burns, James R.; Beights, Harvey W.) An algorithm for converting signed digraphs to Forrester schematics. *IEEE Trans. Systems Man Cybernet.* 9 (1979), no. 3, 115-124. (Authors' summary) **80e:93020** 93A99 (68E10)
- Ullig, D.** See **Ullig, Dietmar**
- Ullrich, A. F.** (with Martynenko, M. A.) Stress condition near the top of a spherical cut in an infinitely elastic medium. (Russian) *Prikl. Meh.* 14 (1978), no. 9, 15-23, 141. (Authors' summary) **80b:73049** 73M20
- ★Метод собственных векторных функций в пространственных задачах теории упругости. (Russian) [The method of eigenvector functions in three-dimensional problems of the theory of elasticity] "Naukova Dumka", Kiev, 1979. 264 pp. (Editors) **80b:73003** 73-02 (35Cxx, 73Cxx)
- Ul'janov, P. L.** Absolute convergence of Fourier-Haar series for superpositions of functions. (Russian. English summary) *Anal. Math.* 4 (1978), no. 3, 225-236. (W. R. Wade) **80c:42012** 42C10
- See also **Men'sov, D. E.**; et al., **80g:01027**
- Ul'janov, S. V.** (with Petrov, B. N.; Gol'denblat, I. I.; Ul'janov, G. M.) ★Теория моделей в процессах управления. (Russian) [The theory of models in control processes] Информационный и термодинамический аспекты. [Informational and thermodynamic aspects] "Nauka", Moscow, 1978. 223 pp. (From the text) **80i:93003** 93-02 (94D05)
- (with Petrov, B. N.; Ulanov, G. M.; Gol'denblat, I. I.) Informational and thermodynamical aspects of the qualitative theory of evolutionary models of developing dynamical control systems. (Russian) *Engineering cybernetics*, Vol. 10 (Russian), pp. 5-119, 322, *VINITI, Moscow*, 1978. (Vadim Komkov) **80e:93010** 93A10
- (with Gol'denblat, I. I.) ★Введение в теорию относительности и ее приложения к новой технике. (Russian) [An introduction to the theory of relativity and its applications to new technology] "Nauka", Moscow, 1979. 272 pp. (Vadim Komkov) **80e:83001** 83-01
- Ul'janov, V. M.** A space with a single point of extremal disconnectedness. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 4(202), 205-206. (Roman Duda) **80a:54067** 54G15
- Ul'janov, V. V.** Some improvements of estimates for the rate of convergence in the central limit theorem. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 3, 684-688. (S. A. Ismatullaev) **80c:60033a** 60F05
- Letter to the editors: "Some improvements of estimates for the rate of convergence in the central limit theorem" [*Teor. Veroyatnost. i Primenen.* 23 (1978), no. 3, 684-688; MR 80c:6033a]. (Russian) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 1, 236. (S. A. Ismatullaev) **80c:60033b** 60F05
- Ullanova, V. I.** (with Abramov, A. A.; Birger, E. S.; Konjuhova, N. B.) Numerical segregation of bounded solutions of systems of ordinary differential equations. (Russian. English summary) *Studia Sci. Math. Hungar.* 10 (1975), no. 3-4, 329-335 (1978). (Authors' summary) **80a:65164** 65L10
- Uljainenko, A. E.** (with Petrov, B. N.; Aleksandrov, A. D.; Andreev, V. P.; Bulekov, V. P.; Viktorov, B. V.; Izvol'skii, E. G.; Kudrjavcev, P. S.; Kuzin, V. P.; Mahan'ko, A. V.; Mikhailov, F. A.; Muravleva, G. A.; Nikolaev, Ju. P.; Pobedonosov, G. V.; Pohvalenskii, V. L.; Sadykov, F. R.; Serpionov, G. V.; Salikova, I. M.; Frolov, P. A.; Červjakov, V. P.; Satirjan, K. T.) ★Мно. режимные и нестационарные системы автоматического управления. (Russian) [Multistate and nonstationary automatic control systems] "Mashinostroenie", Moscow, 1978. 240 pp. (Publisher's summary) **80c:93073** 93C40
- Ullah, Aman** (with Ullah, Shobha) Double  $k$ -class estimators of coefficients in linear regression. *Econometrica* 46 (1978), no. 3, 705-722. (Stanley L. Sclove) **80e:62048** 62J05 (62P20)
- Ullah, Shobha** (with Ullah, Aman) Double  $k$ -class estimators of coefficients in linear regression. *Econometrica* 46 (1978), no. 3, 705-722. (Stanley L. Sclove) **80e:62048** 62J05 (62P20)
- Ullman, Jeffrey D.** (with Aho, A.; Hopcroft, John E.) ★Построение и анализ вычислительных алгоритмов. (Russian) [The design and analysis of computer algorithms] Translated by A. O. Slisenko. Edited by Ju. V. Matijasevič. "Mir", Moscow, 1979. 536 pp. (Editors) **80g:68036** 68C05
- (with Aho, A.; Sagiv, Y.) Equivalences among relational expressions. *SIAM J. Comput.* 8 (1979), no. 2, 218-246. (Ju. G. Karpov) **80f:68106** 68H05 (68B15)
- ★Principles of database systems. Computer Software Engineering Series. Computer Science Press, Potomac, Md., 1980. 379 pp. ISBN 0-914894-13-7. (Clement T. Yu) **80j:68002** 68-01 (68B15)
- (with Kaplan, Marc A.) A scheme for the automatic inference of variable types. *J. Assoc. Comput. Mach.* 27 (1980), no. 1, 128-145. (Authors' summary) **80m:68014** 68B05 (68B20, 68C05)
- Ullom, Stephen V.** Swan modules, class fields, and class groups of cyclic  $p$ -groups. *Séminaire de Théorie des Nombres (1976-1977)*, Exp. No. 31, 9 pp., CNRS, Talence, 1977. (H. Yokoi) **80b:20017** 20C10 (12A57)
- Class groups of cyclotomic fields and group rings. *J. London Math. Soc.* (2) 17 (1978), no. 2, 231-239. (John D. Leadley) **80k:12015** 12A57 (20C10)
- Ulrich, Christian** Über schwach zyklische Abbildungen in nichtlinearen Produktträumen und einige Monotonieaussagen. (Czech and Russian summaries) *Apl. Mat.* 24 (1979), no. 3, 209-234, iv. (W. Börsch-Supan) **80i:65050** 65G10 (65J05)
- Blockiterationverfahren bei schwach zyklischen Abbildungen. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* 59 (1979), no. 3, T83-T84. (From the text) **80b:65027** 65F99 (65G10)
- Ulrich, Milan** The use of Boolean functions for generation of stochastic processes. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 527-536, Academia, Prague, 1978. (From the text) **80g:94094** 94C10 (60G99, 65C20)
- Ulm, Sulev** See **Obituary: Ulm, Sulev**, **80b:01036**
- Ulm, D. A.** (with Kraige, L. G.) Rectification of the Encke perturbation method as applied to rigid body rotational motion. *J. Astronaut. Sci.* 27 (1979), no. 3, 311-319. (Authors' summary) **80m:70006** 70E20
- Ullman, D.** See **Ullman, Jeffrey D.**
- Ulmer, W.** (with Hartmann, H.) On a geometric interpretation of Heisenberg's commutation rule and the algebraic structure of the Pauli equation. (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 1, 59-73. (Authors' summary) **80c:81050** 81D05 (58G35)
- (with Hartmann, H.) On the application of a Gauss transformation in nonlinear quantum mechanics. (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 3, 359-376. (Gisèle Hadinger) **80a:81027** 81C10 (45K05)
- Ulph, David** On labour supply and the measurement of inequality. *J. Econom. Theory* 19 (1978), no. 2, 492-512. (G. Tintner) **80b:90042** 90A16
- Uma, S. U.** Some remarks on the generalization of superalgebras. *Proceedings of the Conference on Structure of Matter—Mathematics and Phenomenology (Inst. Engrs., Mysore, 1978)*, pp. 302-304, *Matscience Rep.*, 93, Inst. Math. Sci., Madras, 1978. (Hans Tilgner) **80d:17004** 17A70 (81M05)
- Umar, Sarfaraz** (with Khan, Huzoor H.) On  $|C|_k$  summability factors of Fourier series. *Indian J. Pure Appl. Math.* 10 (1979), no. 3, 334-338. (Prem Chandra) **80d:42008** 42A28
- Umarani, Prakash G.** On a subclass of spiral-like functions. *Indian J. Pure Appl. Math.* 10 (1979), no. 10, 1292-1297. (M. S. Robertson) **80c:30027** 30C45
- Umbach, Dale** On the approximate behavior of the posterior distribution for an extreme multivariate observation. *J. Multivariate Anal.* 8 (1978), no. 4, 518-531. (Michael Titterton) **80b:62044** 62F12 (62F15)
- Umbetjanov, D. U.** (with Berzanov, A. B.) Holomorphic almost multiperiodic solution of a certain integro-partial differential equation. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1977, no. 5, 61-66, 93. (M. I. Imanaliev) **80m:35006** 35B15
- ★Почти многопериодические решения дифференциальных уравнений в частных производных. (Russian) [Almost multiperiodic solutions of partial differential equations] "Nauka" Kazah. SSR, Alma-Ata, 1979. 210 pp. (J. K. Hale) **80b:35008** 35B15 (34C28, 34C30, 34K15)
- Almost multiperiodic solution of a hyperbolic system of differential equations. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1979, no. 1, 63-67, 92. (Author's summary) **80c:35009** 35B10 (35L50)
- Umenaga, Kaoru** Rankine's contribution to thermodynamics. *Bull. Fukuoka Univ. Ed. III* 28 (1978), 35-43. (R. H. Atkin) **80f:01017** 01A55 (80-03)
- Umeo, Hiroshi** (with Sugata, Kazuhiro; Morita, Kenichi) The language accepted by an  $n$ -bounded multicounter automaton and its computing ability. *Systems-Comput.-Controls* 8 (1977), no. 2, 71-79 (1978). (Ronald E. Prather) **80b:68077** 68D35
- (with Morita, Kenichi; Sugata, Kazuhiro) Computation complexity of  $n$ -bounded counter automaton and multidimensional rebound automaton. *Systems-Comput.-Controls* 8 (1977), no. 2, 80-87 (1978). (A. L. Selman) **80g:68068** 68D05
- (with Morita, Kenichi; Sugata, Kazuhiro) Some notes concerning the shape of two-dimensional input tapes. *Systems-Comput.-Controls* 8 (1977), no. 4, 61-67 (1979). (Authors' summary) **80g:68070** 68D05
- (with Morita, Kenichi; Sugata, Kazuhiro) Computational complexity of  $L(m, n)$  tape-bounded two-dimensional Turing machines. *Systems-Comput.-Controls* 8 (1977), no. 6, 17-24 (1979). (Authors' summary) **80f:68060** 68C40 (03D15, 68C25)
- (with Morita, Kenichi; Sugata, Kazuhiro) Language recognition abilities of several two-dimensional tape automata and their relation to tape complexities. *Systems-Comput.-Controls* 8 (1977), no. 6, 58-65 (1979). (Authors' summary) **80f:68063** 68F10 (68C40, 68D20)
- Umezawa, H.** (with Wadati, Miki; Matsumoto, H.; Takahashi, Yasushi) Quantum field theory of crystals and dislocations. *Fortschr. Phys.* 26 (1978), no. 6, 357-396. (P. M. van den Broek) **80a:82037** 82A60 (35Q99)
- (with Stuart, C. I. J. M.; Takahashi, Yasushi) Mixed-system brain dynamics: neural memory as a macroscopic ordered state. *Found. Phys.* 9 (1979), no. 3-4, 301-327. (Authors' summary) **80c:92014** 92A09
- Umezawa, M.** (with Oberlechner, G.; Zenses, Ch.) The boson transformations and the soliton solutions of the sine-Gordon equation. *Lett. Nuovo Cimento* (2) 23 (1978), no. 18, 641-649. (A. Rouet) **80b:81090** 81E99 (35Q20)
- Umezawa, Toshio** A method for cut elimination in intuitionistic predicate logic and classical predicate logic. *Rep. Fac. Sci. Shizuoka Univ.* 13 (1979), 1-13. (G. E. Mini) **80k:03063** 03F05



- Unger, Karl Über eine Produktdarstellung holomorpher Funktionen. (Italian summary) *Atti Accad. Sci. Ist. Bologna Cl. Sci. Fis. Rend.* (13) 5 (1977/78), no. 1, 149-156. (S. M. Shah) **80i:30003** 30B99
- (with Hornich, H.) Über Reihen- und Produktdarstellung von Funktionen. *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* **187** (1978), no. 8-10, 411-415. (S. M. Shah) **80i:30006** 30B10
- Umrhin, Ju. D. A systemological approach to the synthesis of adaptive communications networks. (Russian) *Principles of the construction of information disseminating devices* (Russian), pp. 37-53, 161, "Nauka", Moscow, 1978. (Author's summary) **80i:93085** 93C40 (94A40)
- Underground, P. On graphs with Hamiltonian squares. *Discrete Math.* **21** (1978), no. 3, 323. (Walter Stromquist) **80i:05097** 05C45
- Underwood, Robert G. (with Young, Donald F.) Null controllability of nonlinear functional-differential equations. *SIAM J. Control Optim.* **17** (1979), no. 6, 753-772. (D. H. Chyung) **80m:93018** 93B05
- Ungar, A. M. See Szabó, Árpád. **80i:01001**
- Ungar, Abraham The differential transform technique for solving problems of wave propagation. *Modern problems in elastic wave propagation* (Proc. IUTAM Symp., Northwestern Univ., Evanston, Ill., 1977), pp. 83-102, Wiley, New York, 1978. (G. Eason) **80i:73025** 73D10
- The use of a new operational method in solid mechanics. *Solid Mech. Arch.* **4** (1979), no. 1, 1-29. (P. C. Golas) **80i:73036** 73D99
- Ungar, S. *n*-connectedness of inverse systems and applications to shape theory. (Serbo-Croatian summary) *Glas. Mat. Ser. III* **13**(33) (1978), no. 2, 371-396. (Maria Moszyńska) **80i:55023** 55Q07 (54F43, 55P55, 55U40)
- Ungethüm, E. Poncelatsche Dreieckscharen. *Elem. Math.* **34** (1979), no. 5, 109-119. (O. Botema) **80i:51008** 51M15
- Uno, Minoru (with Kise, Hiroshi) One-machine scheduling problems with earliest start and due time constraints. *Mem. Kyoto Tech. Univ. Sci. Tech.* **27** (1978), 25-34. (Authors' summary) **80i:90083** 90B35
- Unterwiesing, Karl Dynamic weighted binary search trees. *Acta Inform.* **11** (1978/79), no. 4, 341-362. (Author's summary) **80i:68057** 68E10 (68C25, 68H05)
- Unterberger, André Encore des classes de symboles. *Séminaire Goulaouic-Schwartz* 1977/1978: *Equations aux dérivées partielles*, Exp. No. 6, 17 pp., École Polytech., Palaiseau, 1978. (M. S. Agranović) **80i:58038** 58G15 (35S05, 47G05)
- Décompositions spectrales approchées associées à une famille d'oscillateurs harmoniques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 11, A783-A785. (Author's summary) **80i:58069** 58G25 (35S05)
- Sur la continuité  $L^2$  des opérateurs pseudo-différentiels. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 14, A935-A936. (Author's summary) **80i:47043** 47G05 (35S05)
- Extensions du lemme de Cotlar et applications. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 4, A249-A252. (Author's summary) **80i:47055** 47B38
- Les opérateurs métadifférentiels. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 8, A449-A451. (Bent E. Petersen) **80i:58096** 58G15
- Uonaki, Katsuji Solution of certain partial differential equations by a modified explosive method. *Tech. Rep. Osaka Univ.* **28** (1978), no. 1430-1458, 333-341. (Author's summary) **80i:65149** 65P05
- Upadhyay, M. D. (with Dube, K. K.) Some problems on differentiable structure defined by the algebraic equation  $F^2 - A^2F = 0$ . (Romanian summary) *An. Univ. Timișoara Ser. Științ. Mat.* **15** (1977), no. 1, 55-60 (1978). (K. Yano) **80i:53027** 53C15
- (with Gupta, V. C.) A differentiable manifold with  $\{K, K-2\}$ -structure of rank  $R$ . (Romanian summary) *An. Univ. Timișoara Ser. Științ. Mat.* **15** (1977), no. 1, 61-73 (1978). (Authors' summary) **80i:53041** 53C15
- (with Dube, K. K.) Linear connections on manifolds with  $(1, 1)$  tensor field. *An. Univ. Timișoara Ser. Științ. Mat.* **15** (1977), no. 2, 157-164 (1978). (R. S. Millman) **80i:53049** 53C15
- (with Das, Lovejoy S. K.) On  $F$ -structure manifold. *Kyungpook Math. J.* **18** (1978), no. 2, 277-283. (David Blair) **80i:53043** 53C15
- Upadhyaya, B. Shreekantha Composition factors of the principal indecomposable modules for the special linear group  $SL(2, q)$ . *J. London Math. Soc.* (2) **17** (1978), no. 3, 437-445. (Kok-Wee Han) **80m:20009** 20C20
- Filtrations with Weyl module quotients of the principal indecomposable modules for the group  $SL(2, q)$ . *Comm. Algebra* **7** (1979), no. 14, 1469-1488. (Edward Cline) **80i:20045** 20G40 (20C30)
- Upadhyaya, K. S. (with Ambar, M.) Compatibility conditions for the surface of discontinuity in pseudoflow. *Ann. Soc. Sci. Bruxelles Sér. I* **93** (1979), no. 2, 69-72. (Tommaso Ruggeri) **80i:76052** 76L05 (35L67, 53B25)
- Upadhyaya, Sushama (with Srivastava, Viorend Kumar) Properties of Stein-like estimators in the regression model when disturbances are small. *J. Statist. Res.* **11** (1977), no. 1-2, 5-21. (Authors' summary) **80i:62068** 62J07
- Upham, Mary H. A new proof of a theorem of Michler. *Arch. Math. (Basel)* **31** (1978/79), no. 6, 554-561. (B. J. Müller) **80i:16007** 16A14
- Localization and completion of FBN hereditary rings. *Comm. Algebra* **7** (1979), no. 12, 1269-1307. (Toyonori Kato) **80i:16008** 16A08 (16A49)
- Uppmeyer, Harald (with Braun, Robert; Kaup, Wilhelm) On the automorphisms of circular and Reinhardt domains in complex Banach spaces. *Manuscripta Math.* **25** (1978), no. 2, 97-133. (Martin Schottenloher) **80i:32003** 32A07 (32M05)
- Uppmeyer, C. Light caustics from rippling water. *Proc. Roy. Soc. London Ser. A* **365** (1979), no. 1720, 95-104. (J. S. Joel) **80i:78003** 78A10 (58C27)
- Upton, Graham J. G. ★The analysis of cross-tabulated data. Wiley Series in Probability and Mathematical Statistics—Applied. *John Wiley & Sons, Ltd., Chichester*, 1978. xii + 148 pp. ISBN 0-471-99659-9 (Rolf Sundberg) **80i:62078** 62H17
- Ur, Hamech (with Shen-Orr, Chaim D.) Function evaluation by incremental computation, with applications. *Math. Comput. Simulation* **21** (1979), no. 2, 163-169. (F. M. Larkin) **80i:65010** 65D15 (41-04)
- Ura, Taro Homomorphism theorems in local dynamical systems theory. Qualitative research on stability of solutions of functional differential equations (Proc. Sympos. Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976). *Shikaisaikikenkyūsho Kōkyūroku* No. 288 (1977), 23-49. (From the introduction) **80i:54054** 54H20
- Urahe, Hironobu On a factorization problem of certain entire functions and a theorem of Ostrovskii. *Bull. Kyoto Univ. Ed. Ser. B* No. 53 (1978), 1-9. (R. S. L. Srivastava) **80i:30026** 30D20
- (with Yang, Chung Chun) On the zeros of an entire function which is periodic mod a non-constant entire function of order less than one. *Proc. Japan Acad. Ser. A Math. Sci.* **54** (1978), no. 6, 142-144. (T. Kövari) **80i:30029** 30D20
- Infinite order, periodic, entire functions which together with their derivatives are prime. *Bull. Kyoto Univ. Ed. Ser. B* No. 55 (1979), 21-32. (Fred Gross) **80i:30035** 30D15
- Urabe, Jilchiroh On the theorem of Hamada for a linear second-order equation with variable multiplicities. *J. Math. Kyoto Univ.* **19** (1979), no. 1, 153-169. (Z. Schuss) **80i:35022** 35C10
- Urabe, Tokuake On Hironaka's monoidal. *Publ. Res. Inst. Math. Sci.* **15** (1979), no. 1, 279-287. (Bernard Teissier) **80i:14013** 14E15
- Urakawa, Hajime On the least positive eigenvalue of the Laplacian for compact group manifolds. *J. Math. Soc. Japan* **31** (1979), no. 1, 209-226. (R. S. Millman) **80i:58046** 58G25 (53C21)
- Ural'ceva, N. N. Strong solutions of the generalized Signorini problem. (Russian) *Sibirsk. Mat. Ž.* **19** (1978), no. 5, 1204-1212, 1216. (A. A. Arsen'ev) **80i:35166** 35Q20 (35R45)
- See also Boundary value problems. Spectral theory, **80i:35003**
- Urban, János See Trahtenbrot, B. A. **80i:68001**
- Urban, Paul (with Pucker, Norbert) Johannes Kepler: sa contribution au progrès des sciences naturelles. With discussion. *Ontologie und Logik/Ontology and logic* (Proc. Internat. Colloq., Salzburg, 1976), pp. 247-265, Duncker & Humblot, Berlin, 1979. (William R. Shea) **80i:01024** 01A45
- Urbanek, Friedrich J. (with Proding, Helmut) Language operators related to Init. *Theoret. Comput. Sci.* **8** (1979), no. 2, 161-175. (Branislav Rovani) **80i:68195** 68F05
- Urbanik, K. Lévy's probability measures on Banach spaces. *Studia Math.* **63** (1978), no. 3, 283-308. (S. A. Cobanjan) **80i:60007** 60B12 (60B11)
- Urbaniski, Ryszard (with Hudzik, Henryk; Musielak, Julian) Lattice properties of the space of convex, closed and bounded subsets of a topological vector space. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979), no. 2, 157-162. (N. Adasch) **80i:46027** 46A99
- Urbanke, H. K. (with Rumpf, Helmut) Covariant "in-out" formalism for creation by external fields. *Ann. Physics* **114** (1978), no. 1-2, 332-355. (N. D. Sengupta) **80i:81066** 81E05 (00A89)
- valdivia Ureña, Manuel See Valdivia Ureña, Manuel
- Ureña, John B. Improbability of collisions in Newtonian gravitational systems of specified angular momentum. *SIAM J. Appl. Math.* **36** (1979), no. 1, 123-136. (Author's summary) **80i:70015** 70F10 (58F05)
- Uricher, Émile (with Troesch, Albert) Perturbations singulières et analyse non standard. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 14, A937-A939. (Authors' summary) **80i:34047** 34C99 (03H05)
- Uroş, Carmencita On the connections between congruence relations and the neutral ideals of lattices. (Romanian. German summary) *Bul. Ştiinț. Tehn. Inst. Politehn. "Traian Vuia" Timișoara* **22**(36) (1977), no. 2, 366-368. (R. Cipoliti) **80i:06006** 06B10
- Urquhart, Alasdair Distributive lattices with a dual homomorphic operation. *Studia Logica* **38** (1979), no. 2, 201-209. (Csaba Hatvani) **80i:03071** 03G25 (06D99)
- de Urries, F. J. (with Julve, J.; Tiemblo, A.) Nonlinear group realizations and Higgs-like mechanism. (Italian and Russian summaries) *Nuovo Cimento A* (11) **50** (1979), no. 2, 225-240. (Authors' summary) **80i:81053** 81D20
- Urrut, Hilarri, Jean-Baptiste See Hilarri-Urrut, Jean-Baptiste
- Ursescu, C. (with Pavel, N.) Flow-invariance for higher order differential equations. *An. Ştiinț. Univ. "Al. I. Cuza" Iași Sec. I a Mat. (N.S.)* **24** (1978), no. 1, 91-100. (Sadakazu Aizawa) **80i:34087** 34G20
- Ursini, Aldo A sequence of theories for arithmetic whose union is complete. (Italian summary) *Rend. Sem. Mat. Univ. Padova* **57** (1977), 75-92 (1978). (Author's summary) **80i:03058** 03F30
- On the set of "meaningful" sentences of arithmetic. *Studia Logica* **37** (1978), no. 3, 237-241. (Luiz Paulo de Alcantara) **80i:03084** 03F30
- Intuitionistic diagonalizable algebras. *Algebra Universalis* **9** (1979), no. 2, 229-237. (Anna Romanowska) **80i:03108** 03G25 (06D20)
- Ursul, M. I. (with Arnautov, V. I.) Imbedding of topological rings into connected ones. (Russian) Ring-theoretical constructions. *Mat. Issled.* No. 49 (1979), 11-15, 159. (R. Wiegandt) **80i:16050** 16A80 (17A99)
- Urumov, I. O. (with Kiplidze, Z. Š.; Klimiavili, M. A.; Kobašvili, T. V.) Weighted codes with basis  $q=7$ . (Russian) *Trudy Vysš. Centr. Akad. Nauk Gruz. SSR* **19** (1979), no. 2 Mat. i Tehn. Kibernet., 12-16. (From the text) **80i:94051** 94B05
- Urusov, A. I. (with Janenko, N. N.; Sokin, Ju. I.) Difference schemes in an arbitrary curvilinear coordinate system. (Russian) *Dokl. Akad. Nauk SSSR* **242** (1978), no. 3, 552-555. (E. G. D'jakonov) **80i:65203** 65N05
- Urvancev, A. L. (with Il'in, V. P.) Automation of Čebyšev iteration processes. (Russian) *Computational methods in linear algebra* (Proc. Fourth All-Union Conf., Acad. Sci. USSR, Novosibirsk, 1976), pp. 133-145, Akad. Nauk SSSR Sibirsk. Otdel., Vyčisl. Centr., Novosibirsk, 1977. (E. G. D'jakonov) **80i:65023** 65F10
- Üry, L. (with Filippov, V. V.) A theorem on relative universal spaces with given weight and dimension. *Acta Math. Acad. Sci. Hungar.* **32** (1978), no. 3-4, 371-375. (J. Mioduszewski) **80i:54042** 54F45 (54A25, 54C25)
- Uryson, P. S. See Arboleda, L. C. **80i:01014**
- Usachev, E. S. On the quantitative theory of random dynamical systems. (Russian) *Problemy Ščaičin. Poiska No. 6 Zadaci Optimizacii* (1978), 202-223, 333. (W. Greblich) **80i:93136** 93E20
- Ušakov, R. P. (with Kovalenko, V. G.; Gel'fand, M. B.) ★Доказательство неравенств. (Ukrainian) [Proving inequalities] "Višča Škola", Kharkov, 1979. 120 pp. (B. Crstici) **80i:26002** 26-01 (26Dxx)
- Ušakov, V. I. Algebraically compact groups. (Russian) *Mat. Zametki* **24** (1978), no. 6, 763-770, 892. (K. A. Ross) **80i:22002** 22A05
- The behavior of the solutions of the third mixed problem for second-order parabolic equations as  $t \rightarrow \infty$ . (Russian) *Differencial'nye Uravnenija* **15** (1979), no. 2, 310-320, 381.

- (A. Džurav) **80g:35017** 35B40 (35K10)
- Usami, Yoko A characterization of some type of PSL(2, q). *Natur. Sci. Rep. Ochanomizu Univ.* **29** (1978), no. 1, 19–36. (J. F. Humphreys) **80a:20021** 20D05
- Ušani, Jacek k-semirings. *Mat. Bilten* **27** (1977), no. 1, 41–46. (From the text) **80k:20073** 20N05
- (with Stojaković, Zoran) On a system of functional equations on quasigroups. *Publ. Inst. Math. (Beograd) (N.S.)* **23**(37) (1978), 223–228. (Pl. Kannappan) **80a:39008** 39B50 (39B40)
- Uścił, Mirosław On exact modules over a commutative exact ring. *Colloq. Math.* **40** (1978/79), no. 2, 197–202. (R. E. MacRae) **80i:13006** 13D99
- Učimčić, Š. (with Bratičević, D.) Analysis of finite state automata by state isolation. *Mat. Vesnik* **2**(15)(30) (1978), no. 2, 123–130. (Authors' summary) **80e:68142** 68D05
- Uehio, Kazuhiko (with Tazawa, Shinsei; Yamamoto, Sumiyasu) Partite-claw-decomposition of a complete multipartite graph. *Hiroshima Math. J.* **8** (1978), no. 1, 195–206. (F. Harary) **80i:05033a** 05C05
- (with Tazawa, Shinsei; Yamamoto, Sumiyasu) On claw-decomposition of a complete multipartite graph. *Hiroshima Math. J.* **8** (1978), no. 1, 207–210. (F. Harary) **80i:05033b** 05C05
- Ullrich, Zalman (with Stephanides, Adam) Magic triangular regions of order 4 and 5. *J. Recreational Math.* **11** (1978/79), no. 3, 176–180. (Katherine Heinrich) **80i:05027** 05B30
- Uljakina, N. I. Deep inelastic asymptotics of the Mandelstam graph. (Russian. English summary) *Theoret. Mat. Fiz.* **37** (1978), no. 1, 40–47. (Author's summary) **80a:81062** 81D99 (00A89)
- Ullah, V. F. (with Red'ko, S. F.; Krementulo, Ju. V.; Šabel'skiĭ, V. P.; Jakovlev, V. P.) The determination of some parameters of mechanical systems with the aid of sensitivity functions. (Russian) *Complex control systems* (Russian), pp. 82–89, *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (Authors' summary) **80g:93030** 93B35
- Uslenghi, Piergiorgio L. E. See Electromagnetic scattering. **80f:78001**
- Usmani, Riaz A. (with Meek, Derek S.) Error analysis of the numerical solution of a fourth order boundary value problem. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing* (Univ. Manitoba, Winnipeg, Man., 1977), pp. 487–495, *Congress. Numer., XX, Utilitas Math., Winnipeg, Man.*, 1978. (Peter Lancaster) **80i:65088** 65L10
- On improving error bounds in the integration of a boundary value problem. *Bull. Calcutta Math. Soc.* **70** (1978), no. 1, 33–43. (Ian Gladwell) **80e:65083** 65L10
- (with Meek, Derek S.) On the application of a five-band matrix in the numerical solution of a boundary value problem. *Utilitas Math.* **14** (1978), 21–29. (Authors' summary) **80a:65179** 65L10
- On a connection between an  $O(h^6)$  finite difference and a sextic spline solution of a two point boundary value problem. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing* (Univ. Manitoba, Winnipeg, Man., 1978), pp. 469–477, *Congress. Numer., XXII, Utilitas Math., Winnipeg, Man.*, 1979. (From the text) **80i:65066** 65L10
- A uniqueness theorem for a boundary value problem. *Proc. Amer. Math. Soc.* **77** (1979), no. 3, 329–335. (P. W. Bates) **80j:34018** 34B05 (65L10)
- Discrete methods for boundary value problems with applications in plate deflection theory. (German summary) *Z. Angew. Math. Phys.* **30** (1979), no. 1, 87–99. (Hwa-Shan Ho) **80i:73039** 73K05 (65N30)
- Usmanov, A. A. (with Khabulov, B. T.) A modified dynamical pattern recognition algorithm. (Russian) *Voprosy Kibernet. (Tashkent)* No. 102 (1978), 3–9, 157. (Authors' summary) **80j:68075** 68G10
- Usmanov, H. H. (with Timofeev, N. M.) Additive functions and limit theorems in function spaces. (Russian. Tajiki summary) *Izv. Akad. Nauk Tadzhik. SSR Otdel. Fiz.-Mat. i Geol.-Him. Nauk* **1978**, no. 4(70), 25–33. (D. A. Darling) **80k:10050** 10K20 (60F17)
- Usón, Juan M. (with García, Luis) A simple model for Poincaré self-stresses. *Found. Phys.* **10** (1980), no. 1–2, 137–149. (Authors' summary) **80m:70005** 78A25
- Uspenskiĭ, W. A. See Uspenskiĭ, V. A.
- Uspenskiĭ, O. A. (with Gostincev, Ju. A.) On the theory of turbulent vortex flows of an ideal gas in Laval nozzles. (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* **1978**, no. 2, 126–137. (Authors' summary) **80d:76061** 76N10 (35Q99)
- Uspenskiĭ, S. V. (with Demidenko, G. V.) Differential properties of the solutions of general boundary value problems for equations of Sobolev type. (Russian) *Mathematical analysis and related mathematical questions* (Russian), pp. 276–296, 354–355, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (A. Haimovici) **80m:35015** 35D05 (35J25)
- (with Erugin, N. P.; Bogdanov, Ju. S.; Vuvunikiĭ, Ju. M.; Ivanov, E. A.; Krylov, V. I.; Kudrjavcev, L. D.; Radyno, Ja. V.) Sergei L'voviĭ Sobolev (on the occasion of his seventieth birthday). (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 10, 1907–1910. (Editors) **80c:01013** 01A70 (35–03, 65–03, 70–03)
- Uspenskiĭ, V. A. (with Dynkin, E. B.) ★Mathematische Unterhaltungen. III. Aufgaben aus der Wahrscheinlichkeitsrechnung. Irrfahrten (Markoffsche Ketten). Translated from the Russian by Peter Friedel. Fifth edition. Kleine Ergänzungsreihe zu den Hochschulbüchern für Mathematik. XV. VEB Deutscher Verlag der Wissenschaften, Berlin, 1976. viii + 84 pp. (Editors) **80g:60001** 60–01
- Uspenskiĭ, V. I. Imbeddings into function spaces. (Russian) *Dokl. Akad. Nauk SSSR* **242** (1978), no. 3, 545–548. (N. Hadžiivanov) **80b:54015** 54C25
- Ustavčikova, A. A. An automated system for obtaining surfaces of complex form with required accuracy of approximation. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 37 (1979), 115–118, 145. **80c:65035** 65D10
- Ustinov, Ju. I. Ergodic properties of expanding mappings of one-dimensional complexes. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 1(205), 247–248. (M. I. Brin) **80f:58027** 58F11 (28D99, 58H20)
- Ustinov, S. M. (with Rakitskiĭ, Ju. V.; Černouckiĭ, I. G.) ★Численные методы решения жестких систем обыкновенных дифференциальных уравнений. (Russian) [Numerical methods for the solution of stiff systems of ordinary differential equations] *Leningrad. Politehn. Inst., Leningrad*, 1977. 84 pp. (F. I. Ibragimov) **80a:65153** 65L05
- Ustian, A. E. Relations of the form  $X = AXB$  in semigroups of class K. (Russian) *Modern algebra*, No. 6 (Russian), pp. 152–158, *Leningrad. Gos. Ped. Inst., Leningrad*, 1977. (P. Javor) **80a:20071** 20M05
- Utkin, V. I. (with Young, K. David) Methods for constructing discontinuity planes in multidimensional variable structure systems. *Automat. i Telemekh.* **1978**, no. 10, 72–77. (Russian. English summary); translated as *Automat. Remote Control* **39** (1978), no. 10, part 1, 1466–1470 (1979). (Authors' summary) **80d:93039** 93C15
- Application of equivalent control method to the systems with large feedback gain. *IEEE Trans. Automat. Control* **23** (1978), no. 3, 484–486. (Author's summary) **80a:93118** 93C99
- On the theory of extensions and generalized resolvents of symmetric, dissipative and accumulative relations in Hilbert space with a regular G-metric. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* **1979**, no. 3, 53–66. (J. Bognár) **80i:47050** 47B50 (47A20)
- Utsumiya, Toshio (with Sone, Satoru; Imada, Toshiaki) Memory machine that has some functions of the human brain. *Systems-Comput.-Controls* **8** (1977), no. 4, 1–9 (1979). (From the summary) **80g:68123** 68H05
- Utz, W. R. Properties of solutions of the differential equation  $xx'' - kx'^2 + f(x) = 0$ . *Publ. Inst. Math. (Beograd) (N.S.)* **24**(38) (1978), 189–196. (M. Bertolino) **80d:34052** 34C25
- Expansive mappings. *Proceedings of the 1978 Topology Conference* (Univ. Oklahoma, Norman, Okla., 1978), I. *Topology Proc.* **3** (1978), no. 1, 221–226 (1979). (B. T. Sims) **80k:54023** 54C10 (54H20)
- uang van Uyen See Dang Van Uyen
- Uyenoyama, Marcy K. (with Feldman, Marcus W.) The genetics of sex ratio distortion by cytoplasmic infection under maternal and contagious transmission: an epidemiological study. *Theoret. Population Biol.* **14** (1978), no. 3, 471–497. (Authors' summary) **80a:92057** 92A15 (92A10)
- Uzibov, A. M. Existence and uniqueness of the solutions of initial nonlinear integral equations of modified heredity in creep theory. (Russian) *Izv. Severo-Kavkaz. Nauch. Centra Vysš. Školy Ser. Tehn. Nauk* **1979**, no. 2, 21–24, 108. (J. Švejda) **80k:73039** 73F99 (45G10)
- Uzdemir, A. P. (with Šmelev, V. V.) Integer dynamic problems of economic planning with network constraints. I. *Automat. i Telemekh.* **1978**, no. 7, 106–115. (Russian. English summary); translated as *Automat. Remote Control* **39** (1978), no. 7, part 2, 1025–1033. (Rainer Burkard) **80d:90082** 90C39 (90C10)
- Uzlembo, A. O. (with Žuravskaja, L.) Definability of functions on a finite set by means of compositions of addition and multiplication modulo some prime numbers. *Demonstratio Math.* **11** (1978), no. 4, 1029–1032 (1979). (Editors) **80i:10010** 10A20 (12C99)
- Uzlov, A. E. Existence and uniqueness theorems for the solutions of inverse problems for second-order equations of parabolic type. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 2, 370–372, 384. (V. M. Babič) **80c:35102** 35R30 (35K10)
- ussan V., E. B. See Dussan V., E. B.
- quach thi Cam Vă See Quach thi Cam Vă
- Vaaler, Jeffrey D. Boundary behavior of Laplace-Stieltjes transforms with applications to uniformly distributed sequences. *Studies in probability and ergodic theory*, pp. 119–133, *Advances in Math., Suppl. Studies, 2, Academic Press, New York*, 1978. (Harald Niederreiter) **80i:10063** 10K05 (44A10)
- (with Bennett, Colin; Rudnick, Karl) Note on best approximation of  $|x|$ . *Canad. Math. Bull.* **22** (1979), no. 3, 363–366. (Jean Tzimbarario) **80k:41006** 41A20
- Väinänen, Jouko Two axioms of set theory with applications to logic. *Ann. Acad. Sci. Fenn. Ser. A I Math. Dissertationes* No. 20 (1978), 19 pp. (Martin Weese) **80c:03067** 03E65 (03E35)
- A new incompleteness in arithmetic. (Finnish. English summary) *Archimedes* **31** (1979), no. 1, 30–37. (Author's summary) **80c:03058** 03F30
- Vaarmann, O. Certain iterative methods for the nonlinear least squares problem. (Estonian and Russian summaries) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* **27** (1978), no. 3, 251–258. (W. J. Kotzé) **80a:65125** 65J15
- Vabličević, I. I. On the solutions of the Cauchy problem for the Laplace equation in a doubly connected domain. (Russian) *Dokl. Akad. Nauk SSSR* **241** (1978), no. 6, 1257–1260. (Anthony G. O'Farrell) **80c:35018** 35J05 (65M10)
- Vabličević, P. N. (with Degtjarev, L. M.; Pistunovič, V. I.; Pošeonov, Ju. Ju.; Šafarov, V. D.) Evolution of the equilibrium of a toroidal plasma string in the casing of a complex form. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 119 (1978), 33 pp. (V. P. Milant'ev) **80f:82036** 82A45
- (with Gabov, S. A.) Angular potential for a divergence elliptic operator. (Russian) *Dokl. Akad. Nauk SSSR* **243** (1978), no. 4, 835–838. (I. A. Aleksandrov) **80f:35060** 35J99 (31B35)
- Numerical solution of the problem of MHD-equilibrium in a casing of arbitrary cross section. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 121 (1979), 18 pp. (Author's summary) **80k:76080** 76W05
- (with Gabov, S. A.; Ševcov, P. V.) Angular potential for the operator  $\Delta + c(x)$ . (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **19** (1979), no. 5, 1162–1177, 1356. (M. A. Atahodžev) **80k:35024** 35J05
- Vaca, Marco V. (with Snyder, Donald L.) Estimation and decision for observations derived from martingales. II. *IEEE Trans. Inform. Theory* **24** (1978), no. 1, 32–45. (Author's summary) **80m:93087** 93E10
- Vacca, Maria Teresa Equations of motion of a perfectly elastic and polarized dielectric medium subject to a uniform magnetic field. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **63** (1977), no. 5, 391–398 (1978). (Author's summary) **80g:78003** 78A25 (76W05)
- The internal stress potential for dielectric polarizable crystals subjected to a constant magnetic field and in vibratory motion. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **63** (1977), no. 6, 522–528 (1978). (Author's summary) **80c:82035** 82A60
- Vacek, K. The twenty-fifth anniversary of the College of Mathematics and Physics of Charles University. (Russian) With an English translation. *Acta Univ. Carol.—Math. Phys.* **19** (1978), no. 2, 3–6. (Editors) **80b:01019** 01A65
- Vachenaue, Peter (with Meyberg, Kurt) ★Aufgaben und Lösungen zur Algebra. Mathematische Grundlagen für Mathematiker, Physiker und Ingenieure. Carl Hanser Verlag, Munich-Vienna, 1978. iii + 241 pp. ISBN 3-446-12173-0 (K. Kiyek) **80i:00001** 00A05
- Vachnadze, R. G. (with Metreveli, D. G.) Pareto-optimal solutions with fuzzy goals and constraints. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz.*



- SSR 93 (1979), no. 3, 565-568. (Authors' summary) **80k:90002** 90A05
- Vadnal, Alojzij ★ Osnove diferenčnega računa. (Slovenian) [Foundations of differential calculus] *Društvo Matematikov, Fizikov in Astronomov SRS, Ljubljana*, 1979. 199 pp. (Editors) **80f:39001** 39-01 (39A05)
- Vadova, I. Some statistical considerations concerning the reliability analysis in the multivariate case. *Econom. Comput. Econom. Cybernet. Stud. Res.* **12** (1978), no. 4, 75-85. (Masafumi Sakai) **80c:9070** 90B25
- Vaeth, Michael A note on the behaviour of occurrence/exposure rates when the survival distribution is not exponential. *Scand. J. Statist.* **6** (1979), no. 2, 77-80. (David P. Harrington) **80j:62024** 62F05 (62P10)
- Vagabov, N. G. (with Isaev, G. A.) Distribution of the roots of quadratic forms, spectra and multicompleteness of root vectors of operator functions in Banach space. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1978**, no. 5, 3-10. (T. Andó) **80c:47017** 47A70 (47A12)
- Vagerikjan, A. A. Zeros of some classes of analytic functions. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* **13** (1978), no. 5-6, 423-427, 542. (V. Kabaia) **80k:30012** 30C15
- Vagi, Stephen (with Korányi, Adam) Rational inner functions on bounded symmetric domains. *Trans. Amer. Math. Soc.* **254** (1979), 179-193. (Manfred Stoll) **80h:32062** 32M15 (32A30)
- Vagin, V. N. (with Ivkin, S. A.) Finding an optimal trajectory for a sensor where the target distribution is probabilistic. *Found. Control Engrg.* **4** (1979), no. 1, 35-42. (Authors' summary) **80d:90099** 90D25 (93E05)
- Vagner, V. V. Interrestrictive factored and bifactored ordered sets. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 6(193), 36-50. (I. S. Ponizovskii) **80i:06008** 06A99 (20N99)
- Interrestrictive factored ordered sets and projective systems of sets. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 12, 18-32. (Editors) **80d:06005** 06A99 (18F20)
- See also Theory of semigroups and its applications, **80d:20049**
- Vahabov, S. A. A new treatise of al-Birūnī on astrolabes. (Russian) *Taškent. Gos. Univ. Naučn. Trudy No. 548 Voprosy Mat.* (1977), 17-21, 140. (Editors) **80a:01007** 01A30
- Vahdani, A. N. Forcing's method and consistency problems. *Proceedings of the Eighth National Mathematics Conference (Arya-Mehr Univ. Tech., Tehran, 1977)*, pp. 343-345. *Arya-Mehr Univ. Tech., Tehran*, 1977. (From the text) **80b:03077** 03E35
- Vahidov, Š. (with Mironov, A. V.) Conditions for convergence of an iteration process for an operator equation in a locally compact space. (Russian) *Taškent. Gos. Univ. Sb. Naučn. Trudov No. 573 Funkcional. Anal.* (1978), 22-24, 108. (Authors' summary) **80k:47080** 47H17
- Some iterative methods for solving operator equations in locally convex spaces. (Russian) *Dokl. Akad. Nauk UzSSR No. 3* (1979), 5-6. (From the text) **80j:65023** 65J15 (47H17)
- Vainutinskii, I. Ja. (with Dudkin, L. M.; Ryvkin, A. A.) Iterative aggregation—a new approach to the solution of large-scale problems. *Econometrica* **47** (1979), no. 4, 821-841. (C. B. Garcia) **80i:90151** 90C99
- Vaidya, P. C. An Einstein-Gödel universe. *Gen. Relativity Gravitation* **9** (1978), no. 9, 801-807. (Carl Brans) **80a:83074** 83F05 (53B30)
- Vaillant, Jean Propriété de symétrie des matrices localisées d'une matrice fortement hyperbolique en un point multiple. *Équations aux dérivées partielles (Proc. Conf., Saint-Jean-de-Monts, 1977)*, pp. 190-205. *Lecture Notes in Math.*, 660, Springer, Berlin, 1978. (Editors) **80d:35098** 35L99 (58G99)
- (with Berzin, Robert) Paramétrix du problème de Cauchy pour un système faiblement hyperbolique à caractéristiques multiples. (English summary) *Bull. Sci. Math. (2)* **102** (1978), no. 3, 287-294. (Maria Cinquini-Cibrario) **80a:35081** 35L55
- (with Berzin, Robert) Systèmes hyperboliques à caractéristiques multiples. *J. Math. Pures Appl. (9)* **58** (1979), no. 2, 165-216. (Rémi Vaillancourt) **80f:35073** 35L55 (58G16)
- Vainberg, M. M. On the subgradient of convex functionals. (Russian. English summary) *Nonlinear analysis (collection of papers in honor of Erich H. Rothe)*, pp. 211-218. *Academic Press, New York*, 1978. (Vladimir L. Levin) **80f:49020** 49B27 (58C05)
- (with Aizengendler, P. G.) The branching and stability of periodic solutions of differential equations with a nonanalytic right-hand side. (Russian) *Studia Math.* **63** (1978), no. 1, 9-30. (Ju. V. Trubnikov) **80i:34098** 34G20 (58E07)
- Vainikko, G. Foundations of finite difference method for eigenvalue problems. *The use of finite element method and finite difference method in geophysics (Proc. Summer School, Liblice, 1977)*, pp. 173-192. *Česk. Akad. Věd, Prague*, 1978. (Jacques Lemondant) **80m:65071** 65N10
- (with Maršak, A. L.) The rate of convergence of the method of discrete ordinates in the problem of radiation transfer. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 11(198), 11-22. (A. Ramm) **80c:65256** 65R20 (45L05)
- Approximate methods for nonlinear equations (two approaches to the convergence problem). *Nonlinear Anal.* **2** (1978), no. 6, 647-687. (Author's introduction) **80c:65115** 65J05 (47H15)
- (with Lepik, R.) On the reduction method for multidimensional discrete Wiener-Hopf equations. (Russian. Estonian and English summaries) *Tartu Riikl. Ül. Toimetised No. 448* (1978), 74-81. (R. V. Dudučava) **80j:45019** 45L05 (47B35, 65R20)
- (with Mihlin, S.) The Fredholm resolvent and an inversion of matrices dependent on a parameter. (Russian. Estonian and English summaries) *Tartu Riikl. Ül. Toimetised No. 448* (1978), 94-98. (Authors' summary) **80c:65072** 65F05 (65R20)
- Vainio, Reino The locally connected and the uniformly locally connected coreflector in general convergence theory. *Acta Acad. Åbo. Ser. B* **39** (1979), no. 1, 13 pp. (A. Wiweger) **80j:18010** 18B30 (54D05)
- Vaimanov, Israel The degrees of certain strata of the dual variety. (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. II (Portuguese), pp. 807-809. *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Editors) **80j:14010** 14C10 (14N05)
- Conics in characteristic 2. *Compositio Math.* **36** (1978), no. 1, 101-112. (D. Gallart) **80d:14030** 14N10
- Vainstein, A. I. See Vainstein, A. I.
- Vainstein, A. G. (with Gorelik, E. M.; Efremovič, V. A.) Plane domains, equimorphic to a rectilinear semistrip. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 1 (Russian), pp. 17-27. *Jaroslavl. Gos. Univ., Jaroslavl*, 1976. (From the introduction) **80f:30005** 30C20
- (with Gorelik, E. M.; Efremovič, V. A.) Layering the Lobačevskii plane. (Russian) *Dokl. Akad. Nauk SSSR* **241** (1978), no. 2, 269-271. (M. C. Chaki) **80a:53008** 53A35
- (with Lerman, L. M.) Uniform structures and the equivalence of diffeomorphisms. (Russian) *Mat. Zametki* **23** (1978), no. 5, 739-752. (A. Morimoto) **80a:58049** 58F15 (28D05)
- (with Efremovič, V. A.; Loginov, È. A.) Points at infinity of metric spaces. (Russian) *Trudy Sem. Vektor. Tenzor. Anal.* **18** (1978), 129-139. (A. K. Guc) **80c:54027** 54E50 (53C70)
- (with Efremovič, V. A.; Loginov, È. A.) The skeleton of a Riemannian manifold with boundary. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 3(201), 155-156. (Ju. Burago) **80k:53067** 53C20 (68G10)
- Vainstein, A. I. (with Šifman, M. A.; Zaharov, V. I.) Instantons in nonperturbative QCD vacuum. *Nuclear Phys. B* **165** (1980), no. 1, 45-54. (Authors' summary) **80m:81094** 81G05
- Vainstein, F. V. The cohomology of braid groups. (Russian) *Funkcional. Anal. i Prilozhen.* **12** (1978), no. 2, 72-73. (P. Orlík) **80g:32019** 32C40 (20F34)
- Vainstein, Ju. B. (with Burstein, M. I.; Patakišvili, M. M.; Ruda, L. G.) Realization of one approach to integrated circuit layout automation. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* **94** (1979), no. 3, 573-576. (Author's summary) **80m:94108** 94C15
- Vainstein, S. I. On the theory of a turbulent dynamo. (Russian. English summary) *Izv. Vysš. Učebn. Zaved. Radiofizika* **21** (1978), no. 12, 1803-1811. (Author's summary) **80a:78010** 78A25 (35Q99)
- Vainu, Ja. The construction of regression models on the basis of time series. (Russian. English summary) *Tartu Riikl. Ül. Toimetised No. 451* (1978), 3-19. (Author's summary) **80c:62109** 62M10
- Vairavan, K. (with Breitbart, Y.) The computational complexity of a class of minimization algorithms for switching functions. *IEEE Trans. Comput.* **28** (1979), no. 12, 941-943. (Authors' summary) **80m:94085** 94C10 (68C25)
- Väisälä, J. (with Luukkainen, Jouni) Elements of Lipschitz topology. *Ann. Acad. Sci. Fenn. Ser. A I Math.* **3** (1977), no. 1, 85-122. (J. P. E. Hodgson) **80b:57015** 57Q30
- Vaisbord, È. M. (with Žukovskii, V. I.) A hierarchical differential two-person game. (Russian) *Differentsial'nye Uravnenija* **15** (1979), no. 9, 1548-1561, 1722. (È. G. Al'breht) **80c:90160** 90D42 (90D10, 90D25)
- Vaisbord, I. F. A differential deviation game for systems with distributed parameters. (Russian) *Differentsial'nye Uravnenija* **14** (1978), no. 9, 1552-1557, 1721. (A. I. Subbotin) **80a:90180** 90D25
- Vaish, Satendra K. Logarithmic means of entire functions of slow growth represented by Dirichlet series. (French summary) *Rend. Mat. (6)* **11** (1978), no. 3, 435-443 (1979). (Shlomo Strelitz) **80f:30018** 30D10 (30B50)
- Geometric means of an entire function of order zero. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 9, 1425-1428. (Herb Silverman) **80a:30027** 30D15
- (with Srivastava, Girja S.) Logarithmic proximate orders of entire functions represented by Dirichlet series. *Acta Cienc. Indica* **5** (1979), no. 3, 108-112. (A. V. Bratišev) **80k:30008** 30B50 (30D15)
- (with Srivastava, Girja S.) On the logarithmic proximate orders of entire functions represented by Dirichlet series. (French summary) *Rend. Mat. (6)* **12** (1979), no. 1, 135-142. (M. E. Noble) **80k:30008** 30B50
- Vaishnavi, Vijay K. (with Kriegl, H. P.; Wood, Derick) 2-3 brother trees. *BIT* **18** (1978), no. 4, 425-435. (E. M. Reingold) **80f:68048** 68C25 (68E10)
- (with Wood, Derick) An approach to a unified theory of grammar and L forms. *Inform. Sci.* **15** (1978), no. 1, 77-94. (Authors' summary) **80c:68198** 68F05
- (with Biswas, Somenath) Tree adjoint languages as integer set recognizers. *Internat. J. Comput. Math.* **7** (1979), no. 2, 87-94. (Authors' summary) **80f:68080** 68F05
- Vaisman, A. M. (with Gol'dštit, M. A.) A dynamic model of the movement of a fluid in a porous medium. (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* **1978**, no. 6, 89-95. (Jaroslav Jelen) **80d:76096** 76S05
- Vaisman, Izu Holomorphic vector fields on locally conformal Kähler manifolds. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Secţ. I a Mat. (N.S.)* **24** (1978), no. 2, 357-362. (J. Ferrand) **80b:53069** 53C55
- On the Sasaki-Hsu contact structure of the Brieskorn manifolds. *Tōhoku Math. J. (2)* **30** (1978), no. 4, 553-560. (R. E. Stong) **80b:53028** 53C15 (57R15)
- Conformal foliations. *Kodai Math. J.* **2** (1979), no. 1, 26-37. (Luis A. Cordero) **80g:57038** 57R30 (53C25)
- A theorem on compact locally conformal Kähler manifolds. *Proc. Amer. Math. Soc.* **75** (1979), no. 2, 279-283. (Yoshiko Kubo) **80b:53070** 53C55
- Vaithilingam, M. C. (with Subbayan, R.) Sensitivity-reduced design of linear regulators. *Internat. J. Control* **29** (1979), no. 3, 435-440. (S. G. Tzafestas) **80d:93033** 93B35 (93C35)
- Vajda, Igor Universal coding versus specific coding. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 323-333. *Reidel, Dordrecht*, 1978. (John C. Kieffer) **80i:94012** 94A29
- Adaptive Gaussian detection without a priori symbol synchronization. (Russian summary) *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* **9** (1980), no. 2, 133-140. (Author's summary) **80m:94045** 94A40
- Vajda, Sándor Comments on: "Structural identifiability in linear time-invariant systems" (IEEE Trans. Automat. Control AC-22 (1977), no. 2, 242-246) by J. Gary Reid. *IEEE Trans. Automat. Control* **24** (1979), no. 3, 495-496. (Ivar Gustavsson) **80f:93031** 93B30 (93B35)
- Vajović, Filaret Selfadjoint extensions of some symmetric operators. (Serbo-Croatian. Russian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* **61** (1978), no. 17, 241-251. (Editors) **80a:47038** 47B25
- Vakhtutinsky, I. Y. See Vahutinskii, I. Ja.
- Vaklev, I. S. (with Ivanov, M. I.; Nikolov, A. V.) A field equation for baryons with an

- arbitrary spin (a generalization of the Dirac equation). (Russian. English summary) *Theoret. Mat. Fiz.* 40 (1979), no. 1, 64–76. (Authors' summary) **80f:81024** 81C05
- Vakul'čik, P. A. The convergence of difference schemes for the solution of some problems of nonlinear optics. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 22 (1978), no. 2, 108–111, 187. (Author's summary) **80a:65261** 65P05
- Vakutienko, A. F. Unitary regularization for Friedrichs model of a many-particle system. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 6, 1348–1352. (M. Demuth) **80b:47013** 47A40 (81F15)
- (with Kapitanskii, L. V.) Stability of solitons in  $S^2$  of a nonlinear  $\sigma$ -model. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 4, 840–842. (From the text) **80c:81045** 81E99 (35A99, 55R50, 57R20)
- Valabrega, Paolo P-morphisms and prolongation of sheaves. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 36 (1977/78), 313–330 (1979). (M. L. Laplaza) **80a:14002** 14A15
- (with Valla, Giuseppe) Form rings and regular sequences. *Nagoya Math. J.* 72 (1978), 93–101. (W. Vogel) **80d:14010** 14E15 (13H10)
- Valadier, M. Sur l'espérance conditionnelle multivoque. *Travaux Sémin. Anal. Convexe* 8 (1978), no. 2, exp. no. 9, 16 pp. (A. Badrikian) **80b:60004** 60A10
- Muñoz Valcarlos, Fernando See Muñoz Valcarlos, Fernando
- Valdes, M. V. (with Gutkowski, D.; Masotto, G.) On the sufficiency of Bell's conditions. (Italian and Russian summaries) *Nuovo Cimento B* (11) 50 (1979), no. 2, 323–343. (L. Streit) **80b:81004** 81B05
- Valdivia, Manuel On the space  $\mathcal{Q}(\Omega)$ . *Arch. Math. (Basel)* 30 (1978), no. 5, 516–522. (H. H. Schaefer) **80a:46020** 46F05 (46A09)
- Some notes on convex sets. *Manuscripta Math.* 26 (1978/79), no. 4, 381–386. (R. Silverman) **80j:46024** 46A55 (46A15, 46B05, 52A05)
- Solution of a problem of Grothendieck. *J. Reine Angew. Math.* 305 (1979), 116–121. (K. Floret) **80g:46006** 46A12
- Valeinskii, V. D. A second-order difference scheme for the Stokes problem. (Russian) *Vestnik Moskov. Univ. Ser. XV Vychisl. Mat. Kibernet.* 1978, no. 4, 74–80. (H. Marcinkowska) **80f:65103** 65N05
- The solution to the problem of the contact of elastic and incompressible media. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 3, 536–540. (S. P. Gavajia) **80j:73033** 73T05 (35Q20)
- Valiev, K. G. (with Finin, G. S.) Numerical solution of Riccati's matrix equation. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 8, 730–733, 769. (Authors' summary) **80a:65192** 65L99 (65K05)
- (with Romanovskii, A. A.) On the theory of finding the inverse matrix. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 10* (1979), 842–845, 880. (George P. Barker) **80k:65038** 65F10
- Vale Gonçalves, M. J. Cohomology of Lie groups and Lie algebras. (Spanish) *Algebra*, 21 (Spanish), pp. 1–54. *Univ. Santiago de Compostela, Santiago de Compostela*, 1978. (V. A. Artamonov) **80h:18011** 18G15 (17B56)
- Valenti, Enrico (with Casazza, Enrica) Some observations on certain isomorphisms of projective varieties. (Italian. English summary) *Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* 112 (1978), no. 5–6, 285–290. (D. Gallarati) **80k:14025** 14E99
- Valenti, Sami (with Cannizzo, Aurelio) On some derivability conditions, applicable to sets of measure zero. (Italian. French summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 5, 318–323 (1978). (Authors' summary) **80b:26005** 26A24
- Recent results on the generalized Artin equation. (Italian) *Rend. Circ. Mat. Palermo* (2) 26 (1977), no. 1–3, 126–130 (1978). (Henryk Adamczyk) **80h:39006** 39B10
- Valette, G. Benz planes with pairwise secant circles. *Abh. Math. Sem. Univ. Hamburg* 49 (1979), 37–41. (Nicholas Krier) **80i:51007** 51B99
- Valette, J. (with Pascaud, J. L.) Group actions on Q-F-rings. *Proc. Amer. Math. Soc.* 76 (1979), no. 1, 43–44. (K. R. Fuller) **80m:16011** 16A36 (16A72)
- Valette, R. (with Diaz, M.) Top-down formal specification and verification of parallel control systems. (French and German summaries) *Digital Process.* 4 (1978), no. 3–4, 181–199. (Authors' summary) **80c:68065** 68B20
- Vallaho, Hannu A procedure for one-parametric linear programming. *BIT* 19 (1979), no. 2, 256–269. (K. G. Murty) **80f:90082** 90C05
- Vallant, Leslie G. (with Angluin, Dana) Fast probabilistic algorithms for Hamiltonian circuits and matchings. *J. Comput. System Sci.* 18 (1979), no. 2, 155–193. (Editors) **80f:68040** 68C25 (68E10)
- The complexity of enumeration and reliability problems. *SIAM J. Comput.* 8 (1979), no. 3, 410–421. (Author's summary) **80f:68055** 68C25
- The complexity of computing the permanent. *Theoret. Comput. Sci.* 8 (1979), no. 2, 189–201. (Author's summary) **80f:68054** 68C25 (15A15)
- Valid, Roger Le principe complémentaire en théorie non linéaire des coques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 16, B293–B296. (Author's summary) **80m:73061** 73L99 (49H05)
- An intrinsic formulation for the nonlinear theory of shells and some approximations. *Comput. & Structures* 10 (1979), no. 1–2, 183–194. (Author's summary) **80b:73043** 73L05 (65N30)
- Val'dov, F. I. Minimal numerations of families of general recursive functions. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* 1978, no. 9(196), 13–24. (G. Asser) **80f:03046** 03D45 (03D20, 68C30)
- Valiev, F. M. Sharp estimates of sectional curvatures of homogeneous Riemannian metrics on Wallach spaces. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 2, 248–262, 457. (O. Kowalski) **80h:53049** 53C30 (53C35)
- Vallullin, A. N. Exact solution of a three-dimensional Dirichlet difference problem of increased accuracy for the Laplace equation. (Russian) *Čisl. Metody Meh. Sploin. Sredy* 9 (1978), no. 3 *Matematičeskoe Modelirovanie*, 37–42. **80d:65131** 65N99 (65P05)
- Valk, Rüdiger Self-modifying nets, a natural extension of Petri nets. *Automata, languages and programming* (Fifth Internat. Colloq., Udine, 1978), pp. 464–476. *Lecture Notes in Comput. Sci.*, 62, Springer, Berlin, 1978. (J. Paredaens) **80d:68033** 68B20 (68D90, 94C15)
- Val'kovskaja, V. I. Disconnected quasistatic random thermoelastic fields in thin-walled elements. (Russian) *Prikl. Meh.* 15 (1979), no. 7, 81–87, 142. (L. Jentsch) **80m:73075** 73U05
- Valla, Giuseppe (with Valabrega, Paolo) Form rings and regular sequences. *Nagoya Math. J.* 72 (1978), 93–101. (W. Vogel) **80d:14010** 14E15 (13H10)
- On form rings which are Cohen-Macaulay. *J. Algebra* 58 (1979), no. 2, 247–250. (L. J. Ratliff, Jr.) **80b:13025** 13H10 (13H15, 14M05)
- Remarks on generalized analytic independence. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 2, 281–289. (L. J. Ratliff, Jr.) **80b:13001** 13A15 (13C13, 13D99)
- Valleé, Robert Observation and subjectivity. *Information and systems* (Proc. IFAC Workshop, Compiegne, 1977), pp. 109–112. Pergamon, Oxford, 1978. (Author's summary) **80b:93060** 93B99
- Théorie des systèmes et transferts de structures. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 24(28) (1978), no. 1–2, 9–12. (Editors) **80b:93031** 93B05
- Valleron, Alain-Jacques See Biomathematics and cell kinetics, **80f:92009**
- Vallet, Claude (with Lafrenière, Lise; Moulin, Thibaut; Le Guyader, Hervé) Arithmetical models for complex systems. (Russian summary) *Systems Sci.* 4 (1978), no. 4, 265–279. (From the summary) **80j:93015** 93A15
- Valli, Alberto (with Carbone, Luciano) Filtration through a porous nonhomogeneous medium with variable cross section. *J. Analyse Math.* 33 (1978), 191–221. (C. Bardos) **80i:35152** 35Q20 (76S05)
- (with Beirão-da-Veiga, Hugo) On the motion of a nonhomogeneous ideal incompressible fluid in an external forced field. *Rend. Sem. Mat. Univ. Padova* 9 (1978), 117–145 (1979). (D. E. Edmunds) **80i:35150** 35Q20 (76B99)
- Valliere, Arthur, III (with Morris, S. Brent; Wisniewski, Richard A.) Processes for random and sequential accessing in dynamic memories. *IEEE Trans. Comput.* 28 (1979), no. 3, 225–237. (K. H. V. Booth) **80b:68009** 68A05 (68H05)
- Valls Verdejo, Vicente (with López Cerda, Marco A.) Symmetric duality in nonlinear programming. (Spanish) *Trabajos Estadist. Investigación Oper.* 29 (1978), no. 2, 52–68. (Vincențiu Dumitru) **80c:90098** 90C30
- Valucé, I. L. See Quasigrupos and loops, **80c:20087**
- Valuev, B. N. Realization of an integral in anticommuting variables. (Russian. English summary) *Theoret. Mat. Fiz.* 40 (1979), no. 1, 46–50. (Author's summary) **80f:81053** 81D05 (17A70, 47B99)
- Valuțescu, Ilie (with Suciu, Ion) Factorization theorems and prediction theory. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 9, 1393–1423. (H. Salehi) **80f:60042** 60G25 (47A68)
- Vamanamurthy, M. K. (with Gauld, David B.) Quasiconformal extensions of mappings in  $n$ -space. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 3 (1977), no. 2, 229–246. (F. W. Gehring) **80a:30017** 30C60
- Vamunu, Elena Quasiconnections over particular Riemannian spaces. (Romanian. French summary) *Bul. Inst. Politehn. Iași Sect. I* 24(28) (1978), no. 1–2, 25–32. (Ion D. Teodorescu) **80d:53013** 53B20 (53B50)
- Connections and almost-product structure. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 24(28) (1978), no. 3–4, 39–45. (F. Brickell) **80k:53059** 53C15
- Vámos, P. Finitely generated Artinian and distributive modules are cyclic. *Bull. London Math. Soc.* 10 (1978), no. 3, 287–288. (K. A. Byrd) **80a:16039** 16A53
- The missing axiom of matroid theory is lost forever. *J. London Math. Soc.* (2) 18 (1978), no. 3, 403–408. (Thomas A. Dowling) **80a:05062** 05B35
- On the minimal prime ideal of a tensor product of two fields. *Math. Proc. Cambridge Philos. Soc.* 84 (1978), no. 1, 25–35. (S. Yuan) **80j:12016** 12F10
- can dyk Van See Can Dyk Van
- dó long Ván See Dò Long Ván
- nguyen thanh Van See Nguyen Thanh Van
- Van, K. Dang (with Bui, H. D.) Généralisation de la théorie de la rupture de Griffith. (English summary) *J. Méc. Appl.* 3 (1979), no. 2, 205–225. (Author's summary) **80c:73061** 73M05 (45C05)
- Van Assche, F. See van Assche, F.
- Van Benthem, J. F. A. K. See van Benthem, J. F. A. K.
- Van Campenhout, Jan M. See van Campenhout, Jan M.
- Van Casteren, Jan A. See van Casteren, Jan A.
- phan Ván Chu'ong See Phan Ván Chu'ong
- Vancejan, A. G. (with Stratonović, R. L.) Asymptotically error-free decoding in pure quantum channels. (Russian) With a loose English translation. *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* 7 (1978), no. 3, 161–173. (Authors' summary) **80b:94011** 94A15 (81C99, 94A40)
- Van Cleemput, W. M. See van Cleemput, W. M.
- Van Daele, Alfons See van Daele, Alfons
- Van Dalen, D. See van Dalen, D.
- Van Dam, H. See van Dam, H.
- nguyen Van Dao See Nguyen Van Dao
- Van de Craats, J. See van de Craats, J.
- Van de Lune, J. See van de Lune, J.
- Van den Berg, F. J. See van den Berg, F. J.
- Van den Berg, Peter M. See van den Berg, Peter M.
- Vanden Bergh, G. (with De Meyer, H. E.) A relation between products of vectors whose components satisfy three-parameter Lie-algebras. *Lett. Nuovo Cimento* (2) 24 (1979), no. 12, 417–419. (A. O. Barut) **80g:81029** 81C40 (17B10)
- Van den Bos, A. See van den Bos, A.
- Van den Broeck, C. See van den Broeck, C.
- Van den Broek, P. M. See van den Broek, P. M.
- Van den Dries, Lou See van den Dries, Lou
- Van den Driessche, Pauline See van den Driessche, Pauline
- Van den Essen, Arno See van den Essen, Arno
- Vanden Eynden, Charles Countable sequenceable groups. *Discrete Math.* 23 (1978), no. 3, 317–318. (Hugo S. Sun) **80b:20045** 20F10 (05B30)
- Van den Hombergh, Adolf See van den Hombergh, Adolf
- Vandensavel, Monique (with Doyen, Jean; Hubaut, Xavier) Ranks of incidence matrices of Steiner triple systems. *Math. Z.* 163 (1978), no. 3, 251–259. (Jane W. Di Paola) **80b:05012** 05B20 (51E10)



- Vanderbauwhede, André L.** Potential operators and the inverse problem of classical mechanics. *Hadronic J.* 1 (1978), no. 4, 1177-1197. (S. V. Temko) **80b:70027** 70H30 (49B05)
- Generic and nongeneric bifurcation for the von Kármán equations. *J. Math. Anal. Appl.* 66 (1978), no. 3, 550-573. (R. A. Plastock) **80c:58016** 58E07 (35B32, 73K10) (with Rodrigues, Hildebrando M.) Symmetric perturbations of nonlinear equations: symmetry of small solutions. *Nonlinear Anal.* 2 (1978), no. 1, 27-46. (J. K. Hale) **80b:47087** 47H15 (34C25, 35B32)
- Generic bifurcation and symmetry with an application to the von Kármán equations. *Proc. Roy. Soc. Edinburgh Sect. A* 81 (1978), no. 3-4, 211-235. (R. A. Plastock) **80f:58018** 58E07 (35B32, 47H99, 73K10)
- Potential operators and variational principles: a generalization. *Hadronic J.* 2 (1979), no. 3, 620-641. (Author's summary) **80c:49041** 49H05 (70H30, 76C99) (with Meire, R.) A useful result for certain linear periodic ordinary differential equations. *J. Comput. Appl. Math.* 5 (1979), no. 1, 59-61. (Matti Mäkelä) **80c:65078** 65L07 (70F07)
- Van der Bijl, F. See van der Bijl, F.**
- Van der Cruyssen, P.** A reformulation of Olver's algorithm for the numerical solution of second-order linear difference equations. *Numer. Math.* 32 (1979), no. 2, 159-166. (Author's summary) **80c:65241** 65Q05
- Van der Duyn Schouten, F. A. See van der Duyn Schouten, F. A.**
- Van der Geer, G. See van der Geer, G.**
- Vandergraft, James S.** Introduction to numerical computations. Computer Science and Applied Mathematics. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1978. xi + 344 pp. ISBN 0-12-711350-9 (Bernard H. Rosman) **80a:65006** 65-01 (with O'Leary, Dianne P.; Stewart, G. W.) Estimating the largest eigenvalue of a positive definite matrix. *Math. Comp.* 33 (1979), no. 148, 1289-1292. (Authors' summary) **80d:65048** 65F15
- Van der Houwen, P. J. See van der Houwen, P. J.**
- Vanderjagt, Donald W.** (with Lesniak-Foster, Linda M.; Polimeni, Albert D.) Mixed Ramsey numbers: edge chromatic numbers vs. graphs. *Theory and applications of graphs (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976)*, pp. 330-341. *Lecture Notes in Math.*, 642, Springer, Berlin, 1978. (Stefan A. Burr) **80b:05044** 05C55
- Van der Kallen, Wilberd. See van der Kallen, Wilberd**
- Van der Laan, G. See van der Laan, G.**
- Van der Lubbe, J. C. A. See van der Lubbe, J. C. A.**
- Van der Meer, C. L. J. See van der Meer, C. L. J.**
- Van der Meer, P. J. C. See van der Meer, P. J. C.**
- Van der Merwe, A. J. See van der Merwe, A. J.**
- Van der Merwe, P. du T. See van der Merwe, P. du T.**
- Van der Meulen, S. G. See van der Meulen, S. G.**
- Vander Nat, Arnold. See Vander Nat, Arnold**
- Van der Poorten, Alfred J. (with Loxton, J. H.)** Algebraic independence properties of the Fredholm series. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 1, 31-45. (W. W. Adams) **80c:10040** 10F37
- A proof that Euler missed... Apéry's proof of the irrationality of  $\{3\}$ . An informal report. *Math. Intelligencer* 1 (1978/79), no. 4, 195-203. (I. John Zucker) **80i:10054** 10H05 (10F35)
- (with Loxton, J. H.) Multidimensional generalizations of the Padé table. *Rocky Mountain J. Math.* 9 (1979), no. 3, 385-393. (Anthony G. O'Farrell) **80b:30037** 30E10 (10F30, 41A21)
- Van der Put, M. See van der Put, M.**
- Van der Sluis, A. See van der Sluis, A.**
- Vanderstraeten-Tilquin, Godelieve. See Rockefeller, R. Tyrrell, 80g:49023**
- Van der Waal, Robert W. See van der Waal, Robert W.**
- Van der Waerden, Bartel Leendert. See van der Waerden, Bartel Leendert**
- Van der Weiden, A. J. J. See van der Weiden, A. J. J.**
- Van der Werff, Terry J. See van der Werff, Terry J.**
- Van der Woude, J. C. S. P. See van der Woude, J. C. S. P.**
- Van der Zwan, G. See van der Zwan, G.**
- Van Deuren, Jean-Pierre. See van Deuren, Jean-Pierre**
- Vander, D. L. See V'udev, Dimit'r L.**
- Van de Vel, H. (with Poleunis, F.)** Characterizability of best approximations by means of a Kolmogorov criterion. *J. Approx. Theory* 22 (1978), no. 2, 177-188. (E. W. Cheney) **80j:41063** 41A65
- Haar intervals for trigonometric polynomials. *J. Comput. Appl. Math.* 5 (1979), no. 4, 265-267. (N. N. Abdelmalek) **80b:65017** 65D10 (41A50)
- Van de Ven, M. See van de Ven, M.**
- Van de Ven, Antonius.** Some recent results on surfaces of general type. *Séminaire Bourbaki, 29e année (1976/77)*, Exp. No. 500, pp. 155-166. *Lecture Notes in Math.*, 677, Springer, Berlin, 1978. (C. A. M. Peters) **80b:14019** 14J25
- On the Enriques classification of algebraic surfaces. *Séminaire Bourbaki, 29e année (1976/77)*, Exp. No. 506, pp. 237-251. *Lecture Notes in Math.*, 677, Springer, Berlin, 1978. (Jayant M. Shah) **80j:14025** 14J10 (14-02)
- (with Barth, Wolf) Fano varieties of lines on hypersurfaces. *Arch. Math. (Basel)* 31 (1978/79), no. 1, 96-104. (Allen B. Altman) **80j:14004** 14C05 (14M99)
- (with Hirzebruch, F.) Minimal Hilbert modular surfaces with  $p_g = 3$  and  $k^2 = 2$ . *Amer. J. Math.* 101 (1979), no. 1, 132-148. (Hiroshi Saito) **80d:10040** 10D21 (14J20, 14J25)
- Le fibré normal d'une courbe dans  $P_3$  ne se décompose pas toujours. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 2, A111-A113. (P. E. Newstead) **80k:14027** 14F05
- Van de Vooren, A. I. See van de Vooren, A. I.**
- Vandewalle, Joos (with Van Dooren, Paul M.; Dewilde, Patrick)** On the determination of the Smith-Macmillan form of a rational matrix from its Laurent expansion. *IEEE Trans. Circuits and Systems* 26 (1979), no. 3, 180-189. (Authors' summary) **80b:93061** 93B99 (15A21)
- Van de Wiele, Jean-Paul.** An optimal lower bound on the number of total operations to compute 0-1 polynomials over the field of complex numbers. *19th Annual Symposium on Foundations of Computer Science (Ann Arbor, Mich., 1978)*, pp. 159-165. *IEEE, Long Beach, Calif.*, 1978. (Author's summary) **80c:68127** 68C25
- (with Rivest, Ronald L.) An  $\Omega((n/\lg n)^{1/2})$  lower bound on the number of additions necessary to compute 0-1 polynomials over the ring of integer polynomials. *Inform. Process. Lett.* 8 (1979), no. 4, 178-180. (R. G. Larson) **80b:68058** 68C25
- Vandewiele, M. E. L.** Sur une équation de Mathieu avec amortissement non linéaire. *Mathematica (Cluj)* 20(43) (1978), no. 1, 81-87. (C. Olech) **80j:34066** 34D30 (34C29)
- Van Dooren, Paul M. (with Dewilde, Patrick; Vandewalle, Joos)** On the determination of the Smith-Macmillan form of a rational matrix from its Laurent expansion. *IEEE Trans. Circuits and Systems* 26 (1979), no. 3, 180-189. (Authors' summary) **80b:93061** 93B99 (15A21)
- (with Verghese, G.; Kailath, Thomas) Properties of the system matrix of a generalized state-space system. *Internat. J. Control* 30 (1979), no. 2, 235-243. (B. L. Ovsievic) **80i:93006** 93A99
- The computation of Kronecker's canonical form of a singular pencil. *Linear Algebra Appl.* 27 (1979), 103-140. (Author's summary) **80g:65042** 65F15 (15A18, 15A21)
- Van Dooren, René.** Second form of the generalized Hamilton-Jacobi method for nonholonomic dynamical systems. (French summary) *Z. Angew. Math. Phys.* 29 (1978), no. 5, 828-834. (D. P. Rašković) **80b:70026** 70H20 (34C20, 70F25)
- Comments on: "Stability of solitary waves in shallow water" (Phys. Fluids 19 (1976), no. 6, 771-777) by J. G. Berryman. With a reply by the original author. *Phys. Fluids* 22 (1979), no. 8, 1586-1588, 1588-1589. (Alan Jeffrey) **80f:76005** 76B25 (35Q20)
- Van Douwen, Eric K. See van Douwen, Eric K.**
- Tong Van Duc. See Tong Van Duc**
- Van Dulst, D. See van Dulst, D.**
- Van Duyn, C. J. See van Duyn, C. J.**
- Van Dyke, M. See Jeffrey, D. J., 80d:78017**
- Van Dyke, Milton. See Annual review of fluid mechanics, 80d:76001**
- Van Eljnsbergen, A. C. See van Eljnsbergen, A. C.**
- Van Emde Boas, Peter. See van Emde Boas, Peter**
- Van Emden, M. H. See van Emden, M. H.**
- Van Erkelens, H. See van Erkelens, H.**
- Van Est, W. T. See van Est, W. T.**
- Van Geel, J. See van Geel, J.**
- Vangeldere, J.** Pareto weak minimality and various connected properties. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 1, pp. 663-676. *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (Author's summary) **80c:90086** 90C25
- Sur la notion de cône des directions admissibles. (English summary) *Bull. Soc. Roy. Sci. Liège* 48 (1979), no. 1-2, 33-45. (E. J. Barbeau) **80j:46025** 46A55
- Van Geldrop, J. H. See van Geldrop, J. H.**
- Van Genuchten, M. Th. See van Genuchten, M. Th.**
- Van Goethem, P. See van Goethem, P.**
- Van Haeringen, H. See van Haeringen, H.**
- Van Haersma Buma, Chris E. See van Haersma Buma, Chris E.**
- phan Van Hap. See Phan Van Hap**
- Van Harn, Klaus. See van Harn, Klaus**
- Van Harten, A. See van Harten, A.**
- Vanhecke, Lieven (with Willmore, T. J.)** Umbilical hypersurfaces of Riemannian, Kähler and nearly Kähler manifolds. (Arabic summary) *J. Univ. Kuwait Sci.* 4 (1977), 1-7. (K. Yano) **80c:53069** 53C40
- (with Watson, Bill)  $K_1$ -curvatures and almost Hermitian submersions. (Italian summary) *Rend. Sem. Mat. Univ. Politec. Torino* 36 (1977/78), 205-224 (1979). (A. Gray) **80c:53038** 53C15 (53C40, 53C55)
- (with Goldberg, Samuel Irving) Two volume decreasing theorems and a new proof of the Hopf conjecture for surfaces of genus zero. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 2, 119-122. (Themistocles M. Rassias) **80b:53031** 53C20 (58E15)
- (with Triccerri, Franco) An example of a 6-dimensional flat almost Hermitian manifold. *Colloq. Math.* 40 (1978/79), no. 1, 111-117. (A. Gray) **80e:53037** 53C15 (53C55)
- (with Chen, Bang-yen; Verstraeten, Leopold) Complex submanifolds of some Hermitian symmetric spaces. *Geom. Dedicata* 7 (1978), no. 4, 427-432. (J. L. Koszul) **80m:53040** 53C40 (32M15)
- (with Janssens, D.) The Bochner curvature tensor on almost Hermitian manifolds. *Hokkaido Math. J.* 7 (1978), no. 2, 252-258. (K. Yano) **80g:53016** 53B35
- (with Blair, David E.) Umbilical submanifolds of Sasakian space forms. *J. Differential Geom.* 13 (1978), no. 2, 273-278. (Y. Katsurada) **80f:53029** 53C25
- (with Willmore, T. J.) Jacobi fields and geodesic spheres. *Proc. Roy. Soc. Edinburgh Sect. A* 82 (1978/79), no. 3-4, 233-240. (F. Brickell) **80i:53019** 53B20 (53B35)
- Sur certaines transformations d'une surface réglée. *Rev. Mat. Hisp.-Amer. (4)* 38 (1978), no. 2-3, 131-164. (From Marcus) **80d:53011** 53A20
- (with Chen, Bang-yen) Total curvatures of geodesic spheres. *Arch. Math. (Basel)* 32 (1979), no. 4, 404-411. (George Stamou) **80j:53056** 53C45
- (with Gray, Alfred) Almost Hermitian manifolds with constant holomorphic sectional curvature. *Časopis Pěst. Mat.* 104 (1979), no. 2, 170-179. (K. Yano) **80f:53039** 53C55
- (with Watson, Bill) The structure equation of an almost semi-Kähler submersion. *Houston J. Math.* 5 (1979), no. 2, 295-305. (Yoshio Matsuyama) **80b:53060** 53C42 (53C15)
- (with Triccerri, Franco) Decomposition of a space of curvature tensors on a quaternionic Kähler manifold and spectrum theory. *Simon Stevin* 53 (1979), no. 1-2, 163-173. (Shūkichi Tanno) **80c:53063** 53C55
- (with Gray, Alfred; Barros, M.; Martínez Naveira, Antonio) The Chern numbers of holomorphic vector bundles and formally holomorphic connections of complex vector bundles over almost complex manifolds. *J. Reine Angew. Math.* 314 (1980), 84-98. (Bang-yen Chen) **80m:32010** 32C10 (53C15, 57R20)
- Van Hee, K. M. See van Hee, K. M.**

- Van Heijst, G. J. F. See van Heijst, G. J. F.  
 Van Hemmen, J. L. See van Hemmen, J. L.  
 Van Hemmen, Leo. See van Hemmen, Leo  
 Vanheuverzwijn, Paul. Generators for quasifree completely positive semigroups. (French summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* 29 (1978), no. 1, 123-138. (G. A. Elliott) 80b:46105a 46L10 (47D05, 82A15)  
 (with Demoen, Bart; Verbeure, André) Energetically stable systems. *J. Math. Phys.* 19 (1978), no. 11, 2256-2259. (Authors' summary) 80c:82014 82A15  
 Errata to: "Generators for quasifree completely positive semigroups" (Ann. Inst. H. Poincaré Sect. A (N.S.) 29 (1978), no. 1, 123-138). *Ann. Inst. H. Poincaré Sect. A (N.S.)* 30 (1979), no. 1, 83. (Editors) 80b:46105b 46L10  
 Nguyen Van Hien. See Nguyen Van Hien  
 Nguyễn Văn Hiến. See Nguyễn Văn Hiến  
 Nguyễn Văn Hồ. See Nguyễn Văn Hồ  
 hó-Van-Hoà. See Hó-Van-Hoà  
 Van Holten, J. W. See van Holten, J. W.  
 Van Honstede, W. See van Honstede, W.  
 Van Humbeek, Emile. See van Humbeek, Emile  
 đình Van Huynh. See Đình Van Huynh  
 Van Ijzeren, J. See van Ijzeren, J.  
 Van Inwagen, Peter. See van Inwagen, Peter  
 Van Kampen, N. G. See van Kampen, N. G.  
 Hoàng Van Lai. See Hoàng Van Lai  
 Van Lamswoerde, Axel. See van Lamswoerde, Axel  
 Van Leeuwen, J. M. J. See van Leeuwen, J. M. J.  
 Van Leeuwen, Jan. See van Leeuwen, Jan  
 Van Leeuwen, L. C. A. See van Leeuwen, L. C. A.  
 Van Leeuwen, W. A. See van Leeuwen, W. A.  
 Van Lint, Jacobus H. See van Lint, Jacobus H.  
 Van Loan, Charles. (with Moler, Cleve B.) Nineteen dubious ways to compute the exponential of a matrix. *SIAM Rev.* 20 (1978), no. 4, 801-836. (C. G. Cullen) 80c:15004 15A15  
 A note on the evaluation of matrix polynomials. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 320-321. (Author's summary) 80f:68034 68C05 (68C25)  
 (with Golub, Gene H.) Unsymmetric positive definite linear systems. *Linear Algebra Appl.* 28 (1979), 85-97. (Colette Lebaud) 80k:15016 15A23 (65F05)  
 Ngô Văn Lũc. See Ngô Văn Lũc  
 Van Mill, Jan. See van Mill, Jan  
 Van Moerbeke, Pierre. See van Moerbeke, Pierre  
 Van Montfort, Martin A. J. See van Montfort, Martin A. J.  
 Van Muschenbroek, Petrus. See van Muschenbroek, Petrus  
 Van Neerven, W. L. See van Neerven, W. L.  
 Van Nieuwenhuizen, P. See van Nieuwenhuizen, P.  
 Vannimeus, J. (with Derrida, B.; Pomeau, Y.; Toulouse, G.) Fully frustrated simple cubic lattices and phase transitions. (French summary) *J. Physique* 41 (1980), no. 3, 213-221. (Authors' summary) 80m:82020 82A25  
 Vanninathan, Muthusamy. Homogénéisation des valeurs propres dans les milieux perforés. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 6, A403-A406. (Author's summary) 80b:35116 35P99  
 Homogénéisation des problèmes de valeurs propres dans les milieux perforés. Problème de Dirichlet. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 12, A823-A825. (Author's summary) 80d:35118 35P15  
 Van Otterloo, Peter J. See van Otterloo, Peter J.  
 Van Oystaeyen, F. See van Oystaeyen, F.  
 Van Rees, G. H. J. (with Schellenberg, P. J.; Vanstone, S. A.) Four pairwise orthogonal Latin squares of order 15. *Ars Combin.* 6 (1978), 141-150. (D. Soeteau) 80c:05039 05B15  
 (with Heinrich, Katherine; Wallis, W. D.) A general construction for equidistant permutation arrays. *Graph theory and related topics (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 247-252. Academic Press, New York, 1979. (F. De Clerck) 80k:05021 05B15 (05B30)  
 (with Curran, D.) Critical sets in Latin squares. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1978)*, pp. 165-168. Congress. Numer., XXII, *Utilitas Math.*, Winnipeg, Man., 1979. (Katherine Heinrich) 80j:05022 05B15  
 Van Rooij, A. See van Rooij, A.  
 Van Royen, R. P. See van Royen, R. P.  
 Van Schagen, F. See van Schagen, F.  
 Van Schuppen, Jan H. (with Hibey, Joseph L.; Snyder, Donald L.) Error-probability bounds for continuous-time decision problems. *IEEE Trans. Inform. Theory* 24 (1978), no. 5, 606-622. (O. A. Glonti) 80a:60061 60G35 (94C05)  
 Vansteenkiste, Ghislain C. See Modeling, identification and control in environmental systems. 80a:92004  
 Van Stigt, Walter P. See van Stigt, Walter P.  
 Van Stijn, Th. L. (with van de Vooren, A. I.) An accurate method for solving the Orr-Sommerfeld equation. *J. Engrg. Math.* 14 (1980), no. 1, 17-26. (Authors' summary) 80j:76034 76E99  
 Vanstone, S. A. Generalized Room squares and related combinatorial designs. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1977)*, pp. 591-601. Congress. Numer., XX, *Utilitas Math.*, Winnipeg, Man., 1978. (L. D. Baument) 80g:05024 05B30 (05B15)  
 (with Schellenberg, P. J.; Van Rees, G. H. J.) Four pairwise orthogonal Latin squares of order 15. *Ars Combin.* 6 (1978), 141-150. (D. Soeteau) 80c:05039 05B15  
 Extremal  $(r, \lambda)$ -designs. *Discrete Math.* 23 (1978), no. 1, 57-66. (G. H. J. Van Rees) 80a:05030 05B05  
 (with McCarthy, David; Singhi, N. M.) A graph-theoretical approach to embedding  $(r, 1)$ -designs. *Graph theory and related topics (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 289-304. Academic Press, New York, 1979. (R. C. Mullin) 80j:05038 05B30  
 The asymptotic behaviour of equidistant permutation arrays. *Canad. J. Math.* 31 (1979), no. 1, 45-48. (Katherine Heinrich) 80c:05041 05B15  
 (with McCarthy, David) On the structure of regular pairwise balanced designs. *Discrete Math.* 25 (1979), no. 3, 237-244. (Derek Smith) 80c:05019 05B05  
 Irreducible regular pairwise balanced designs. *Utilitas Math.* 15 (1979), 249-259. (Elizabeth J. Morgan) 80d:05011 05B05  
 Van Strien, Sebastian J. See van Strien, Sebastian J.  
 vo Van Tan. See Vo Van Tan  
 Lê Văn Thiêm. See Lê Văn Thiêm  
 vo Van Tho. See Vo Van Tho  
 Nguyen Van Thoai. See Nguyen Van Thoai  
 Nguyen Van Thu. See Nguyen Van Thu  
 Vantighem, E. On fields with an exponentiation. *Bull. Soc. Math. Belg.* 28 (1976), no. 1, 29-35. (N. L. Alling) 80m:12025 12E99  
 Van Tilborg, Henk. See van Tilborg, Henk  
 Vantilborgh, Hendrik. Exact aggregation in exponential queueing networks. *J. Assoc. Comput. Mach.* 25 (1978), no. 4, 620-629. (Erol Gelenbe) 80f:68008 68A05 (68C15, 90B22)  
 tran Van Trung. See Tran Van Trung  
 Vantsyan, A. G. See Vancjan, A. G.  
 le Van Tu. See Le Van Tu  
 dang Van Uyen. See Dang Van Uyen  
 Van Veen, S. C. See van Veen, S. C.  
 Van Vleck, F. S. (with Himmelberg, C. J.) Corrigendum and addendum to: "Multifunction on abstract measurable spaces and application to stochastic decision theory" [*Ann. Mat. Pura Appl.* (4) 101 (1974), 229-236; MR 54 #13016]. *Ann. Mat. Pura Appl.* (4) 119 (1979), 391-394. (Authors' summary) 80i:28012 28A20 (93E99)  
 Van Vliet, K. M. See van Vliet, K. M.  
 Van Weert, Ch. G. See van Weert, Ch. G.  
 Van Wesp, Robert. Wadge degrees and descriptive set theory. *Cabal Seminar 76-77 (Proc. Caltech-UCLA Logic Sem., 1976-77)*, pp. 151-170. *Lecture Notes in Math.*, 689, Springer, Berlin, 1978. (Andreas Blass) 80i:03058 03E15 (03E60)  
 Van Wijngaarden, A. See van Wijngaarden, A.  
 Van Winkel, E. G. F. See van Winkel, E. G. F.  
 Van Winter, Clansine. See van Winter, Clansine  
 Van Wouwe, J. M. See van Wouwe, J. M.  
 Van Wyk, J. W. J. See van Wyk, J. W. J.  
 Vanzani, V. (with Cattapan, G.) Distribution properties of the channel interactions in N-body scattering and applications. (Italian and Russian summaries) *Nuovo Cimento A* (11) 50 (1979), no. 1, 97-119. (Authors' summary) 80i:81048 81F10 (10J20)  
 Vanzo, L. (with Cognola, G.; Soldati, R.; Zerbini, S.) Classical nonabelian gauge theories in the space of reference frames. *J. Math. Phys.* 20 (1979), no. 12, 2613-2618. (M. Carmeli) 80k:81068 81E10  
 Vanžura, Jiří (with Troják, Jan) A characterization of hyperspheres in the quaternionic space. *Czechoslovak Math. J.* 29(104) (1979), no. 2, 284-286. (Engelbert Dornfeld) 80g:53002 53A05  
 Van Zwet, W. R. See van Zwet, W. R.  
 Vapnytskii, V. M. (with Vdovin, S. I.; Sabaev, E. F.) Stability in the large of a class of control systems. *Avtomat. i Telemekh.* 40 (1979), no. 7, 5-12. (Russian. English summary; translated as *Automat. Remote Control* 40 (1979), no. 7, part 1, 949-955. (Authors' summary) 80k:93038 93D05  
 Vapnik, L. B. Modular problems of the mathematical theory of standardization. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 2, 523-527, 559. (Author's summary) 80c:90152 90C50 (90C30)  
 Varadan, Vasundara V. (with Peterson, Bo Å.; Varadan, Vijay K.) Scattering of acoustic waves by elastic and viscoelastic obstacles immersed in a fluid. *Wave Motion* 2 (1980), no. 1, 23-38. (Authors' summary) 80m:73022 73D25 (78A45)  
 Varadan, Vijay K. (with Peterson, Bo Å.; Varadan, Vasundara V.) Scattering of acoustic waves by elastic and viscoelastic obstacles immersed in a fluid. *Wave Motion* 2 (1980), no. 1, 23-38. (Authors' summary) 80m:73022 73D25 (78A45)  
 Varadarajan, K. Dual Goldie dimension. *Comm. Algebra* 7 (1979), no. 6, 565-610. (E.-A. Behrens) 80k:16014 16A34  
 (with Sarath, B.) Dual Goldie dimension. II. *Comm. Algebra* 7 (1979), no. 17, 1885-1899. (E.-A. Behrens) 80k:16021 16A34  
 Varadhan, S. R. S. (with Donsker, M. D.) On the principal eigenvalue of elliptic second order differential operators. *Proceedings of the International Symposium on Stochastic Differential Equations (Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976)*, pp. 41-47. Wiley, New York, 1978. (Jan Bochenek) 80i:35140 35P15 (35J25, 60J60)  
 (with Donsker, M. D.) On the number of distinct sites visited by a random walk. *Stochastic analysis (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1978)*, pp. 57-62. Academic Press, New York, 1978. (H. Kesten) 80d:60085 60J15 (60F10)  
 Váradý, T. Recognition of the change of a stochastic process on the basis of the prediction error. (Russian and Hungarian summaries) *Közl.-MTA Számítástech. Automat. Kutató Int. Budapest No. 21* (1978), 27-42. (Wolfgang Winkler) 80a:62159 62M20  
 Varah, James M. Numerical methods for the solution of ordinary differential equations. *Numerical analysis (Proc. Sympos. Appl. Math., Atlanta, Ga., 1978)*, pp. 71-86. Proc. Sympos. Appl. Math., XXII, Amer. Math. Soc., Providence, R.I., 1978. (Author's summary) 80d:65004 65-02  
 Stiffly stable linear multistep methods of extended order. *SIAM J. Numer. Anal.* 15 (1978), no. 6, 1234-1246. (René Alt) 80b:65104 65L05  
 On the efficient implementation of implicit Runge-Kutta methods. *Math. Comp.* 33 (1979), no. 146, 557-561. (René Alt) 80b:65105 65L05  
 (with Ludwig, Donald) Optimal harvesting of a randomly fluctuating resource. II. Numerical methods and results. *SIAM J. Appl. Math.* 37 (1979), no. 1, 185-205. (P. D. M. Macdonald) 80h:92015b 92A15 (34H05, 93E20)  
 A practical examination of some numerical methods for linear discrete ill-posed problems. *SIAM Rev.* 21 (1979), no. 1, 100-111. (Colin M. Campbell) 80c:65075 65F05 (65F35)  
 Varaiya, Pravin (with Walrand, Jean) On delayed sharing patterns. *IEEE Trans. Automat. Control* 23 (1978), no. 3, 443-445. (Authors' summary) 80a:93160 93E10  
 (with Arle, Roland) Life cycle consumption and homeownership. *J. Econom.*



- Theory 18** (1978), no. 1, 38–58. (Hans Keiding) **80a:90033** 90A16  
(with Borkar, Vivek) Adaptive control of Markov chains. *Stochastic control theory and stochastic differential systems* (Proc. Workshop, Deutsch. Forschungsgemeinschaft, Univ. Bonn, Bad Honnef, 1979), pp. 294–296. *Lecture Notes in Control and Information Sci.*, 16, Springer, Berlin, 1979. (Tamer Başar) **80c:93063** 93E20 (60J10)  
(with Walrand, Jean) Decentralized control in packet switched satellite communication. *IEEE Trans. Automat. Control* **24** (1979), no. 5, 794–796. (Frits C. Schoute) **80m:93097** 93E20 (94A40)  
See also **Platzman, Loren Kerry**, **80d:93085**
- Vartenko, A. N.** A formula for the rank of the homology groups of the boundary of an isolated singularity of a surface in  $C^3$  and the Newton diagram. (Russian) *Funktsional. Anal. i Prilozhen.* **13** (1979), no. 1, 65–66. (I. N. Iomdin) **80c:32006** 32C40 (14B05)
- Vardanian, V. A.** A formalization of the logic of decision making. (Russian) *Semiotics and information science*, No. 11 (Russian), pp. 66–80 (errata insert), Akad. Nauk SSSR, Vsesoyuz. Inst. Naučn. i Tehn. Informacii, Moscow, 1979. (Jerzy Perzanowski) **80m:03047** 03B45
- Vardanian, V. N.** Density states in homogeneous Dirac systems with model random potentials. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* **67** (1978), no. 2, 65–68. (A. T. Barchuk-Reid) **80c:60082** 60H10 (34F05)
- Vardeman, Stephen B.** A note on the applicability of sequence compound decision schemes. *Scand. J. Statist.* **6** (1979), no. 2, 86–88. (V. Susarla) **80j:62011** 62C25
- van der Varden, B. L.** See **van der Waerden, Bartel Leendert**
- Vardi, Y.** Asymptotic optimality of certain sequential estimators. *Ann. Statist.* **7** (1979), no. 5, 1034–1039. (R. A. Wijsman) **80h:62064** 62L12  
Asymptotic optimal sequential estimators: the Poisson case. *Ann. Statist.* **7** (1979), no. 5, 1040–1051. (R. H. Farrell) **80h:62066** 62L15 (62M99)
- Vardiakakis, A. I. G.** On the structure of the bases of all possible controllability subspaces  $\mathcal{R}$  of a controllable pair  $[A, B]$  in canonical form. *Internat. J. Control* **28** (1978), no. 3, 393–409. (A. M. Zaharin) **80g:93022** 93B05  
(with Stoyle, P. N. R.) Generalized resultant theorem. *J. Inst. Math. Appl.* **22** (1978), no. 3, 331–335. (From the introduction) **80c:12025** 12E05 (15A99, 93B30)  
(with Stoyle, P. N. R.) An algorithm for decoupling and maximal pole assignment in multivariable systems by the use of state feedback. *IEEE Trans. Automat. Control* **24** (1979), no. 2, 362–365. (Authors' summary) **80c:93092** 93C99 (93C35)  
(with Stoyle, P. N. R.) On certain connections between the geometric and the polynomial matrix approaches to linear system theory. *Internat. J. Control* **29** (1979), no. 4, 565–588. (O. I. Nwokah) **80j:93011** 93A10  
(with Stoyle, P. N. R.) The mechanism of decoupling. *Internat. J. Control* **29** (1979), no. 4, 589–605. (Authors' summary) **80h:93011** 93A15  
(with Stoyle, P. N. R.) On the computation of controllability subspaces. *Internat. J. Systems Sci.* **10** (1979), no. 12, 1343–1351. (Authors' summary) **80j:93029** 93B05
- Vares, Vicente R.** Local formations of Lie algebras,  $f$ -nonideal, maximal subalgebras in  $L$ . (Spanish. English summary) *Rev. Real Acad. Cienc. Exact. Fis. Natur. Madrid* **72** (1978), no. 1, 79–95. (V. A. Artamonov) **80i:17017** 17B99
- Varela Garcia, Francisco Javier** (with Goguen, Joseph A.) The arithmetic of closure. *J. Cybernet.* **8** (1978), no. 3–4, 291–324. (Louis H. Kauffman) **80c:93006** 93A05  
(with Goguen, Joseph A.) Systems and distinctions; duality and complementarity. *Internat. J. Gen. Systems* **5** (1979), no. 1, 31–43. (Devendra P. Garg) **80c:93008** 93A10
- The extended calculus of indications interpreted as a three-valued logic. *Note Dame J. Formal Logic* **20** (1979), no. 1, 141–146. (Editors) **80g:03021** 03B50
- Varene, Jean-Pierre** Diffraction par un angle ou un dièdre. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 4, A175–A178. (Author's summary) **80m:35052** 35L05
- Gerard-Varet, L. A.** See **Gerard-Varet, L. A.**
- Varga, A.** (with Móricz, Ferenc; Ecsedi-Tóth, P.) A method for minimizing partially defined Boolean functions. *Acta Cybernet.* **4** (1978/79), no. 3, 283–290. (Authors' summary) **80j:94041** 94C10 (03G05, 68E99)
- Varga, Gyula** Similarity reduction of singular symmetric matrices. (Hungarian. English summary) *Alkalmaz. Mat. Lapok* **3** (1977), no. 3–4, 349–353 (1978). (Agneta Vescan) **80k:15015** 15A21
- Varga, Richard S.** (with Saff, Edward B.) On incomplete polynomials. *Numerische Methoden der Approximationstheorie, Band 4* (Meeting, Math. Forschungsinst., Oberwolfach, 1977), pp. 281–298. *Internat. Schriftenreihe Numer. Math.*, 42, Birkhäuser, Basel, 1978. (From the text) **80d:41008** 41A10 (65D15)  
(with Saff, Edward B.) Nonuniqueness of best complex rational approximations to real functions on real intervals. *J. Approx. Theory* **23** (1978), no. 1, 78–85. (Myron S. Henry) **80f:41012** 41A20 (30E10, 41A25)  
(with Lanchance, Michael; Saff, Edward B.) Inequalities for polynomials with a prescribed zero. *Math. Z.* **168** (1979), no. 2, 105–116. (R. Vermes) **80j:30009** 30C10  
(with Moak, D. S.; Saff, Edward B.) On the zeros of Jacobi polynomials  $P_n^{(\alpha, \beta)}(x)$ . *Trans. Amer. Math. Soc.* **249** (1979), no. 1, 159–162. (Y. L. Luke) **80g:33021** 33A65
- Varga, Tiinde** Über Berwaldsche Räume. *I. Publ. Math. Debrecen* **25** (1978), no. 3–4, 213–223. (Makoto Matsumoto) **80a:53040** 53B40
- Varga, Z.** Least-squares solution for  $N$ -person multicriteria differential games. *Ann. Univ. Sci. Budapest. Eötvös Sect. Math.* **21** (1978), 139–148 (1979). (Emmanuel Nicholas Barron) **80e:90146** 90D25  
On a cooperative pursuit-evasion game. (Russian) *Vestnik Moskov. Univ. Ser. XV Vychisl. Mat. Kibernet.* **1979**, no. 1, 51–57, 70. (A. I. Subbotin) **80f:90169** 90D25
- Varian, Hal R.** A note on locally constant income elasticities. *Econom. Lett.* **1** (1978), no. 1, 9–13. (Reinhard Illner) **80c:90029** 90A15  
(with Crawford, Vincent P.) Distortion of preferences and the Nash theory of bargaining. *Econom. Lett.* **3** (1979), no. 3, 203–206. (Authors' summary) **80j:90024** 90A10
- Vautly, Joseph C.** (with Emch, Gérard G.) On the standard form of the Bloch equation. *Lett. Math. Phys.* **3** (1979), no. 2, 113–116. (Panayotis Tsiligrakis) **80c:82019** 82A15
- Vautneau, Verne J.** (with Johnson, Larry S.; Porter, A. Duane) Commutators over finite fields. *Publ. Math. Debrecen* **25** (1978), no. 3–4, 259–264. (John H. Hodges) **80d:15017** 15A24 (15A23)
- Vasilescu, A.** (with Spoleitini Cherubini, Alessandra) Some properties of  $E$ - $m$  semigroups. *Semigroup Forum* **17** (1979), no. 2, 153–161. (J. E. Kuczowski) **80c:20087** 20M10
- Vasilescu, V. I.** The method of majorant series for a class of analytic almost periodic systems. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 4, 579–588, 762. (H. I. Freedman) **80h:34052** 34C25  
Kinematic similarity of linear almost periodic systems. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 8, 1395–1398, 1532. (A. Halanay) **80i:34058** 34C26 (93C15)
- Vasilescu, J.** Nodes of the congruence lattice of a distributive  $p$ -algebra. *Nanta Math.* **11** (1978), no. 2, 124–129. (Joel Berman) **80f:06011** 06D15  
Large congruences in  $p$ -algebras and double  $p$ -algebras. *Algebra Universalis* **9** (1979), no. 2, 165–178. (H. Peter Gumm) **80f:06012** 06D15 (06B10, 06D30)
- Varma, A. K.** Some inequalities of algebraic polynomials having real zeros. *Proc. Amer. Math. Soc.* **75** (1979), no. 2, 243–250. (A. Elbert) **80c:28019** 28D05 (28D10)  
(with Prasad, Jagdish) Lacunary interpolation by quintic splines. *SIAM J. Numer. Anal.* **16** (1979), no. 6, 1075–1079. (A. Sharma) **80c:41001** 41A05 (41A15)
- Várnai, Ferenc** (with Kiss, Péter) On generalized Pell numbers. *Math. Sem. Notes Kobe Univ.* **6** (1978), no. 2, 259–267. (R. Steiner) **80h:10019** 10A40 (10B05)
- Varol, Yaşar L.** (with Westreich, David) Applications of Galerkin's method to bifurcation and two-point boundary value problems. *J. Math. Anal. Appl.* **70** (1979), no. 2, 399–422. (A. A. Fonarev) **80c:65038** 65J15  
(with Westreich, David) Numerical bifurcation at simple eigenvalues. *SIAM J. Numer. Anal.* **16** (1979), no. 3, 538–546. (B. V. Logvinov) **80h:47072** 47H15 (58E07)
- Vaspassio, P.** Incremental analysis of axisymmetric shallow shells with varying strain-displacement equations. *Comput. Methods Appl. Mech. Engrg.* **21** (1980), no. 2, 153–169. (Author's summary) **80m:73062** 73L99
- Vasilevski, V. I.** (with Zabolotnyi, A. M.; Serebinski, F.) Homogeneous games with an associated exchange process. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1977**, no. 6, 132–134 (Russian); translated as *Engrg. Cybernetics* **15** (1977), no. 6, 99–101 (1978). (Authors' summary) **80b:90169** 90D30 (68A05)
- Vasilevski, M. N.** (with Acharya, B. Devadas) On the graphs having unique maximal connecting partition graphs. *Indian J. Pure Appl. Math.* **8** (1977), no. 11, 1378–1384. (R. J. Douglas) **80i:05071** 05C99
- Vasilevski, T. S.** An investigation of Vekua's operator of the theory of elastic shells. (Russian) *Complex analysis and its applications* (Russian), pp. 102–107, 665, "Nauka", Moscow, 1978. (W. Kecs) **80c:73060** 73L99
- Vasilenko, V. P.** On the calculation of all nontrivial simple decompositions of a function of the algebra of logic. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 1, 15–18. (V. V. Gorlov) **80j:03006** 03G05 (94C10)
- Vasconcelos, Wolmer V.** On the homology of  $1/I^2$ . *Comm. Algebra* **6** (1978), no. 17, 1801–1809. (Ralph W. Wilkerson) **80a:13014** 13D05 (16A60)  
(with Wiegand, Roger) Bounding the number of generators of a module. *Math. Z.* **164** (1978), no. 1, 1–7. (Pushpa Gupta) **80h:13028** 13H15 (13D99)  
Regular sequences and powers of ideals. *Proc. Amer. Math. Soc.* **77** (1979), no. 2, 165–166. (R. A. Wiegand) **80k:13012** 13H99
- Vasenin, V. A.** (with Samsonov, V. A.) Some properties of the impact-impulse control of a linear system. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Mekh.* **2** (1979), 97–100, 105. (Authors' summary) **80h:93013** 93A15 (34H05, 93C15)
- Vashista, S. K.** (with Goyal, S. P.) An expansion formula for the  $H$ -function of two variables. (Hindi. English summary) *Vijnana Parishad Amsandhan Patrika* **21** (1978), no. 3, 237–246. (R. S. Dahiya) **80h:33007** 33A35
- Vasilevski, David P.** Random linear systems and temporal homogeneity. *J. Math. Phys.* **19** (1978), no. 2, 401–408. (Author's summary) **80c:82038** 82A42 (81E10)
- Vasić, P. M.** (with Mitrović, Dragoslav S.; Bullen, P. S.) Means and inequalities connected with them. I. (Serbo-Croatian. English summary) *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* **No. 600** (1977), 232 pp. (B. Crstici) **80b:26001** 26–02 (26Dxx)
- Vasilache, Sergiu** (with de Bruc, Denis) Sur un problème aux limites pour l'équation de propagation avec perte d'énergie. (English summary) *Rev. CETHEDC* **No. 58** (1979), 33–42. (J. Chrastina) **80h:44010** 44A40 (35C15)  
Algebraic method for solving linear partial differential equations with variable coefficients. I. Basic theory. *SIAM J. Math. Anal.* **10** (1979), no. 3, 586–602. (R. A. Struble) **80d:35031** 35C99 (46F10)  
Algebraic method for solving linear partial differential equations with variable coefficients. II. Fundamental solutions. *SIAM J. Math. Anal.* **10** (1979), no. 5, 1077–1088. (R. A. Struble) **80j:35014** 35C10
- Vasilakis, J. D.** (with Wu, Julian J.) Effect of damping at the support of a rotating beam on vibrations. *Transactions of the Twenty-Third Conference of Army Mathematicians* (Langley Res. Center, Hampton, Va., 1977), pp. 401–420, *ARO Rep.* **78**, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1978. (Authors' summary) **80d:73084** 73K05
- Vasil'cik, M. Ju.** Errata: "The lower bound of the distortion coefficient for infinitely close domains" [Sibirsk. Mat. Z. **19** (1978), no. 3, 547–554; MR **58**:17084]. (Russian) *Sibirsk. Mat. Z.* **20** (1979), no. 4, 924. (Editors) **80h:30019** 30C60
- Vasilenko, S. S.** Optimal integration of rapidly oscillating functions from the class  $W_p^N$ . (Russian) Optimization of computations (the solution of equations, numerical integration, statistical data processing). *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* **No. 40** (1977), 25–32. (B. A. Bondarenko) **80c:65053** 65D30
- Vasilescu, E. N.** On extensive games and almost complete information. *Internat. J. Game Theory* **7** (1978), no. 3–4, 163–182. (Author's summary) **80c:90088** 90D12
- Vasilescu, Florian-Horia** (with Ceaușescu, Zoia) Tensor products and the joint spectrum in Hilbert spaces. *Proc. Amer. Math. Soc.* **72** (1978), no. 3, 505–508. (Z. Słodkowski) **80b:47003** 47A10 (46M05)  
A Martinelli type formula for the analytic functional calculus. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 10, 1587–1605. (Z. Słodkowski) **80b:47020** 47A60 (32E25)  
(with Ceaușescu, Zoia) Tensor products and Taylor's joint spectrum. *Studia Math.* **62** (1978), no. 3, 305–311. (Author's review (F.V.)) **80a:47004** 47A10 (46M10)  
★Calculus functional analitic multidimensional. (Romanian) [Multidimensional analytic functional calculus] With an English summary. *Editura Academiei Republicii*

- Socialiste România, Bucharest, 1979. 278 pp. (W. Żelazko) 80i:47027 47A60 (46H30, 46J99, 47A10)*
- Analytic functional calculus and Martinelli's formula. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976), pp. 693-701, Lecture Notes in Math., 743, Springer, Berlin, 1979. (Robin Harte) 80m:47013 47A60 (32A25)*
- The extension of a spectral distribution. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.) 23(71) (1979), no. 2, 209-213. (Chandler Davis) 80g:47041 47B40 (46F99)*
- Vasil'ev, A. A. The necessary conditions for a minimum in nonlinear approximation problems. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom. 1978, vyp. 4, 7-10, 149. (Author's summary) 80j:49031 49B99*
- Vasil'ev, A. I. In a linear metric space, the Čebyšev line is not necessarily approximately compact. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 69-70, "Nauka", Moscow, 1977. (Editors) 80m:41024 41A65*
- Vasil'ev, F. P. The convergence of a difference method for the solution of the time-optimality problem. (Russian) *Mathematical models and numerical methods (Papers, Fifth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975), pp. 93-101, Banach Center Publ., 3, PWN, Warsaw, 1978. (G. D. Maistrovskii) 80k:65059 65K10 (49D25)*
- (with Tihonov, A. N.) Methods for the solution of ill-posed extremal problems. (Russian) *Mathematical models and numerical methods (Papers, Fifth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975), pp. 297-342, Banach Center Publ., 3, PWN, Warsaw, 1978. (A. I. Šchiop) 80k:65071 65J05 (90C99)*
- The loaded functional method. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet. 1978, no. 3, 24-32. (Ja. I. Al'ber) 80k:65090 65K10 (49D37)*
- The tangent method. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz. 18 (1978), no. 4, 1060-1061, 1072. (B. T. Poljak) 80k:65141 65K10*
- (with Voronov, M. A.; Litvinova, O. A.) Optimal control of the thermal self-interaction process. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz. 19 (1979), no. 4, 1053-1058, 1085. (Authors' summary) 80g:93047 93C22*
- Vasil'ev, Ju. P. An algorithm for the computer construction of automorphisms and the solution of the question of the isomorphism of finite groups. (Russian. English summary) *Kibernetika (Kiev) 1978, no. 5, 151-152. (U. Schoenwaelder) 80c:20002 20-04*
- Vasil'ev, L. V. (with Dem'janov, V. F.) The relaxation method of a generalized gradient. (Russian) *Optimizacija No. 19(36) (1977), 48-52, 154. (Authors' summary) 80c:49028 49D07 (93C99)*
- (with Tarasov, V. N.) A method for solving minimax problems. (Russian) *Optimizacija No. 19(36) (1977), 53-57, 154. (Jürgen Guddat) 80g:65077 65K10 (90C99)*
- (with Dem'janov, V. F.; Lisina, S. A.) Minimization of a convex function by means of  $\epsilon$ -subgradients. (Russian) *Control of dynamical systems (Russian), pp. 3-22, 310, Leningrad. Univ., Leningrad, 1978. (Authors' summary) 80k:49021 49D07 (93C99)*
- Vasil'ev, M. A. (with Fradkin, E. S.) Minimal set of auxiliary fields in SO(2)-extended supergravity. *Phys. Lett. B 85 (1979), no. 1, 47-51. (From the text) 80d:83059 83C99 (22E70)*
- Vasil'ev, M. G. (with Juferev, V. S.) A bi-cubic spline interpolation in polar coordinates. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz. 18 (1978), no. 6, 1600-1602, 1631. (Gheorghe Coman) 80k:65017 65D07*
- Vasil'ev, M. M. Determination of the flow field in a region adjacent to a streamlined body at small Reynolds number. *Prikl. Mat. Meh. 41 (1977), no. 6, 1072-1078 (Russian); translated as J. Appl. Math. Mech. 41 (1977), no. 6, 1090-1096 (1979). (Author's summary) 80i:76019 76D30 (35Q10)*
- Two-dimensional steady-state flow of a viscous fluid around a cylinder with a small Reynolds number. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 146 (1979), 16 pp. (Author's summary) 80m:76034 76D05*
- Vasil'ev, N. B. Bernoulli and Markov stationary measures in discrete local interactions. *Locally interacting systems and their application in biology (Proc. School-Sem. on Markov Interaction Processes in Biology, Pushchino, 1976), pp. 99-112, Lecture Notes in Math., 653, Springer, Berlin, 1978. (Richard Holley) 80k:60133 60K35 (82A15)*
- Vasil'ev, N. I. (with Klokova, J.) ★ Основы теории краевых задач обыкновенных дифференциальных уравнений. (Russian) [Foundations of the theory of boundary value problems in ordinary differential equations] "Zinatne", Riga, 1978. 183 pp. (loose errata). (I. Kiguradze) 80i:34015 34B10 (34B15)
- Vasil'ev, N. N. Determining singular points of the function of distance between points of Keplerian orbits. (Russian. English summary) *Bull. Inst. Teoret. Astronom. 14 (1978), no. 5(158), 266-268. (Author's summary) 80c:70015 70F15 (65L99)*
- Vasil'ev, O. V. A problem of optimal control of a process with distributed parameters and controllable boundary conditions. (Russian) *Differential and integral equations, No. 4 (Russian), pp. 82-100, 314-315, Irkutsk. Gos. Univ., Irkutsk, 1976. (Author's summary) 80j:49020 49B22 (93C20)*
- Vasil'ev, R. K. Convergence of isotonic operators to the identity operator. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 70-77, "Nauka", Moscow, 1977. (S. Kutateladze) 80c:41009 41A35 (47B55)*
- Equivalence of convergence conditions for isotone and positive additive operators. (Russian) *Trudy Moskov. Mat. Obšč. 39 (1979), 213-234, 237. (S. Kutateladze) 80k:41011 41A36 (47B55)*
- Vasil'ev, S. N. (with Matrosov, V. M.) Comparison principle for automatic derivation of theorems. I. *Izv. Akad. Nauk SSSR Tehn. Kibernet. 1978, no. 2, 60-69, 220 (Russian); translated as Engng. Cybernetics 16 (1978), no. 2, 39-49 (1979). (Authors' summary) 80c:68067 68G15*
- (with Matrosov, V. M.) A comparison principle for theorem deducing. II. *Izv. Akad. Nauk SSSR Tehn. Kibernet. 1978, no. 4, 40-49 (Russian); translated as Engng. Cybernetics 16 (1978), no. 4, 32-40 (1979). (Authors' introduction) 80j:68078 68G15 (93A10)*
- (with Matrosov, V. M.; Karatuev, V. G.; Novikov, M. A.; Sumenkov, E. A.; Jadykin, S. A.) Machine deduction of theorems on dynamic properties with vector functions of Lyapunov. *Kibernetika (Kiev) 1979, no. 2, 27-36 (Russian); translated as Cybernetics 15 (1979), no. 2, 184-194. (Authors' summary) 80m:68082 68G15*
- Vasil'ev, V. A. Polynomial cores of cooperative games. (Russian) *Optimizacija No. 21(38) (1978), 5-29, 178. (O. N. Bondareva) 80i:90115 90D12*
- Support function of a convex cooperative game. (Russian) *Optimizacija No. 21(38) (1978), 30-35, 178. (O. N. Bondareva) 80h:90173 90D12*
- Vasil'ev, V. G. Derived length of uniform products of cyclic groups. (Russian) *Algebra i Logika 17 (1978), no. 3, 260-266, 357. (B. Hartley) 80g:20034 20D15*
- A necessary condition for existence of a special solution of an integral equation of the first kind that satisfies a given constraint. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz. 18 (1978), no. 6, 1603-1604, 1632. (A. S. Silbergleit) 80d:45001 45B05*
- Vasil'ev, V. V. (with Sobolevskii, P. E.) An  $\epsilon$ -approximation of Navier-Stokes equations. (Russian) *Čisl. Metody Meh. Sploin. Sredy 9 (1978), no. 5 Matematičeskoe Modelirovanie, 115-139. (L. Cattabriga) 80m:35063 35Q10*
- Coercive solvability of abstract parabolic equations with a constant operator. (Russian) *Differencial'nye Uravnenija 14 (1978), no. 8, 1507-1510, 1534. (Angelo Favini) 80d:34088 34G10*
- See also *Differential and integral equations, 80i:00004*
- Vasil'eva, A. B. The development of the small parameter method. (Russian) *Problemy v matematicheskoy i numericheskoy matematike (Russian), pp. 70-81, 324, "Nauka", Moscow, 1977. (J. S. Joel) 80g:34057 34E15 (01A65)*
- (with Butuzov, V. F.) ★ Сингулярно возмущенные уравнения в критических случаях. (Russian) [Singularly perturbed equations in critical cases] *Moskov. Gos. Univ., Moscow, 1978. 106 pp. (Frederick A. Howes) 80b:34070 34E15 (45J05, 45M99)*
- Vasil'eva, G. V. On the Dirichlet problem for a multidimensional analogue of the A. V. Biczade system. (Russian) *Dokl. Akad. Nauk SSSR 243 (1978), no. 4, 833-834. (V. V. Ivanov) 80h:35052 35J55*
- On the Dirichlet problem for a multidimensional elliptic system. (Russian) *Differencial'nye Uravnenija 15 (1979), no. 2, 345-347, 382. (V. S. Rabinovich) 80g:35054 35J55*
- Vasil'eva, M. V. (with Efimov, N. V.; Račevskii, P. K.) Grigorii Borisovič Gurevič (on the occasion of his eightieth birthday). (Russian) *Uspehi Mat. Nauk 34 (1979), no. 2(206), 241-242. (Editors) 80c:01019 01A70*
- Vasil'ev, N. D. (with Ladis, N. N.) Integrability of Pfaff's equations in  $CP^n$ . (Russian) *Differencial'nye Uravnenija 15 (1979), no. 4, 732-733, 766. (V. Oproiu) 80i:58006 58A17 (34A20)*
- Vasil'evskii, N. L. (with Truhil'o, R.) On  $\Phi_2$ -operators in matrix algebras of operators. (Russian) *Dokl. Akad. Nauk SSSR 245 (1979), no. 6, 1289-1292. (S. G. Gindikin) 80k:47049 47D30*
- Vasil'ev, M. A. See Vasil'ev, M. A.
- Vasilyev, N. B. See Vasil'ev, N. B.
- Vasil'yev, S. N. See Vasil'ev, S. N.
- Vasin, V. P. A topology in the theory of linear systems of differential equations. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst. No. 357 (1978), 20-22. (Tadeusz Dłotko) 80m:34048 34D05*
- Vasin, V. V. Regularization of the problem of calculating the values of an unbounded positive operator. (Russian) *Trudy Inst. Mat. i Meh. Ural. Nauch. Centr Akad. Nauk SSSR No. 23 Metody Regularizatsii Neustoičivyykh Zadach (1976), 9-19, 62. (Author's summary) 80k:47017 47A50 (65J10)*
- (with Ivanov, V. K.; Tanana, V. P.) ★ Теория линейных некорректных задач и ее приложения. (Russian) [Theory of linear ill-posed problems and its applications] "Nauka", Moscow, 1978. 206 pp. (A. V. Džiskariani) 80i:65062 65J10 (47A50)
- Stable approximation of infinite-dimensional problems of linear and convex programming. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika 1978, no. 11(198), 23-33. (Ja. I. Al'ber) 80i:90003 90C05 (90C25)*
- Discrete convergence and finite-dimensional approximation of regularizing algorithms. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz. 19 (1979), no. 1, 11-21, 267. (S. Burýšek) 80g:47014 47A50 (65J05)*
- Vasishtha, S. K. (with Goyal, S. P.) On expansions of the  $H$ -function of two variables. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika 21 (1978), no. 2, 111-122. (S. D. Bajpai) 80f:33009 33A35*
- (with Goyal, S. P.) Unified expansion formula for the  $H$ -function of two variables. *Acta Cienc. Indica 5 (1979), no. 3, 145-154. (Authors' introduction) 80g:33005 33A30*
- Vasil, Angela (with Groze, Victoria; Orbán, B.) Characterisation of the  $S$ -groups. *Papers from the National Colloquium on Geometry and Topology (Univ. Timișoara, Timișoara, 1977), pp. 237-242, Univ. Timișoara, Timișoara, 1977. (Uno Kaljulaid) 80a:20085 20M30 (08A99)*
- (with Groze, Victoria) A system of axioms for the 4-dimensional projective space. *Mathematica (Cluj) 19(42) (1977), no. 1, 63-66 (1978). (Seymour Schuster) 80b:51002 51A05*
- Vasil, Mircea Sur l'équation de dispersion d'un modèle de plasma composé. I. (Romanian summary) *Studia Univ. Babeș-Bolyai Ser. Phys. 24 (1979), no. 1, 54-58. (From the introduction) 80h:82031 82A45 (85A15)*
- Vasilev, V. I. Stability of stationary vortices. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst. No. 357 (1978), 23-25. 80i:76017 76E99*
- Vasjunin, V. I. The construction of the B. Szökefalvi-Nagy and C. Foias functional model. (Russian. English summary) *Investigations on linear operators and the theory of functions, VIII. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 73 (1977), 16-23, 229 (1978). (From the summary) 80d:47017 47A45*
- Unconditionally convergent spectral decompositions and interpolation problems. (Russian) *Spectral theory of functions and operators. Trudy Mat. Inst. Steklov. 130 (1978), 5-49, 223. (D. Sarason) 80b:47041 47B37 (30D50, 47A15)*
- Vaskovjak, M. A. A qualitative study of the evolution of orbits in a bounded circular doubly averaged three-body problem. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 106 (1979), 32 pp. (Author's summary) 80k:70012 70F07*
- Vasquez, A. T. (with Charlap, L. S.) Multiplication of integral representations of some dihedral groups. *J. Pure Appl. Algebra 14 (1979), no. 3, 233-252. (Ken-Ichi Tahara) 80g:20009 20C10*
- Vasseur, C. (with Postaire, J.-G.) Convexité des fonctions de densité: application à la détection des modes en reconnaissance des formes. (English summary) *RAIRO*



- Automat.* 13 (1979), no. 2, 171-188. (Authors' summary) **80c:68228** 68G10
- Vassiliou, Elefthios On the infinite-dimensional holonomy theorem. *Bull. Soc. Roy. Sci. Liège* 47 (1978), no. 9-10, 223-228. (J. Vanžura) **80m:58006** 58B20 (53C05)
- Vassileva, H. L. One-dimensional perturbations. *Indian J. Pure Appl. Math.* 10 (1979), no. 6, 745-751. (R. M. Džabar-Zade) **80g:47023** 47A70
- Vassileva, R. A log log law for Abel's sum. *Acta Math. Acad. Sci. Hungar.* 32 (1978), no. 3-4, 205-215. (J. L. Mijneer) **80a:60037** 60F15
- A logarithmic law for sums of stable random variables. *Sankhyā Ser. A* 40 (1978), no. 2, 174-184. (J. L. Mijneer) **80j:60041** 60F15
- Vasudevan, R. (with Vittal, P. R.; Vijayakumar, A.) On a first passage time problem. *Proceedings of the Conference on Mathematical Analysis and its Applications (Inst. Engrs., Mysore, 1977)*, pp. M82-M91, *Mathematics Rep.*, 91, Inst. Math. Sci., Madras, 1978. (Authors' summary) **80b:60108** 60J75
- Angular momentum coherent states. *Proceedings of the Conference on Structure of Matter—Mathematics and Phenomenology (Inst. Engrs., Mysore, 1978)*, pp. 1-30, *Mathematics Rep.*, 93, Inst. Math. Sci., Madras, 1978. (From the introduction) **80i:81036** 81C40
- (with Jagannathan, R.) Representations of a para-Bose algebra using only a single Bose field. *J. Math. Phys.* 20 (1979), no. 3, 390-392. (From the introduction) **80i:81039a** 81D99 (17B70, 22E65, 46L40)
- (with Jagannathan, R.) Erratum: "Representations of a para-Bose algebra using only a single Bose field" [*J. Math. Phys.* 20 (1979), no. 3, 390-392; MR **80i:81039a**]. *J. Math. Phys.* 20 (1979), no. 11, 2372. (From the text) **80i:81039b** 81D99 (17B70)
- Vatsala, A. S. (with Lakshminathan, V.; Leela, S.) Reaction-diffusion equations in abstract cones. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 219-243, *Academic Press*, New York, 1979. (Charles C. Conley) **80f:35065** 35K55
- (with Lakshminathan, V.; Vaughn, Randy) Existence and comparison results for a class of Volterra integral equations of Sobolev type. *J. Integral Equations* 1 (1979), no. 3, 183-191. (T. L. Herdman) **80j:45003** 45D05
- Vat'ian, A. O. Contact problem with adhesion for an anisotropic layer. *Prikl. Mat. Meh.* 41 (1977), no. 4, 727-734 (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 4, 745-752 (1978). (Author's summary) **80a:73013** 73C35 (00A89)
- The action of a rigid punch on an orthotropic layer. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* 31 (1978), no. 4, 31-42, 100. (T. G. Gegelia) **80f:73067** 73T05 (45B05)
- Vat'ula, V. A. A limit theorem for a critical multitype Bellman-Harris branching process with infinite second moments. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 4, 807-818. (E. Seneta) **80b:60115** 60J80
- Discrete limit distributions of the number of particles in a multitype Bellman-Harris branching process. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 3, 503-514. (E. Seneta) **80j:60112** 60J80
- Vandine, Renée Stabilité géométrique et régularisation dans les espaces intégreaux de type Orlicz à paramètre et à variable vectorielle; critère de compacité de Kolmogorov-Riesz. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 16, A1057-A1060. (Author's summary) **80c:46041** 46E30
- Vaughan, David (with Heine, Hans P.) Interpolation on Orlicz spaces involving weights. *J. Math. Anal. Appl.* 64 (1978), no. 1, 79-95. (A. Kufner) **80f:46028b** 46E30 (46M35)
- Vaughan, J. E. Discrete sequences of points. *Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978)*, I. *Topology Proc.* 3 (1978), no. 1, 237-265 (1979). (R. Hodel) **80k:54046** 54D99
- A countably compact, first countable, nonnormal  $T_2$ -space. *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 339-342. (Michael L. Wage) **80c:54022** 54D15
- Vaughan, N. H. (with Yeagy, R. W.) Factoring ideals into semiprime ideals. *Canad. J. Math.* 30 (1978), no. 6, 1313-1318. (Norman Egert) **80a:13023** 13G05 (13A15)
- Vaughan, R. C. (with Erdős, Paul; Saffari, B.) On the asymptotic density of sets of integers. II. *J. London Math. Soc.* (2) 19 (1979), no. 1, 17-20. (J. B. Kelly) **80i:10074** 10L02
- Vaughan, R. N. Class behaviour and the distribution of wealth. *Rev. Econom. Stud.* 46 (1979), no. 3, 447-465. (From the introduction) **80b:90049** 90A16
- Vaughan-Lee, M. R. (with Oates-Williams, Sheila) Variables that make one Cross. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 3, 368-382. (V. A. Aramov) **80c:80006** 08B15 (17A30)
- (with Doyle, John Kevin; Mandelberg, K. I.) On solvability of groups of exponent four. *J. London Math. Soc.* (2) 18 (1978), no. 2, 234-242. (N. D. Gupta) **80b:20058** 20F50
- Laws in finite loops. *Algebra Universalis* 9 (1979), no. 3, 269-280. (Petr Némec) **80b:20059** 20N05
- Vaughn, Randy (with Lakshminathan, V.; Vatsala, A. S.) Existence and comparison results for a class of Volterra integral equations of Sobolev type. *J. Integral Equations* 1 (1979), no. 3, 183-191. (T. L. Herdman) **80j:45003** 45D05
- (with Lakshminathan, V.) Reaction-diffusion inequalities in cones. *J. Math. Anal. Appl.* 70 (1979), no. 1, 1-9. (C. V. Pao) **80j:35049** 35K20 (35B05, 35B99)
- Vaugon, Michel Équations différentielles non linéaires sur les variétés riemanniennes compactes. (English summary) *Bull. Sci. Math.* (2) 103 (1979), no. 3, 263-272. (J. L. Kazdan) **80i:35081** 35J60 (58G15)
- Vautherin, D. (with Grammaticos, B.) Hartree-Fock calculations of crystalline structure of nuclear matter with hard-core potentials. *Phys. Rev. C* (3) 20 (1979), no. 2, 859-860. (Authors' summary) **80f:82044** 82A60
- Vauthier, Jacques Théorèmes d'annulation et de finitude d'espaces de 1-formes harmoniques sur une variété de Riemann ouverte. (English summary) *Bull. Sci. Math.* (2) 103 (1979), no. 2, 129-177. (Mark Pinsky) **80j:58069** 58G32 (32L20, 58G11, 60J60)
- Vavilov, N. A. Parabolic subgroups of Chevalley groups over a semilocal ring. (Russian) *Rings and linear groups. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 75 (1978), 43-58, 195. (S. I. Gelfand) **80a:20051** 20G25
- Description of the subgroups, containing the group of diagonal matrices, of the general linear group over a semilocal field. (Russian) *Algebraic numbers and finite groups. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 86 (1979), 30-33, 188-189. (J. L. Brenner) **80b:20066** 20G35
- Nilpotent self-normalizing subgroups of the general linear group over a finite field. (Russian) *Algebraic numbers and finite groups. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 86 (1979), 34-39, 189. (J. L. Brenner) **80g:20058** 20G40
- Casas-Vazquez, J. See Casas-Vazquez, J.
- Vazquez, Luis Classical nonlinear scalar fields. *Hadronic J.* 2 (1979), no. 4, 917-954. (Author's summary) **80k:81140** 81E99
- Vázquez, R. (with Salicrú López, Graciela) Connection and disconnection. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 326-344, *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (V. Kannan) **80m:54015** 54B30 (18B99)
- (with Herrlich, Horst; Salicrú López, Graciela) Dispersed factorization structures. *Canad. J. Math.* 31 (1979), no. 5, 1059-1071. (H. Gonsior) **80j:18006** 18A99 (54B30)
- V. Borzeshkowskii, H. See v. Borzeshkowskii, H.
- Vdovina, S. I. (with Vaplyukin, V. M.; Sabae, E. F.) Stability in the large of a class of control systems. *Automat. i Telemekh.* 40 (1979), no. 7, 5-12 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 7, part 1, 949-955. (Authors' summary) **80k:93038** 93D05
- Vdovina, E. V. A second inverse problem of the qualitative theory of differential equations. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 10, 1760-1764, 1915. (M. Ráb) **80c:34052** 34C35 (34C05)
- Veber, V. L. Statistical characteristics of images obtained in observation through a rough surface separating media with different indices of refraction. (Russian) *Izv. Vys. Uchebn. Zaved. Radiofizika* 22 (1979), no. 8, 989-1001. (Author's summary) **80f:78062** 78A05
- di Vecchia, P. Recent developments in dual string models. *Many degrees of freedom in particle theory (Proc. Internat. Summer Inst. Theoret. Phys., Univ. Bielefeld, Bielefeld, 1976)*, pp. 493-531, *NATO Adv. Study Inst. Ser., Ser. B: Physics*, 31, Plenum, New York, 1978. (M. Martinis) **80m:81048** 81E10
- Vechtom, E. M. An isomorphism of the multiplicative semigroups of algebras of continuous functions with compact support. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 5(203), 175-176. (Bridget B. Baird) **80d:54013** 54C35 (20M20)
- Ved', Ju. A. The influence of integral perturbations on the power asymptotic behavior of the solutions of differential equations. (Russian) *Izv. Akad. Nauk Kirgiz. SSR* 1978, no. 4, 42-49. (Z. Schuss) **80a:45027** 45M05 (34D05)
- Asymptotic estimates for the solutions of nonlinear integro-differential equations of Volterra type. (Russian) *Izv. Akad. Nauk Kirgiz. SSR* 1979, no. 1, 9-16, 101. (M. Tvrdý) **80k:45014** 45J05
- dalla Vedova, Elvira Tognoli See Dalla Vedova, Elvira Tognoli
- Veech, William A. Interval exchange transformations. *J. Analyse Math.* 33 (1978), 222-272. (Michael Keane) **80c:28034** 28D99 (54H20)
- van Veen, S. C. Thomas Jan Stieltjes (1856-1894). *Nieuw Arch. Wisk.* (3) 26 (1978), no. 1, 84-95. (E. Grosswald) **80f:01022** 01A70 (10-03)
- See also Bottena, O., **80a:01029**
- Vega, Carlos See Pontrjagin, L. S., **80c:22091**
- de Vega, H. J. (with Gervais, Jean-Loup; Sakita, B.) Real-time approach to instanton phenomena. I. Multidimensional potentials with degenerate absolute minima. *Nuclear Phys. B* 139 (1978), no. 1-2, 20-36. (Authors' summary) **80c:81037a** 81C99 (35C99, 81E99)
- (with Gervais, Jean-Loup; Sakita, B.) Real-time approach to instanton phenomena. II. Multidimensional potential with continuous symmetry. *Nuclear Phys. B* 143 (1978), no. 1, 125-147. (Authors' summary) **80c:81037b** 81C99 (35C99, 81E99)
- Fermions and vortex solutions in abelian and non-abelian gauge theories. *Phys. Rev. D* (3) 18 (1978), no. 8, 2932-2944. (K. T. Mahanthappa) **80c:81089** 81E15
- Veic, V. L. (with Kočura, A. E.) A method for the determination of characteristic spectra of composite elastic systems. (Russian) *Prikl. Meh.* 14 (1978), no. 7, 88-96, 142. (J. L. Nowinski) **80c:73026** 73D99
- Veichik, A. I. (with Žmud', E. M.) Connectedness of a finite group and Zassenhaus groups. (Russian. Georgian and English summaries) *Sakharth. SSR Mecn. Akad. Moambe* 90 (1978), no. 2, 277-279. (S. S. Levičenko) **80c:20034** 20D60
- Veldinger, L. On the order of convergence of finite element approximations to solutions of nonselfadjoint elliptic boundary value problems. *Period. Math. Hungar.* 10 (1979), no. 2-3, 207-215. (William W. Hager) **80b:65009** 65N30
- belirio-da-Veiga, Hugo See Belirio-da-Veiga, Hugo
- Velnott, Arthur F., Jr. (with Dantzig, George B.) Discovering hidden totally Leontief substitution systems. *Math. Oper. Res.* 3 (1978), no. 2, 102-103. (Georg Bol) **80c:90094** 90C05
- Vejrova, Otto (with Strákraba, Ivan) Correction: "Periodic solutions to abstract differential equations" [*Czechoslovak Math. J.* 23(98) (1973), 635-669]. *Czechoslovak Math. J.* 27(102) (1977), no. 3, 511-513. (Editors) **80c:34062** 34G20 (34C25)
- (with Schwabik, Stefan; Tvrdý, Milan) ★ Differential and integral equations. Boundary value problems and adjoints. D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1979. 248 pp. ISBN 90-277-0802-9 (A. M. Krall) **80b:34003** 34-02 (34Bxx, 45-02)
- Veksel, A. I. (with Koldunov, A. V.) Sequential majorizability in vector lattices. (Russian) *Modern algebra*, No. 6 (Russian), pp. 66-85, *Leningrad. Gos. Ped. Inst., Leningrad*, 1977. (L. Skula) **80c:54019** 54C40 (06F25, 54H12)
- P-spaces. (Russian) *Izv. Vys. Uchebn. Zaved. Matematika* 1978, no. 5(192), 9-18. (Stojan Nedev) **80b:54032** 54E18 (54D40)
- (with Buhvalov, A. V.; Lozanovskii, G. Ja.) Banach lattices — some Banach aspects of the theory. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 2(206), 137-183. (G. J. O. Jameson) **80f:46019** 46B30
- Veksel, V. E. (with Babeiko, V. A.) Certain systems of integral equations of the first kind that are encountered in elasticity theory and in mathematical physics. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* 31 (1978), no. 5, 20-30, 92. (Editors) **80b:45008** 45F05
- Vekua, I. N. Some new applications of generalized Cauchy-Riemann equations in the theory of shells. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 62-69, *Moskoo. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (S. Drobót) **80c:73052** 73K15 (30G20, 35J45)
- See also Bogoljubov, N. N.; et al., **80a:01028**
- Vekua, N. P. A system of nonlinear differential equations with a small parameter

- multiplying the derivatives. (Georgian. Russian summary) Questions of the theory of functions and mathematical physics. *Sakharth. SSR Mecn. Akad. Math. Inst. Šrom.* 58 (1978), 73–80. (T. A. Ebanoidze) **80a:34069** 34D15  
 An inhomogeneous Riemann-Hilbert boundary value problem for systems of analytic functions. (Russian. Georgian and English summaries) *Sakharth. SSR Mecn. Akad. Moambe* 89 (1978), no. 2, 273–276. (V. B. Dybin) **80a:30049** 30E25  
 The Riemann-Hilbert value problem for several unknown functions. (Russian. Georgian and English summaries) *Tbiliss. Gos. Univ. Inst. Prikl. Mat. Trudy* 5/6 (1978), 51–67. (N. K. Karapetjan) **80j:30062** 30E25  
**van de Vel, H.** See **Van de Vel, H.**  
**van de Vel, M.** (with van Mill, Jan) Convexity preserving mappings in subbase convexity theory. *Nederl. Akad. Wetensch. Proc. Ser. A* 40 (1978), no. 1, 76–90. (John Cantwell) **80f:52014** 52A99 (54C10)  
 Superextensions and Lefschetz fixed-point structures. *Fund. Math.* 104 (1979), no. 1, 27–42. (Richard Wilson) **80i:54033** 54D99 (54H25)  
**Velarde, M. G.** (with Bonilla, L. L.) Singular perturbations approach to the limit cycle and global patterns in a nonlinear diffusion-reaction problem with autocatalysis and saturation law. *J. Math. Phys.* 20 (1979), no. 12, 2692–2703. (Authors' summary) **80m:35010** 35B32 (80A30)  
**dias Velasco, Flavio R.** See **Dias Velasco, Flavio R.**  
**Velček, C. I.** (with Enikova, M. M.; Karlukovski, V. I.) Exact finite-energy solutions in non-linear  $SU(2) \times SU(2)$  and  $SU(2) \times SU(1, 1)$  chiral theories. *Nuclear Phys. B* 151 (1979), no. 1, 172–180. (Authors' summary) **80c:35006** 35A30 (35C05, 58G35)  
**Velthorst, M.** (with van der Meulen, S. G.) ★TORRIX. A programming system for operations on vectors and matrices over arbitrary fields and of variable size. Vol. 1. Mathematical Centre Tracts, 86. *Mathematisch Centrum, Amsterdam*, 1978, vi + 231 pp. ISBN 90-6196-152-1 (From the introduction) **80b:15003** 15-04 (68B05)  
**Velvet, V. A.** (with Konstantinov, M. M.) Globally bounded and almost periodic solutions of a system of differential equations, implicit in the derivative. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Priložna Mat.* 13 (1977), no. 4, 93–100 (1978). (Authors' summary) **80a:34063** 34C27 (34C11)  
**Vélez, William Ylles** (with Norris, Michael J.) A characterization of the splitting of inseparable algebraic extensions. *Amer. Math. Monthly* 85 (1978), no. 5, 338–341. (G. H. Wenzel) **80a:12018** 12F05  
 Prime ideal decomposition in  $F(\mu^{1/p})$ . *Pacific J. Math.* 75 (1978), no. 2, 589–600. (K. Masuda) **80a:12009** 12A40  
 (with Gay, David A.) On the degree of the splitting field of an irreducible binomial. *Pacific J. Math.* 78 (1978), no. 1, 117–120. (D. J. Lewis) **80c:12026** 12E10  
**Veličenko, V. V.** Minimal interpretation of the least action principle. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 3, 553–556. (M. Junusov) **80m:49035** 49H05 (49A05, 70H25)  
**Vellikka, V. N.** Connections that are induced by framings of a hypersurface  $V_{n-1}$  in the Euclidean space  $E_n$ . (Russian) *Kaliningrad. Gos. Univ. Differentsial' naja Geom. Mnogooobraz. Figur* No. 9 (1978), 40–44, 137. (Julian Kuklewski) **80b:53022** 53B30  
**Veller, G. P.** (with Babaez, D. A.; Mamedov, K. Š.) A priori determination of optimal values of unknowns in discrete programming problems. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 2, 519–523, 559. (Authors' summary) **80c:90102** 90C10  
**Vellik, A. P.** Asymptotic approach to the transfer of boundary conditions for systems of linear ordinary differential equations. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 4, 507–512, 571. (Labor Malina) **80d:34019** 34B05 (65L10)  
**Velling, E. J. M.** (with Grasman, J.; Jansen, M. J. W.) Asymptotic methods for relaxation oscillations. *Differential equations and applications (Proc. Third Scheveningen Conf., Scheveningen, 1977)*, pp. 93–111, *North-Holland Math. Studies*, 31, North-Holland, Amsterdam, 1978. (V. B. Headley) **80m:34053** 34E05 (34A45, 34C25)  
**Vella, Alfred D.** The malnormality of certain subgroups of small cancellation groups. *Math. Z.* 163 (1978), no. 2, 187–189. (Benjamin Fine) **80c:20052** 20F06  
**Vel'minov, P. A.** The uniqueness of the solution of the direct Laval nozzle problem. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 1, 15–17. (Author's introduction) **80i:35167** 35Q20  
**Velo, Giorgio** (with Ginibre, Jean) Existence of solutions and scattering theory for the nonlinear Schrödinger equation. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics (Leipzig, 1977)*, pp. 320–334, Teubner, Leipzig, 1978. (T. Ushijima) **80c:35055** 35P25 (35J10)  
 (with Ginibre, Jean) Équation de Schrödinger non linéaire avec interaction non locale. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 14, A683–A685. (Authors' summary) **80c:35025** 35J10 (35B40)  
 (with Ginibre, Jean) The classical field limit of scattering theory for nonrelativistic many-boson systems. I. *Comm. Math. Phys.* 66 (1979), no. 1, 37–76. (Jean-Claude Guillot) **80b:81069** 81F20 (35P25)  
**Veloso, Paulo A. S.** Characterizing the regular prefix codes and right power-bounded languages. *Inform. Process. Lett.* 9 (1979), no. 1, 5–7. (From the text) **80g:94065** 94B45 (68D45, 68F05)  
 (with Gill, Arthur) Some remarks on multiple-entry finite automata. *J. Comput. System Sci.* 18 (1979), no. 3, 304–306. (Authors' summary) **80c:68155** 68D35  
**Veltman, M.** (with 't Hooft, G.) Scalar one-loop integrals. *Nuclear Phys. B* 153 (1979), no. 3–4, 365–401. (L. O'Riadaigh) **80c:81021** 81C35  
**Vélu, Jacques** Quelques identités entre formes modulaires. *Séminaire Delange-Pisot-Poitou, 19e année (1977/78), Théorie des nombres, Fasc. 1, Exp. No. 1, 6 pp.* *Secrétariat Math., Paris*, 1978. (Editors) **80b:10031** 10D05  
 Courbes elliptiques munies d'un sous-groupe  $Z/nZ \times \mu_n$ . *Bull. Soc. Math. France Mém. No. 57* (1978), 5–152. (Loren D. Olson) **80a:14011** 14G25  
**Velupillai, Kumaraswamy** (with Rustem, B.) On the definition and detection of structural change. *Stochastic control theory and stochastic differential systems (Proc. Workshop, Deutsch. Forschungsgemeinschaft, Univ. Bonn, Bad Honnef, 1979)*, pp. 539–553, *Lecture Notes in Control and Information Sci.*, 16, Springer, Berlin, 1979. (Authors' introduction) **80b:90054** 90A19 (93E20)  
 Some stability properties of Goodwin's growth cycle. *Z. Nationalökonom.* 39 (1979), no. 3–4, 245–257. (From the introduction) **80m:90037** 90A16  
**Venuganti, R. R.** On the feasibility of scheduling lot sizes for two products on one machine. *Management Sci.* 24 (1978), no. 15, 1668–1673. (Author's summary) **80c:90088** 90B35  
**Vemuri, V.** ★Modeling of complex systems. An introduction. *Operations Research and Industrial Engineering, Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London*, 1978, xvi + 448 pp. ISBN 0-12-716550-9 (B. P. Zeigler) **80c:00001b** 00A05 (00A06, 68J10, 92-01)  
 (with Raefsky, A.) On a new approach to parameter estimation by the method of sensitivity functions. *Internat. J. Systems Sci.* 10 (1979), no. 4, 395–407. (J. O'Reilly) **80c:93037** 93B30  
 (with Raefsky, A.) On a method of solving sensitive boundary value problems. *J. Franklin Inst.* 307 (1979), no. 4, 217–243. (Authors' summary) **80b:93124** 93D05 (65L10)  
**van de Ven, Antonius** See **Van de Ven, Antonius**  
**Venables, W.** (with James, A. T.) Interval estimates for variance components. (French summary) *Canad. J. Statist.* 6 (1978), no. 1, 103–111. (J. Kleffe) **80g:62022** 62F25  
**Vencov, A. B.** The Selberg trace formula for a Hecke operator that is generated by an involution, and eigenvalues of the Laplace-Beltrami operator on the fundamental domain of the modular group  $PSL(2, Z)$ . (Russian) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* 42 (1978), no. 3, 484–499. (Larry J. Goldstein) **80g:10026** 10D15 (58G25)  
**Venec, V. I.** (with Rybašov, M. V.) Quasioptimal control of dynamic process statics. *Automat. i Telemekh.* 40 (1979), no. 7, 13–19. (Russian. English summary; translated as *Automat. Remote Control* 40 (1979), no. 7, part 1, 955–960. (Authors' summary) **80h:93043** 93D15 (49D99, 93C99)  
**Venema, Gerard A.** Approximating disks in 4-space. *Michigan Math. J.* 25 (1978), no. 1, 19–27. (James W. Cannon) **80d:57011** 57Q55  
 (with Rushing, T. B.) A weak flattening criterion for compacta in 4-space. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 649–654, Academic Press, New York, 1979. (John Hempel) **80h:57022** 57N25  
 (with Matsumoto, Yukio) Failure of the Dehn lemma on contractible 4-manifolds. *Invent. Math.* 51 (1979), no. 3, 205–218. (R. C. Kirby) **80a:57013** 57M35 (57N15)  
**Vénérini, M.** (with Baranger, M.) An adiabatic time-dependent Hartree-Fock theory of collective motion in finite systems. *Ann. Physics* 114 (1978), no. 1–2, 123–200. (R. K. Pathria) **80a:81054** 81D25 (35L99)  
**Venets, V. I.** See **Venec, V. I.**  
**Venezia, Itzhak** A decision-theoretic approach to the aggregation problem at the pre-data-collection stage. *J. Amer. Statist. Assoc.* 73 (1978), no. 363, 552–558. (Jerry A. Hausman) **80b:62006** 62-07  
 Optimal insurance premium rates when the distribution of claims is unknown. *J. Appl. Probab.* 16 (1979), no. 3, 678–684. (H. L. Seal) **80b:62074** 62P05  
 (with Tapiero, Charles S.) A mean variance approach to the optimal machine maintenance and replacement problem. *J. Oper. Res. Soc.* 30 (1979), no. 5, 457–466. (Masanori Kodama) **80h:90079** 90B25  
 Optimal aggregation of input-output coefficients—a decision theoretic approach. *Comm. Statist. A—Theory Methods* 9 (1980), no. 5, 557–570. (Author's summary) **80m:90024** 90A11  
**Veneziano, Daniele** Envelopes of vector random processes and their crossing rates. *Am. Probab.* 7 (1979), no. 1, 62–74. (A. M. Hasofer) **80d:60051** 60G17  
**Veneziano, G.** (with Konishi, K.; Ukwaka, A.) Jet calculus: a simple algorithm for resolving QCD jets. *Nuclear Phys. B* 157 (1979), no. 1, 45–107. (Martin B. Einhorn) **80g:81086** 81G45  
**Vengerov, V. N.** (with Nikitin, A. S.) Heuristic algorithm for cutting weighted graphs. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 5 (1979), no. 5, 26–30, 138–139. (Authors' summary) **80m:68060** 68E10  
**Venkateshchalam, C. V.** (with Sampathkumar, E.; Neeralagi, Prabha S.) A generalization of the chromatic and line chromatic numbers of a graph. *J. Karnatak Univ. Sci.* 22 (1977), 44–49. (M. Plantholt) **80j:05064** 05C15  
**Venkateshchalam, M.** (with Rudraiah, N.) Propagation of hydromagnetic waves in a perfectly conducting non-isothermal atmosphere in the presence of rotation and a variable magnetic field. *J. Fluid Mech.* 89 (1978), no. 4, 785–792. (Authors' summary) **80d:86011** 86A35 (78A40)  
**Venkataraman, S.** On the wave function for a system of particles. *Proceedings of the Sixteenth Anniversary Symposium on New Particles—Do They Imply New Physics? (Int. Math. Sci., Madras, 1978), Paper No. 16, 7 pp.* *Matscience Rep.*, 92, Inst. Math. Sci., Madras, 1978. (F. R. Halpern) **80d:81018** 81C03  
**Venketesan, M.** An alternate approach to transitive coupling in ISM. *IEEE Trans. Systems Man Cybernet.* 9 (1979), no. 3, 125–130. (Author's summary) **80b:68120** 68J10  
**Venketesan, P. S.** On right unipotent semigroups. II. *Glasgow Math. J.* 19 (1978), no. 1, 63–68. (John M. Howie) **80b:20071** 20M05  
 Primitive orthodox semigroups. *Semigroup Forum* 17 (1979), no. 4, 365–372. (Ferenc Fenyes) **80b:20101** 20M10  
**Venkatesh, K.** Symmetries of the 6j coefficient. *J. Math. Phys.* 19 (1978), no. 9, 1973–1974. (T. Sasakawa) **80c:81046** 81C99 (33A35)  
**Venkateshan, S. P.** (with Krishna Prasad, K.) Radiative interactions in boundary layers. *J. Fluid Mech.* 90 (1979), no. 1, 33–66. (From the summary) **80b:76025** 76N05 (35B99)  
**Venketeswaran, H.** (with Krishnamurthy, E. V.) Multivariable polynomial processing—applications to interpolation. *Proceedings of the 4th IEEE Symposium on Computer Arithmetic (Santa Monica, Calif., 1978)*, pp. 81–87, IEEE, Long Beach, Calif., 1978. (Authors' summary) **80g:68025** 68B15 (65D07)  
**Venkov, A. B.** (with Vinogradov, A. I.) Asymptotic distribution of the norms of the classes and the spectral characteristics of cusp forms of weight zero for a Fuchsian group. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 6, 1373–1376. (Larry J. Goldstein) **80i:10035** 10D40 (10D45, 10H10)  
 A formula for the Čebyšev psi-function. (Russian) *Mat. Zametki* 23 (1978), no. 4, 497–503. (Larry J. Goldstein) **80i:10053** 10H10 (10D24)  
 (with Skriyanov, M. M.) On the question of H. Weyl's formula in the spectral theory of automorphic functions. (Russian) *Funkcional. Anal. i Priložn.* 13 (1979), no. 1, 67–68. (J. Szmidt) **80i:10036** 10D40 (22E40, 30F35, 58G25)  
**Venkov, B. I.** See **Algebraic numbers and finite groups**, **80c:00005**  
**Venkov, G. I.** On the question of choosing a numerical algorithm for the solution of a Sturm-Liouville problem. (Bulgarian. Russian and English summaries) *Godišnik Visš.*



- Učebn. Zaved. Priložna Mat. 12 (1976), no. 3, 145-152 (1978). (Author's summary) **80c:65172** 65L10 (65L15)
- The identification of stochastic systems as a minimax problem. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Priložna Mat.* 13 (1977), no. 2, 121-128 (1978). (Author's summary) **80c:93129** 93E12
- Venlar, V. See Wipław, Witold
- Ventcel', T. D. Estimates of the solutions of quasilinear parabolic systems. (Russian) *Trudy Sem. Petrovsk. No. 3* (1978), 9-18. (L. Cattabriga) **80d:35083** 35K60
- Venter, J. H. (with de Wet, T.; van Wyk, J. W. J.) The null distributions of some test criteria of multivariate normality. *South African Statist. J.* 13 (1979), no. 2, 153-176. (Authors' summary) **80i:62047** 62H10
- Ventevogel, W. J. (with Falk, H.) Random mapping based on a genetic model. *Phys. A* 95 (1979), no. 2, 191-207. (Susan Wilson) **80b:92027** 92A15
- (with Nijboer, B. R. A.) On the configuration of systems of interacting particle with minimum potential energy per particle. *Phys. A* 98 (1979), no. 1-2, 274-288. (Tuan W. Chen) **80i:81080** 81H05
- Ventre, Aldo G. S. On the maximum genus of some graphs with upper imbeddable subgraphs. *Monatsh. Math.* 86 (1978/79), no. 4, 327-331. (Richard D. Ringeisen) **80i:05047** 05C10
- (with di Nola, A.) On some sequences of fuzzy sets. (French summary) *RAIRO Inform.* 13 (1979), no. 2, 199-204. (Korolien Gilezan) **80b:03076** 03E72
- Ventriglia, F. (with Aiello, A.; Burattini, E.; Massarotti, A.) Towards a general principle of evaluation for approximate algorithms. (French summary) *RAIRO Inform. Théor.* 13 (1979), no. 3, 227-239. (From the summary) **80i:68027** 68C25
- Venturi, A. (with Ferreira, Artur V.; Gigante, G.) A theorem of the Gleason-Kahane-Zelazko type for general topological algebras. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 15 (1978), no. 3, 897-905. (W. Zelazko) **80i:46025** 46H10
- Venturi, G. (with Righi, R.; Zamirarov, V.) A nonabelian gauge theory in a nonlinear gauge. (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 4, 518-528. (Authors' summary) **80d:81092** 81E15 (22E70)
- (with Righi, R.)  $g-2$  in a nonlinear approach to quantum electrodynamics. (Italian and Russian summaries) *Nuovo Cimento A* (11) 54 (1979), no. 4, 495-501. (Authors' summary) **80m:81128** 81L05
- Venturini Zilli, Marina Head recurrent terms in combinatory logic: a generalization of the notion of head normal form. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978)*, pp. 477-493. *Lecture Notes in Comput. Sci.*, 62, Springer, Berlin, 1978. (J. P. Seldin) **80g:03014** 03B40
- Venturino, Marina The first eigenvalue of linear elliptic operators in nonvariational form. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 15 (1978), no. 2, 576-591. (Ja. A. Roitberg) **80a:35095** 35P15
- Venzl, P. On geodesic mapping in Riemannian and pseudo-Riemannian manifolds. *Tensor (N.S.)* 32 (1978), no. 2, 193-198. (B. B. Sinha) **80a:53022** 53B20
- Venzke, Paul A contribution to the theory of finite super-solvable groups. *J. Algebra* 57 (1979), no. 2, 567-579. (Hartmut Laue) **80i:20050** 20F16 (20D20)
- Verardi, Libero Groups which are the product of two solvable subgroups. (Italian. English summary) *Atti Sem. Mat. Fis. Univ. Modena* 26 (1977), no. 2, 215-221 (1979). (A. Scarselli) **80f:20019** 20D10
- Veraverbeke, Noël (with Embrichts, Paul; Goldie, Charles M.) Subexponentiality and infinite divisibility. *Z. Wahrsch. Verw. Gebiete* 49 (1979), no. 3, 335-347. (Lennart Bondesson) **80i:60025** 60E07
- Verbeek, R. (with Weirauch, K.) Data representation and computational complexity. *Theoret. Comput. Sci.* 7 (1978), no. 1, 99-116. (Forbes D. Lewis) **80j:68035** 68C25 (03D15)
- Verbeure, André (with Demoen, Bart) Homogeneous perturbed classical states and equilibrium conditions. *Comm. Math. Phys.* 62 (1978), no. 3, 191-200. (Authors' summary) **80b:82028** 82A30
- (with Demoen, Bart; Vanheuverzwijn, Paul) Energetically stable systems. *J. Math. Phys.* 19 (1978), no. 11, 2256-2259. (Authors' summary) **80c:82014** 82A15
- Characterization of equilibrium states. (French summary) *Algèbres d'opérateurs et leurs applications en physique mathématique (Proc. Colloq., Marseille, 1977)*, pp. 441-450. *Colloques Internat. CNRS*, 274, CNRS, Paris, 1979. (Etang Chen) **80m:82017** 82A15 (49H05)
- (with Pulé, J. V.) The classical limit of quantum dissipative generators. *J. Math. Phys.* 20 (1979), no. 4, 733-735. (H. Wakita) **80d:81026** 81C20 (47D45)
- (with Nandis, J.; Pulé, J. V.) Linear response and relaxation in quantum lattice systems. *J. Statist. Phys.* 21 (1979), no. 3, 279-300. (Francesco Guerra) **80i:82026** 82A15 (47Bxx, 82A67)
- (with Martens, Roger) The equipartition for quantum systems. *Lett. Math. Phys.* 3 (1979), no. 5, 413-418. (Authors' summary) **80i:82025** 82A15
- Verbitskiĭ, I. E. The reduction method for power Toeplitz matrices. (Russian) Operators in Banach spaces. *Mat. Issled.* No. 47 (1978), 3-11, 135. (R. V. Dudučava) **80d:47045** 47B35
- Projection methods for the solution of singular integral equations with piecewise continuous coefficients. (Russian) Operators in Banach spaces. *Mat. Issled.* No. 47 (1978), 12-24, 135-136. (R. V. Dudučava) **80d:47056** 47B38 (45E05, 47G05)
- Verbruggen, H. B. (with Udink ten Kate, A. J.) A least-squares-like gradient method for discrete process identification. *Internat. J. Control* 28 (1978), no. 6, 933-952. (Zbigniew Nahorski) **80c:93130** 93E12
- Verdugue, E. Predictive relativistic mechanics of gravitating masses. (French summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* 28 (1978), no. 4, 379-397. (Author's summary) **80b:83021** 83C35
- Valls Verdejo, Vicente See Valls Verdejo, Vicente
- Verdi, Labella The normal rational curves as set-theoretic complete intersections. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 2, 385-390. (Paolo Maroscia) **80i:14052** 14M10
- Verdier, Jean-Louis (with Marry, Pierre) Quelques problèmes d'intersections en géométrie riemannienne. *J. Differential Geom.* 12 (1977), no. 3, 345-376. (Editors) **80c:57012** 57R20 (32L99, 53C20)
- colin de Verdière, Yves See Colin de Verdière, Yves
- Verde, I. A. ★ Инварианты представлений групп Лоренца и их применение в дуальной модели физики частиц. (Russian) [Invariants of the representations of Lorentz groups and their applications in the dual model of particle physics] "Élm", Baku, 1978. 116 pp. (Wayne J. Holman, III) **80j:81083** 81G20 (22E43, 22E70)
- (with Kerimov, G. A.; Radžabov, B. A.) On the theory of representations of the de Sitter group SO(3, 2). (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 7, 13-16. (Kishore Marathe) **80a:22025** 22E70 (81C40)
- (with Kerimov, G. A.; Radžabov, B. A.) On the theory of Wigner coefficients for the de Sitter group. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 8, 19-21. (Jifi Patera) **80c:22023** 22E70
- (with Kerimov, G. A.; Radžabov, B. A.) Wigner coefficients of the de Sitter group SO(4, 1). (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 1, 3-7. (Wayne J. Holman, III) **80j:22020** 22E70 (81C40)
- (with Kerimov, G. A.) Clebsch-Gordan coefficients of the SL(2, C) group. *Rep. Math. Phys.* 13 (1978), no. 3, 315-326. (William H. Klink) **80b:22017** 22E43 (22E70)
- Verdillon, André (with Turcat, Claudine) Symmetry, automorphism, and test. *IEEE Trans. Comput.* 28 (1979), no. 4, 319-325. (Siegmund Gerber) **80d:94032** 94C05
- Verdooren, L. R. See Kleffe, J. R.
- Martinez Verduch, J. R. See Martinez Verduch, J. R.
- Vere, Steven A. Composition of relational productions for plans and programs. *Internat. J. Comput. Inform. Sci.* 8 (1979), no. 2, 149-179. (Author's summary) **80c:68041** 68B10 (68B99)
- Vered, Gior (with Yechiali, Uri) Optimal structures and maintenance policies for PBX power systems. *Oper. Res.* 27 (1979), no. 1, 37-47. (Authors' summary) **80b:90070** 90B25
- Veremé, E. I. (with Petrov, Ju. P.) Limit possibilities of linear control systems optimization. (Russian) *Control of dynamical systems (Russian)*, pp. 23-28, 310. *Leningrad. Univ., Leningrad*, 1978. (Authors' summary) **80c:49027** 49D99
- Vereščagin, A. F. (with Minaev, L. N.) Principles of construction of specialized computers for positional supervisor control of a manipulator. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 4, 56-65. (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 4, 45-52 (1979). (Authors' summary) **80c:68078** 68G99 (68A05)
- Veretnikov, G. M. (with Griškin, Ju. S.; Ivanov, S. V.; Nesterenko, V. A.; Poltavcev, A. N.) Quantum gravitational effects in an anisotropic universe. *Ž. Éksp. Teoret. Fiz.* 73 (1977), no. 6, 1985-2077. (Russian. English summary); translated as *Soviet Phys. JETP* 46 (1977), no. 6, 1041-1051. (Derek Raine) **80c:83028** 83C45 (35Q99)
- Vesović, P. P. Nonstationary singularities of a system of three differential equations. (Russian) *Diferencijal'nye Uravnenija* 14 (1978), no. 12, 2257-2259, 2302. (A. I. Panasjuk) **80d:34036** 34C05 (34A20)
- (with Dežurko, Ju. I.) Existence and uniqueness of algebroid solutions for a system of three differential equations. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 22 (1978), no. 9, 780-783, 859. (Leon Wejntrub) **80j:34007** 34A20
- Veretennikov, A. Ju. Strong solutions of some stochastic equations. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 5(203), 173-174. (S. M. Hrisanov) **80a:60080** 60H10
- Vergasov, V. L. (with Arustamjan, A. M.; Čuhovikiĭ, F. N.) A study of the solutions of the one-dimensional Schrödinger equation with a potential of Hardy type. S-matrix formalism. (Russian. English summary) *Theoret. Mat. Fiz.* 38 (1979), no. 3, 380-387. (J. Wisniewski) **80f:81098** 81F20 (34B25)
- Vergese, G. (with Kailath, Thomas) A further note on backwards Markovian models. *IEEE Trans. Inform. Theory* 25 (1979), no. 1, 121-124. (Lennart Ljung) **80c:93119** 93E10
- (with Van Dooren, Paul M.; Kailath, Thomas) Properties of the system matrix of a generalized state-space system. *Internat. J. Control* 30 (1979), no. 2, 235-243. (B. L. Ovsievich) **80i:93006** 93A99
- Las Vergnas, Michel See Las Vergnas, Michel
- Vergne, Michèle (with Jakobsen, Hans Plesner) Restrictions and expansions of holomorphic representations. *J. Funct. Anal.* 34 (1979), no. 1, 29-53. (A. U. Klimyk) **80m:22020** 22E45 (81C40)
- See also Non-commutative harmonic analysis, **80g:22001**
- Verheest, Frank (with Eeckhout, Linda) Aspects of nonresonant mode coupling in third order. *Simon Stevin* 53 (1979), no. 1-2, 175-185. (T. Kahan) **80j:76010** 76B15 (35Q20, 58F22)
- Verheggen, Th. M. M. Note on the convergence of the Bremner series. *J. Math. Anal. Appl.* 65 (1978), no. 3, 505-510. (G. P. Bava) **80b:35044** 35J05
- Verheggen, Theo Transmission coefficient and heat conduction of a harmonic chain with random masses: asymptotic estimates on products of random matrices. *Comm. Math. Phys.* 68 (1979), no. 1, 69-82. (Author's summary) **80c:82014** 82A05
- Verheide, Eric Integral and rational completions of combinatorial matrices. *J. Combin. Theory Ser. A* 25 (1978), no. 3, 267-276. (A. O. Morris) **80a:05045** 05B20
- Verheyen, P. A. Economic interpretation of models for the replacement of machines. *European J. Oper. Res.* 3 (1979), no. 2, 150-156. (Author's summary) **80b:90071** 90B25
- Verite, J. C. (with Nédélec, J.-C.) Computation of eddy currents on a surface in  $\mathbb{R}^3$  by finite element methods. *Computing methods in applied sciences and engineering (Proc. Third Internat. Sympos., Versailles, 1977)*, I, pp. 111-126. *Lecture Notes in Math.*, 704, Springer, Berlin, 1979. (Authors' summary) **80c:78010** 78A25 (65N30)
- Verloren van Themaat, W. A. Right-divisive groups. *Notre Dame J. Formal Logic* 19 (1978), no. 1, 137-140. (O. Borůvka) **80c:20078** 20L10
- Verma, A. (with Joshi, C. M.) Some remarks on summation of basic hypergeometric series. *Houston J. Math.* 5 (1979), no. 2, 277-294. (Y. L. Luke) **80c:33012** 33A35
- Verma, B. G. (with Singh, J. B.) Propagation of magnetogasdynamical spherical shock waves in an exponential medium. *Astrophys. and Space Sci.* 63 (1979), no. 1, 253-259. (Giulio Mattei) **80g:85005** 85A30 (76W05)
- (with Vishwakarma, J. P.) Axially symmetric explosion in magnetogasdynamics. *Astrophys. and Space Sci.* 69 (1980), no. 1, 177-188. (Authors' summary) **80m:76056** 76L05 (76W05, 85A30)
- Verma, R. K. (with Agrawal, S. C.) On solving interval linear programming problems by a branch and bound technique. *Acta Cienc. Indica* 4 (1978), no. 4, 410-412. (Markku Kallio) **80b:90087** 90C05

- Verma, R. L. (with Singh, Punyatma) Free convection fluctuating flow on a horizontal magnetized plate. *Acta Phys. Acad. Sci. Hungar.* 46 (1979), no. 2, 77-96. (Authors' summary) **80m:76081** 76W05 (76R05)
- Verma, R. U. A formal solution of an integral equation involving the  $H$ -function of two variables by  $L_2$  and  $L_2^{-1}$  operators. *Math. Notes* 26 (1977/78), 39-46. (S. L. Kalla) **80j:45013** 45H05 (33A35)
- On the  $H$ -function of two variables. III. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 3, 323-328. (Author's summary) **80m:33016** 33A35
- Vermeir, D. (with Rozenberg, Grzegorz) On the effect of the finite index restriction on several families of grammars. II. Context dependent systems and grammars. *Found. Control Engng.* 3 (1978), no. 3, 125-142. (Juhani Karhumäki) **80f:68009** 68F05
- (with Rozenberg, Grzegorz) On the effect of the finite index restriction on several families of grammars. *Inform. and Control* 39 (1978), no. 3, 284-302. (Juhani Karhumäki) **80f:68009a** 68F05
- (with Meersman, Robert; Rozenberg, Grzegorz) Persistent ETOL systems. *Inform. Sci.* 18 (1979), no. 3, 189-212. (Authors' summary) **80e:68204** 68F10
- (with Rozenberg, Grzegorz) On acceptors of iteration languages. *Internat. J. Comput. Math.* 7 (1979), no. 1, 3-19. (Juhani Karhumäki) **80d:68103** 68F10 (68F05)
- Vermes, Domokos A stochastic bang-bang principle. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978), Vol. B, pp. 353-364, Reidel, Dordrecht, 1978.* (Author's summary) **80f:93102** 93E20
- Verner, A. L. (with Byčkova, T. I.) Limit cone of a simple saddle  $C^1$ -smooth cup. (Russian) *Geometry, No. 6 (Russian), pp. 15-21, Leningrad. Gos. Ped. Inst., Leningrad, 1977.* (A. V. Pogorelov) **80j:53055** 53C45 (53A05)
- See also Studies in the geometry of imbedded manifolds and projective geometry, **80m:53001**
- Vernier Piro, Stella See Piro Vernier, Stella
- Vernikov, M. B. Tangency elements of a surface of a symplectic space. The general case. (Russian) *Geometry, No. 6 (Russian), pp. 22-30, Leningrad. Gos. Ped. Inst., Leningrad, 1977.* (J. Vilms) **80e:53029** 53B99
- Higher order Ricci tensors of a surface in an affine-symplectic space. (Russian) *Modern geometry (Russian), pp. 30-39, Leningrad. Gos. Ped. Inst., Leningrad, 1978.* (P. Ver Eecke) **80i:53007** 53A35
- Vernon, Siobhán On the critical points of polynomials. *Proc. Roy. Irish Acad. Sect. A* 78 (1978), no. 20, 195-198. (Wolfgang Luh) **80i:30013** 30C15
- Véron, Laurent Équations non linéaires avec conditions aux limites de type Sturm-Liouville. *Ann. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 24 (1978), no. 2, 277-287. (Jean Mawhin) **80j:47088** 47H20 (34G20)
- Solutions singulières d'équations elliptiques semilinéaires. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 18, A867-A869. (From the text) **80k:35038** 35J05 (35B40)
- (with Baras, Pierre) Comportement asymptotique de la solution d'une équation d'évolution semi-linéaire de la chaleur. *Comm. Partial Differential Equations* 4 (1979), no. 7, 795-807. (H.-W. Rohde) **80j:35010** 35B40 (35K22)
- bidaut-Véron, Marie-Françoise See bidaut-Véron, Marie-Françoise
- Verona, Andrei (with Moscovici, Henri) Coherent states and square integrable representations. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 29 (1978), no. 2, 139-156. (J. Niederle) **80d:22016** 22E45 (81C40)
- (with Moscovici, Henri) Holomorphically induced representations of solvable Lie groups. (French summary) *Bull. Sci. Math. (2)* 102 (1978), no. 3, 273-286. (A. Kleppner) **80i:22025** 22E27
- (with Moscovici, Henri) Harmonically induced representations of nilpotent Lie groups. *Invent. Math.* 48 (1978), no. 1, 61-73. (A. Kleppner) **80a:22011** 22E27
- (with Moscovici, Henri) Quantization and projective representations of solvable Lie groups. *Trans. Amer. Math. Soc.* 246 (1978), 173-192. (A. Kleppner) **80i:22026** 22E27
- Verona, Maria Elena See Cioranu-Verona, Elena
- Verza, Alessandro Some properties of schemes whose generic point is open. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 36 (1977/78), 103-111 (1979). (Mario Pezzana) **80f:14001** 14A15
- The pseudoradical and Jacobson radical of a scheme. (Italian. English summary) *Boll. Un. Mat. Ital. B (5)* 15 (1978), no. 3, 787-800. (Author's summary) **80e:13001** 13A10 (13D10)
- (with Picco Botta, Luciana) Some duality properties for geometrically linked schemes. (Italian. English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 24 (1979), 137-145. (D. Kirby) **80f:14026** 14M10 (14F10)
- Verrì, Maurizio (with Frigerio, Alberto; Gorini, Vittorio) Stability, detailed balance and KMS condition for quantum systems. *Mathematical problems in theoretical physics (Proc. Internat. Conf., Univ. Rome, Rome, 1977), pp. 420-425, Lecture Notes in Phys., 80, Springer, Berlin, 1978.* (Jean-Paul Marchand) **80d:82011** 82A05
- (with Gorini, Vittorio; Frigerio, Alberto; Kossakowski, Andrzej; Sudarshan, E. C. G.) Properties of quantum Markovian master equations. *Rep. Math. Phys.* 13 (1978), no. 2, 149-173. (Mary Beth Ruskai) **80e:82015** 82A15
- Verriest, Erik (with Hellman, Martin E.) Convolutional encoding for Wyner's wiretap channel. *IEEE Trans. Inform. Theory* 25 (1979), no. 2, 234-236. (A. D. Wyner) **80b:94021** 94A40 (94B10)
- Verron, Jacques Écoulements cavitants autour d'ailes d'envergure finie en présence d'une surface libre. (English summary) *J. Mécanique* 18 (1979), no. 4, 745-773. (Author's summary) **80k:76012** 76B10
- Verschoren, A. (with van Oystaeyen, F.) ★ Reflectors and localization. Application to abelian theory. Lecture Notes in Pure and Applied Mathematics, 41. Marcel Dekker, Inc., New York-Basel, 1979. vii + 166 pp. ISBN 0-8247-6844-2 (J. Lambek) **80f:18012** 18F20 (18E35)
- (with van Oystaeyen, F.) Relative localization; bimodules and semiprime P.I. rings. *Comm. Algebra* 7 (1979), no. 9, 955-988. (William D. Blair) **80e:16004** 16A08 (16A38)
- Vershlin, K. P. (with Gergely, T.) Model theoretical investigation of theorem proving methods. *Notre Dame J. Formal Logic* 19 (1978), no. 4, 523-542. (L. W. Szczerba) **80b:03015** 03B35 (03C75, 68G15)
- Veršik, A. M. (with Arzumanyan, V. A.) Factor representations of the crossed product of a commutative  $C^*$ -algebra with its endomorphism semigroup. (Russian) *Dokl. Akad. Nauk SSSR* 238 (1978), no. 3, 513-516. (G. Arsene) **80i:46054** 46L35
- (with Birman, M. S.; Solomjak, M. Z.) The product of commuting spectral measures may fail to be countably additive. (Russian) *Funkcional. Anal. i Prilozhen.* 13 (1979), no. 1, 61-62. (R. G. Bartle) **80a:28010** 28B05 (46G10, 47B15)
- Veršinin, V. D. On a method of determining the inverse Laplace transformation. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 10(197), 24-28. (A. Ramm) **80a:44001** 44A10
- Veršikov, È. V. See Christofides, Nicos, **80c:05002**
- Verstraeten, Leopold (with Chen, Bang-yen; Vanhecke, Lieven) Complex submanifolds of some Hermitian symmetric spaces. *Geom. Dedicata* 7 (1978), no. 4, 427-432. (J. L. Koszul) **80m:53040** 53C40 (32M15)
- (with De Meulemeester, Willy) Codimension 2 submanifolds with a 2-quasi-umbilical normal direction. *J. Korean Math. Soc.* 15 (1978/79), no. 2, 101-108. (G. Tsagas) **80c:53017** 53B25
- (with Barros, M.) A characterization of totally cylindrical submanifolds. *Rev. Mat. Hisp.-Amer. (4)* 38 (1978), no. 4-5, 181-186. (Alan West) **80j:53025** 53B25
- (with Hendrickx, Marcel) On totally real submanifolds with parallel  $f$ -structure in the normal bundle. *Soochow J. Math.* 4 (1978), 55-61. (J. R. Vanstone) **80i:53018** 53C15 (53C40)
- Vértesi, P. Convergent interpolatory processes for arbitrary systems of nodes. Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 1-2, 223-234. (J. Prasad) **80g:41007** 41A05
- Vervast, Wim A relation between Brownian bridge and Brownian excursion. *Ann. Probab.* 7 (1979), no. 1, 143-149. (Douglas P. Kennedy) **80b:60107** 60J65
- Verwer, J. G. The application of iterated defect correction to the LOD method for parabolic equations. *BIT* 19 (1979), no. 3, 384-394. (Author's summary) **80h:65073** 65M20 (65L05)
- (with van der Houwen, P. J.; Sommeijer, B. P.) Comparing time integrators for parabolic equations in two space dimensions with a mixed derivative. *J. Comput. Appl. Math.* 5 (1979), no. 2, 73-83. (Authors' summary) **80c:65185** 65M99 (65L05)
- Vescan, R. T. (with Gottlieb, J.; Jucan, T.) A generalization of the Fourier transform. (Romanian summary) *An. Univ. Timişoara Ser. Ştiinţ. Mat.* 15 (1977), no. 1, 19-25 (1978). (From the introduction) **80h:46057** 46F12
- Veselić, Krešimir (with Aganović, Ibrahim) On a singular contact problem for two-dimensional Laplace equation. (French summary) *Rend. Mat. (6)* 11 (1978), no. 4, 521-532 (1979). (R. K. Gupta) **80c:73067** 73T05
- On real eigenvalues of real tridiagonal matrices. *Linear Algebra Appl.* 27 (1979), 167-171. (M. Lotkin) **80i:15008** 15A18
- On a class of Jacobi-like procedures for diagonalising arbitrary real matrices. *Numer. Math.* 33 (1979), no. 2, 157-172. (Ludwig Elsner) **80m:65032** 65F15
- On a new class of elementary matrices. *Numer. Math.* 33 (1979), no. 2, 173-180. (Ludwig Elsner) **80m:65033** 65F15 (15A12)
- (with Wenzel, H. J.) A quadratically convergent Jacobi-like method for real matrices with complex eigenvalues. *Numer. Math.* 33 (1979), no. 4, 425-435. (Authors' summary) **80m:65034** 65F15
- Veselinov, V. M. The Hausdorff approximation by derivatives of linear operators and by Bernstein polynomials. (Russian) *C. R. Acad. Bulgare Sci.* 31 (1978), no. 6, 639-642. (S. N. Kračkovskii) **80i:41019** 41A35 (41A10)
- Veselov, A. P. Hamiltonian formalism for Novikov-Krichever equations on the commutativity of two operators. (Russian) *Funkcional. Anal. i Prilozhen.* 13 (1979), no. 1, 1-7, 96. (Alexander A. Pankov) **80i:58028** 58F07 (81D05)
- Veselov, S. I. (with Ševčenko, V. N.) The exponential growth of coefficients of the aggregating equation. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 4, 78-79. (E. Ja. Gabovič) **80a:90101** 90C10 (65F99)
- Veselova, O. M. Some special cases of holonomic nets in the space  $E_3$ . (Russian) *Modern geometry (Russian), pp. 40-45, Leningrad. Gos. Ped. Inst., Leningrad, 1978.* (Leo Boča) **80f:53013** 53A60 (53A10)
- Veselovskii, I. N. Copernicus' first work in astronomy. (Russian) *Istor.-Astronom. Izv.* No. 14 (1978), 109-118. (Stanislav Gluškov) **80m:01020** 01A40 (85-03)
- See also Rosenfeld, B. A., **80g:01030**
- Vesentini, Edoardo Beniamino Segre (1903-1977). (Italian) *Boll. Un. Mat. Ital. A (5)* 15 (1978), no. 3, 699-714. (Editors) **80a:01047** 01A70
- Variations on a theme of Carathéodory. *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* 6 (1979), no. 1, 39-68. (B. M. Weinstock) **80k:32029** 32H15 (46G20)
- Methods of differential geometry in functional analysis. (Italian. English summary) *Boll. Un. Mat. Ital. A (5)* 16 (1979), no. 2, 213-226. (Carlos A. Berenstein) **80g:32044** 32H15 (46G20)
- Vieto-Vesperinas, M. See Nieto-Vesperinas, M.
- Vestergaard, P. D. How long is the chord? (Bertrand's paradox). (Danish. English summary) *Normat No. 3* (1979), 112-114, 128. (E. J. F. Primrose) **80i:60015** 60D05 (01A60, 51-03)
- Vesterstrøm, J. (with Christensen, Jens Peter Reus) A note on extreme positive definite matrices. *Math. Ann.* 244 (1979), no. 1, 65-68. (Raphael Loewy) **80m:15015** 15A57 (15A48)
- Vestřil, I. A. (with Timan, A. F.) A universality property of Hilbert spaces. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 3, 528-530. (A. Császár) **80e:54039** 54E40 (46C99)
- Vestner, H. (with Waldmann, L.) Nonequilibrium thermodynamics of the gas kinetic boundary value problem. *Phys. A* 99 (1979), no. 1-2, 1-33. (Carlo Cercignani) **80m:82036** 82A40
- (with Waldmann, L.) Boundary conditions for the distribution function and for the moments of a gas at a moving wall. *Z. Naturforsch. A* 34 (1979), no. 3, 269-283. (Carlo Cercignani) **80f:82034** 82A40
- Vesztegömbi, K. (with Lovász, László) Restricted permutations and Stirling numbers. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II, pp. 731-738, Colloq. Math. Soc. János Bolyai, 18, North-Holland, Amsterdam, 1978.* (D. H. Lehmer) **80c:05007** 05A10 (10K20)



- Vetro, P. (with Bongiorno, B.) Gradients of Borel functions. *Colloq. Math.* 40 (1978/79), no. 1, 53-61. (James Foran) **80i:26014** 26B05
- Vetters, Klaus Asymptotisch symmetrische Verfahren für Nullstellen- und Extremwertaufgaben einer Verästelten. *Beiträge Numer. Math.* 7 (1979), 121-137. (W. M. Kincaid) **80i:65055** 65H05
- Vieille, de Veubeke, Baudouin See Fraeijs de Veubeke, Baudouin
- Vey, Jacques Orbites périodiques d'un système hamiltonien du voisinage d'un point d'équilibre. *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* 5 (1978), no. 4, 757-787. (Ju. E. Gliklikh) **80i:58028** 58F05
- Principe de la phase résonnante. (English summary) *Ann. Inst. Fourier (Grenoble)* 29 (1979), no. 1, xvii, 307-311. (A. Crumeyrolle) **80i:58025** 58G15
- (with Colin de Verdière, Yves) Le lemme de Morse isochore. *Topology* 18 (1979), no. 4, 283-293. (Virgil Obădeanu) **80i:57059** 57R70 (58C25)
- Verzani, A. (with Mangione, V.) On connections with null torsion vector. (Italian. English summary) *Riv. Mat. Univ. Parma (4)* 4 (1978), 143-155 (1979). (C. Di Comite) **80i:53023** 53C05
- V. Golitschek, Manfred See v. Golitschek, Manfred
- Vial, J.-P. (with Moulin, Hervé) Strategically zero-sum games: the class of games whose completely mixed equilibria cannot be improved upon. *Internat. J. Game Theory* 7 (1978), no. 3-4, 201-221. (C. B. Millham) **80i:90158** 90D05
- Viallet, C.-M. (with Daniel, M.; Mitter, P. K.) Local stability of deformations of self-dual Yang-Mills fields on  $S^4$ . *Phys. Lett. B* 77 (1978), no. 1, 77-79. (Editors) **80i:58022** 58G05 (81E10)
- (with Babelon, O.) The geometrical interpretation of the Faddeev-Popov determinant. *Phys. Lett. B* 85 (1979), no. 2-3, 246-248. (Eckehard W. Mielke) **80i:81077** 81E10 (58D20, 81C35)
- Viano, G. A. (with Bertero, M.) On probabilistic methods for the solution of improperly posed problems. (Italian summary) *Boll. Un. Mat. Ital. B (5)* 15 (1978), no. 2, 483-508. (J. Bulatović) **80i:60057** 60H25 (47A50)
- (with Bertero, M.; de Mol, C.) On the problems of object restoration and image extrapolation in optics. *J. Math. Phys.* 20 (1979), no. 3, 509-521. (V. H. Weston) **80i:78004** 78A10 (65J15, 68G10)
- Vianu, Victor The structure of formal languages from the standpoint of measure theory. (Romanian. English summary) *Stud. Cerc. Mat.* 30 (1978), no. 2, 227-235. (D. Simovici) **80i:68094** 68F05 (28A10)
- (with Dumitrescu, Camelia) The topological learning space. (Romanian. English summary) *Stud. Cerc. Mat.* 31 (1979), no. 1, 71-75. (S. Guaiqu) **80i:54060** 54H99 (54D05, 93A10)
- Vinod, D. Une formalisation du jeu de Mastermind. (English summary) *RAIRO Rech. Opér.* 13 (1979), no. 3, 307-321. (Author's summary) **80i:90126** 90D05
- Vizninskiy, Cesar (with Wan, Kay Kong) Quantization in spaces of constant curvature. *Progr. Theoret. Phys.* 58 (1977), no. 3, 1030-1044. (J. H. Rawnsley) **80i:58054** 58F06 (81E10)
- (with Wan, Kay Kong) Lie algebra and the quantisation of momenta and the Hamiltonian. *J. Phys. A* 12 (1979), no. 5, 643-647. (Authors' introduction) **80i:81038** 81D05 (58F06)
- Vicente, José L. (with Aroca Hernández-Ros, José Manuel; Hironaka, Heisuke) ★ Desingularization theorems. *Memorias de Matemática del Instituto "Jorge Juan"* [Mathematical Memoirs of the Jorge Juan Institute], 30. Consejo Superior de Investigaciones Científicas, Madrid, 1977. ISBN 84-00-03602-6 (Jean Giraud) **80i:32027** 32C45
- Vickroy, James G. (with Dutton, John A.) Bifurcation and catastrophe in a simple, forced, dissipative quasi-geostrophic flow. *J. Atmospheric Sci.* 36 (1979), no. 1, 42-52. (J. S. Joel) **80i:86004** 86A35 (35B40, 58C27)
- Vlesek, M. (with Galántai, Aurél) On the concept of the stiffness. *Berichte der Tagung "Numerische Behandlung Gewöhnlicher Differentialgleichungen"* (Humboldt Univ., Berlin, 1978), pp. 96-109. *Seminarberichte*, 11. Humboldt Univ., Berlin, 1978. (K. Vianak) **80i:65047** 65L05
- Victor, Jonathan D. (with Knight, Bruce W.) Nonlinear analysis with an arbitrary stimulus ensemble. *Quart. Appl. Math.* 37 (1979/80), no. 2, 113-136. (Authors' summary) **80i:92014** 92A09
- Victory, H. Dean, Jr. On criticality problems in energy dependent neutron transport theory. *J. Math. Anal. Appl.* 67 (1979), no. 1, 140-157. (A. G. Gibbs) **80i:82086** 82A75 (45C05)
- (with Nelson, Paul, Jr.) Theoretical properties of one-dimensional discrete ordinates. *SIAM J. Numer. Anal.* 16 (1979), no. 2, 270-283. (V. Sree-Hari-Rao) **80i:65155** 65R20 (82A70)
- Vistié-Vidal, Annie See Astié-Vidal, Annie
- Vital, Robert Anneaux de Cohen, non commutatifs, sur un corps local. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 3, A181-A184. (Maria Grazia Marinari) **80i:16005** 16A10 (16A72)
- Vitalis, T. Spinor operators of Weiss-Zumino type and their irreducible components. (Italian and Russian summaries) *Nuovo Cimento A (11)* 51 (1979), no. 4, 553-579. (Author's summary) **80i:81073** 81D99 (81D20)
- Vidak, Ivan ★ Banachove algebre. (Slovenian) [Banach algebras] Postdiplomski Seminar iz Matematike [Postgraduate Seminar in Mathematics], 11. Društvo Matematikov, Fizikov in Astronomov SR Slovenije, Ljubljana, 1978. 132 pp. (Editors) **80i:46068** 46Hxx (46Jxx)
- (with Mizori-Oblak, Pavlina) On entire matrix-valued functions. *Linear Algebra Appl.* 22 (1978), 25-31. (B. Rodríguez-Salinas) **80i:30043** 30C30
- Videnskii, I. V. Simultaneous interpolation by Blaschke products. (Russian. English summary) Investigations on linear operators and the theory of functions, VIII. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 73 (1977), 195-202, 234-235 (1978). (Richard E. Frankfurt) **80i:30039** 30E05 (30D50)
- Videnakis, V. S. Bernstein-type polynomial in rational fractions. (Russian. Latvian and English summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 1, 37-43, 229. (N. V. Rao) **80i:41012** 41A25
- Vilmonich, Giovanni An invitation to the boundary value problems of ordinary differential equations. (Portuguese) *Proceedings of the Ninth Brazilian Mathematical Colloquium* (Poços de Caldas, 1973), Vol. I (Portuguese), pp. 163-171. *Inst. Mat. Pura Apl., São Paulo*, 1977. (Editors) **80i:34022** 34Bxx (34-01)
- Existence and uniqueness theorems for boundary value problems by means of the theory of eigenvalues. (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium* (Poços de Caldas, 1977), Vol. I (Portuguese), pp. 167-181. *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (N. Onuchic) **80i:34021** 34B15
- Chaplygin's method is Newton's method. *J. Math. Anal. Appl.* 66 (1978), no. 1, 188-206. (Eckehard Wagenführer) **80i:65189** 65L10 (65P05, 65R20)
- Vidyanagar, Mathukumalli On the use of right-coprime factorizations in distributed feedback systems containing unstable subsystems. *IEEE Trans. Circuits and Systems* 25 (1978), no. 11, 916-921. (Author's summary) **80i:93142** 93D15
- $L_{\infty}$ -stability criteria for interconnected systems using exponential weighting. *IEEE Trans. Circuits and Systems* 25 (1978), no. 11, 946-947. (V. M. Popov) **80i:93103** 93D05
- (with El-Attar, R. A.) Subsystem simplification in large-scale systems analysis. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 321-323. (Authors' summary) **80i:93007** 93A15
- New passivity-type criteria for large-scale interconnected systems. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 575-579. (Peter J. Moylan) **80i:93053** 93D25
- See also Coleman, T. F., **80i:90099**
- Vidyanankar, K. Covering the edge set of a directed graph with trees. *Discrete Math.* 24 (1978), no. 1, 79-85. (L. S. Mel'nikov) **80i:05080** 05C20 (05C35)
- Minimum strong cover in circuit-balanced graphs. *Utilitas Math.* 14 (1978), 287-303. (D. H. Younger) **80i:05106** 05C20
- Vidybida, A. K. The Cauchy problem for the Bogoljubov chain of equations. One-dimensional quantum lattice systems. (Russian. English summary) *Teoret. Mat. Fiz.* 39 (1979), no. 3, 353-358. (Author's summary) **80i:82042** 82A67 (81H05)
- Vielra, Augusto C. (with Dewilde, Patrick; Kailath, Thomas) On a generalized Szegő-Levinson realization algorithm for optimal linear predictors based on a network synthesis approach. Special issue on the mathematical foundations of system theory. *IEEE Trans. Circuits and Systems* 25 (1978), no. 9, 663-675. (Authors' summary) **80i:94043** 94C05
- (with Morf, Martin; Lee, Daniel T. L.; Kailath, Thomas) Recursive multichannel maximum entropy spectral estimation. *IEEE Trans. Geosci. Electron.* 16 (1978), no. 2, 85-94. (L. L. Campbell) **80i:62066** 62M15 (93E99, 94A99)
- Vielra-Martins, Roberto See Martins, Roberto Vielra
- Vielack, Peter The analogy between elastic rods and rigid body motions. I. Nonlinear theory. *Solid Mech. Arch.* 4 (1979), no. 4, 347-377. (Yi-Yuan Yu) **80i:73049** 73K05
- Viennot, Gérard ★ Algèbres de Lie libres et monoïdes libres. Bases des algèbres de Lie libres et factorisations des monoïdes libres. *Lecture Notes in Mathematics*, 691. Springer-Verlag, Berlin-New York, 1978. ii + 124 pp. ISBN 3-540-09090-8 (Juri A. Bahturin) **80i:17016** 17B65
- (with François, J.; Vuillemin, Jean) Description and analysis of an efficient priority queue representation. *19th Annual Symposium on Foundations of Computer Science* (Ann Arbor, Mich., 1978), pp. 1-7. *IEEE, Long Beach, Calif.*, 1978. (Authors' summary) **80i:68045** 68B15 (68C15, 68C25)
- Permutations ayant une forme donnée. (English summary) *Discrete Math.* 26 (1979), no. 3, 279-284. (Reinhard Razen) **80i:05013** 05A15
- Viertl, Reinhard Eine Charakterisierung von  $n$ -Algebren von Teilmengen einer Menge und elementare Trennungseigenschaften von Messräumen. *Math. Balkanica* 6 (1976), 296-297 (1978). **80i:28003** 28A05
- ho due Viet See Ho Duc Viet
- Viet, H. D. (with Kolomý, Josef) On duality mappings and metric gradient. (Italian summary) *Boll. Un. Mat. Ital. A (5)* 16 (1979), no. 1, 92-99. (John R. Giles) **80i:46029** 46B20
- ngo Viet Trung See Ngo Viet Trung
- Vidgergauz, S. B. On a case of the inverse problem of the two-dimensional theory of elasticity. *Prikl. Mat. Meh.* 41 (1977), no. 5, 902-908 (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 5, 927-939. (P. M. Gupta) **80i:73019** 73C99
- Vigfussion, Gudmundur The queer differential equations for adiabatic compression of plasma. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 5, 778-781. (F. C. Auluck) **80i:82037** 82A45 (34K05, 45J05)
- Vigfussion, J. O. On Poincaré cycles of the linear chain of oscillators. *Phys. A* 98 (1979), no. 1-2, 215-230. (Author's summary) **80i:70021** 70K05 (58F21)
- Vigier, J.-P. (with Guérat, Ph.; Merat, P.; Moles, M.) Stable states of a relativistic harmonic oscillator imbedded in a random stochastic thermostat. *Lett. Math. Phys.* 3 (1979), no. 1, 47-56. (Ronald F. Fox) **80i:82016** 82A15 (53C10, 58F06)
- (with Fenech, Ch.; Moles, M.) Internal relations of spinning particles. *Lett. Nuovo Cimento (2)* 24 (1979), no. 2, 56-62. **80i:81048** 81C99 (58F06)
- (with Cufaro Petroni, N.) Causal superluminal interpretation of the Einstein-Podolsky-Rosen paradox. *Lett. Nuovo Cimento (2)* 26 (1979), no. 5, 149-154. (Kenneth Dunn) **80i:81007** 81B05
- Vigna, E. S. The initial value problem for linear evolution equations with time lag. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 4, 444-451, 570. (L. Cattabriga) **80i:35138** 35R10
- Vigueroa, J. P. (with Lambin, Ph.) A continued-fraction approach for the numerical determination of one-dimensional band structures. *J. Phys. A* 12 (1979), no. 11, 1961-1970. (Authors' summary) **80i:81016** 81C05 (65P05)
- Vignes, J. New methods for evaluating the validity of the results of mathematical computations. *Math. Comput. Simulation* 20 (1978), no. 4, 227-249. (Author's summary) **80i:65004** 65-02
- Vignoli, A. (with Furi, M.; Martelli, Mario) Contributions to the spectral theory for nonlinear operators in Banach spaces. (Italian summary) *Ann. Mat. Pura Appl. (4)* 118 (1978), 229-294. (Milan Kučera) **80i:47070** 47H12 (58C40, 58E07)
- Vigot, Jean-Pierre Automorphismes analytiques des produits continus de domaines bornés. *Ann. Sci. École Norm. Sup. (4)* 11 (1978), no. 2, 229-246. (Hugo Rossi) **80i:32029** 32M05 (32K05)
- Frontière des domaines bornés cercles homogènes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 13, A657-A660. (Author's summary) **80i:32032** 32M10 (46G20)
- Vigué-Poirrier, Micheline (with Grove, Karsten; Halperin, Stephen) The rational

- homotopy theory of certain path spaces with applications to geodesics. *Acta Math.* **140** (1978), no. 3-4, 277-303. (Francesco Mercuri) **80c:58024** 58E10 (53C22)  
Formalité d'une application continue. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 16, A809-A812. (Author's summary) **80c:55043** 55P62
- Vijayakumar, A.** (with Vasudevan, R.; Vittal, P. R.) On a first passage time problem. *Proceedings of the Conference on Mathematical Analysis and its Applications (Inst. Engrs., Mysore, 1977)*, pp. M82-M91, *Maiscience Rep.*, 91, Inst. Math. Sci., Madras, 1978. (Authors' summary) **80b:60106** 60J75
- Vijayalakshmi, B.** (with Balachandran, A. P.; Govindarajan, T. R.) Particles of half-integral or integral helicity by quantization of a non-relativistic free particle, and related topics. *Phys. Rev. D* (3) **18** (1978), no. 6, 1950-1959. (Aubrey Truman) **80c:81053** 81D20 (81B05, 81G25)
- Vijayan, K. S.** On arc-transitive graphs. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 1091-1098, *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (J. Bosák) **80c:05067** 05C25 (05C38)  
On a class of distance transitive graphs. *J. Combin. Theory Ser. B* **25** (1978), no. 2, 125-129. (R. A. Melter) **80a:05174** 05C99 (05B05)
- Vikas, Om** Analysis of a periodically inspected buffer. *Inform. Process. Lett.* **8** (1979), no. 3, 124-130. (Frits C. Schoute) **80f:68037** 68C15 (68A05)
- Vikina, V. V.** Stability of the zero solution of differential equations with discontinuous right-hand sides. (Russian) *Differentsial'nye Uravneniya (Ryazan) No. 11* (1978), 35-40. (M. Bertolino) **80d:34070** 34D20
- Viktorov, B. V.** (with Petrov, B. N.; Aleksandrov, A. D.; Andreev, V. P.; Bulekov, V. P.; Izvol'skii, E. G.; Kudrjavcev, P. S.; Kuzin, V. P.; Mahan'ko, A. V.; Mikhailov, F. A.; Muravlev, G. A.; Nikolaev, Ju. P.; Pobedonoscev, G. V.; Pohvalenskii, V. L.; Sadykov, F. R.; Serpionov, G. V.; Saikova, I. M.; Ul'jaichenko, A. E.; Frolov, P. A.; Cervjakov, V. P.; Caturjan, K. T.) ★Многообразие нестационарные системы автоматического управления. (Russian) [Multistate and nonstationary automatic control systems] "Masinostroenie", Moscow, 1978. 240 pp. (Publisher's summary) **80c:93073** 93C40
- Viktorov, I. A.** Types of acoustic surface waves in solids (review). *Akust. Ž.* **25** (1979), no. 1, 1-17. (Russian); translated as *Soviet Phys. Acoust.* **25** (1979), no. 1, 1-9. (J. Miklowitz) **80j:73015** 73D20 (35C99, 76Q05, 86A15)
- Viktorova, I. I.** (with Leontović, A. M.) Number of checks for determining significant variables of Boolean functions. *Problemy Peredaci Informacii* **14** (1978), no. 4, 85-97. (Russian); translated as *Problems Inform. Transmission* **14** (1978), no. 4, 298-306. (Claude Benzenen) **80k:94055** 94C10 (68C25)
- Vila, A. M.** (with Izé, Antonio Fernandes) Perturbations of neutral functional differential equations with non-uniform stability behavior. *Nonlinear Anal.* **2** (1978), no. 5, 573-582. (M. M. Konstantinov) **80c:34082** 34K20
- Vilain, Christiane** Virial theorem in general relativity. Consequences for stability of spherical symmetry. *Astrophys. J.* **227** (1979), no. 1, part 1, 307-318. (Carl Brans) **80b:83033** 83C55
- Vil'činskii, V. T.** (with Sprindžuk, Vladimir G.) Diophantine approximations on random varieties. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **22** (1978), no. 12, 1065-1066, 1147. (B. Volkman) **80k:10069** 10K05 (10K15)
- Vilela Mendes, R.** Extended relativity, T-violation and a new kind of particle. *J. Phys. A* **13** (1980), no. 2, 479-501. (Author's summary) **80k:81052** 81C40 (81G25, 83A05)
- Vilhela, Václav** Über die Charakterisierung der Verbände durch ihre  $\alpha$ -Teilverbände. (Russian summary) *Časopis Pěst. Mat.* **103** (1978), no. 3, 291-296. (H. F. J. Lowig) **80g:06012** 06C05
- Vilimovský, J.** (with Tashjian, G.) Coreflectors not preserving the interval and Baire partitions of uniform spaces. *Proc. Amer. Math. Soc.* **77** (1979), no. 2, 257-263. (A. Császár) **80j:54022** 54E15
- Vilkas, Eduardas** Two game-theoretic theorems. (Russian. Lithuanian and English summaries) *Mat. Metody o Social. Nauk.—Trudy Sem. Protsessy Optimal. Upravleniya II Sekcija No. 10* (1978), 9-17, 119. (V. G. Ramm) **80a:90172** 90D12
- Vil'kov, V. B.** (with Surovov, L. K.) Some sufficient conditions of existence of a saddle point for the Lagrange function. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* **1979**, vyp. 3, 11-15, 121. (Authors' summary) **80k:49017** 49B36
- Villaggio, Piero** An elastic theory of Coulomb friction. *Arch. Rational Mech. Anal.* **70** (1979), no. 2, 135-143. (Vladimir Kercman) **80f:73068** 73T05 (73C99)  
Buckling under unilateral constraints. *Internat. J. Solids and Structures* **15** (1979), no. 3, 193-201. (Author's summary) **80b:73033** 73H05 (49G05)  
Concavity techniques with application to shock problems. *J. Elasticity* **9** (1979), no. 1, 29-41. (Cornelius O. Horgan) **80d:73085** 73K05 (35B45)
- Villase, J.** Frustration dans un verre de spins quantique. (English summary) *J. Physique* **41** (1980), no. 2, 149-159. (From the summary) **80c:82049** 82A42
- Villalonga, Patricia M.** (with Kalla, S. L.) On the integral transform whose kernel is the  $\Omega$ -function of two variables. (Spanish. English summary) *República Venezolana Bol. Acad. Cienc. Fis. Mat. Natur.* **38** (1978), no. 115, 93-104. (L. Artega) **80f:44003** 44A20
- Villamarin, Manuel-Antonio Fugarcía** Bases absolutas dans les bornologies nucléaires et applications. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 16, A1089-A1092. (Author's summary) **80c:46006** 46A09 (46A35)
- Villamayor, Orlando E.** On Jacobian extensions of ideals. *Bol. Soc. Brasil. Mat.* **10** (1979), no. 1, 87-95. (Jonathan M. Wahl) **80k:14007** 14B05
- Villani, A.** (with Ruggiero, J. R.; Zimerman, A. H.) Some comments on the application of analytic regularisation to the Casimir forces. *J. Phys. A* **13** (1980), no. 2, 761-766. (Authors' summary) **80k:81214** 81L05 (82A15)
- Villanueva Novea, E.** (with López Rodríguez-Moldes, M. A.) A property of the pentagon in axiomatic geometry. (Spanish) *Gaceta Mat. (I) (Madrid)* **30** (1978), no. 7-8, 167-177. (E. J. F. Primrose) **80f:51002** 51A30  
(with López López, M. A.) Product of triples. (Spanish) *Rev. Mat. Hisp.-Amer.* (4) **38** (1978), no. 1, 61-70. (M. L. Laplaza) **80a:18005** 18C15
- Villarroel, D.** Class of complex Yang-Mills fields. *Phys. Rev. D* (3) **18** (1978), no. 6, 1983-1987. (V. Syamala Devi) **80a:81088** 81E15 (53C10)
- Villella Bressan, Rosanna** (with Dyson, Janet) Semigroups of translations associated with functional and functional-differential equations. *Proc. Roy. Soc. Edinburgh Sect. A* **82** (1978/79), no. 3-4, 171-188. (G. F. Webb) **80i:34113** 34K05
- (with Dyson, Janet) A nonlinear boundary problem for a functional-differential equation. *J. Differential Equations* **34** (1979), no. 2, 273-290. (D. K. Hughes) **80c:34116** 34K10
- Viloria, L.** (with Kalla, S. L.; Conde, S.) On an integral equation associated with a production problem. *Kyungpook Math. J.* **19** (1979), no. 1, 135-147. (K. S. Parihar) **80m:45004** 45E10 (90B30)
- Vil'son, A. D.** See Wilson, A. G.
- Vinardi, G.** (with Gatteschi, L.) The degree of accuracy of quadrature formulas of Čebyšev type. (Italian. English summary) *Calcolo* **15** (1978), no. 1, 59-85. (Authors' summary) **80b:65029** 65D32
- Vinberg, É. B.** (with Švarcman, O. V.) Riemann surfaces. (Russian) *Algebra, Topology, Geometry, Vol. 16* (Russian), pp. 191-245, 247 (errata insert), *VINITI, Moscow*, 1978. (Anatoly Libgober) **80k:30047** 30F99 (14H99, 32G15, 32G20, 57N05)  
(with Kac, V. G.) Spinors of 13-dimensional space. *Adv. in Math.* **30** (1978), no. 2, 137-155. (V. L. Popov) **80c:10022** 10C30 (15A66)  
(with Ešaišvili, A. G.) A classification of the three-vectors of nine-dimensional space. (Russian) *Trudy Sem. Vektor. Tenzor. Anal.* **18** (1978), 197-233. (H. de Vries) **80b:15039** 15A72 (14D25, 17B20, 20G20)  
Classification of homogeneous nilpotent elements of a semisimple graded Lie algebra. (Russian) *Trudy Sem. Vektor. Tenzor. Anal.* **19** (1979), 155-177. (V. G. Kac) **80k:17006** 17B30 (15A72, 20G05)
- Vince, Andrew** The Fibonacci sequence modulo  $N$ . *Fibonacci Quart.* **16** (1978), no. 5, 403-407. (Jau-Shyong Shiue) **80a:10022** 10A35
- Vincensini, Paul** Sur le plongement de certaines variétés riemanniennes à deux dimensions dans l'espace euclidien à quatre dimensions. (Italian summary) *Ann. Mat. Pura Appl.* (4) **121** (1979), 91-107. (Jean-Marie Morvan) **80m:53046** 53C42 (53A05)  
See also Tortrat, Robert, **80c:53009**
- Vincent, Alexandre Joseph Hildulph** See Lloyd, E. Keith, **80i:01015**
- droz-Vincent, Philippe** See Droz-Vincent, Philippe
- Vincent, Thomas L.** (with Lee, Cho Seng) A sufficiency theorem for an optimal control of a general periodic system. *Bull. Malaysian Math. Soc.* (2) **1** (1978), no. 2, 81-89. (F. S. Van Vleck) **80c:49013** 49B10  
(with Skowroński, J. M.) Controllability with capture. *J. Optim. Theory Appl.* **29** (1979), no. 1, 77-86. (T. Parthasarathy) **80i:93015** 93B05 (90D26)  
Yield for annual plants as an adaptive response. Conference on Deterministic Differential Equations and Stochastic Processes Models for Biological Systems (San Cristobal, N.M., 1977). *Rocky Mountain J. Math.* **9** (1979), no. 1, 163-173. (P. D. M. Macdonald) **80b:92004** 92A05
- sangiovanni-Vincentelli, Alberto** See Sangiovanni-Vincentelli, Alberto
- Vincenti, Rita** A transformation of a Desarguesian plane over a field of even characteristic. (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **35** (1975/76), 337-346. (Irene L. Rosati) **80i:51013** 51E15 (05B25)
- da Vinci, Leonardo** See Ackerman, James S., **80a:01009**
- Vinck, A. J.** (with Schalkwijk, J. Pieter M.; Post, Karel A.) Syndrome decoding of binary rate  $k/n$  convolutional codes. *IEEE Trans. Inform. Theory* **24** (1978), no. 5, 553-562. (Sat Narain Gupta) **80c:94017** 94B10
- Vincke, Philippe** Une borne supérieure pour la faiblesse minimum d'un quasi-noyau dans un graphe. (English summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 415-416, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Author's summary) **80m:05051** 05C20  
Quasi-ordres généralisés et représentation numérique. (English summary) *Math. Sci. Humaines No. 62* (1978), 35-60, 81. (Ivan Rival) **80c:06002** 06A10  
Preferences representation in actuarial sciences. *Second. Actuar. J.* **1979**, no. 4, 223-230. (Author's summary) **80m:62102** 62P05
- Vincze, E.** Über die Einführung der komplexen Zahlen mittels Funktionalgleichungen. *Publ. Math. Debrecen* **25** (1978), no. 3-4, 303-309. (B. Choczewski) **80f:39010** 39B40 (10D25)
- Vincze, I.** (with Hayman, W. K.) A problem on entire functions. (Russian summary) *Complex analysis and its applications (Russian)*, pp. 591-594, 672, "Nauka", Moscow, 1978. (Eric Amar) **80c:30010** 30D20  
(with Csáki, E.) On limiting distribution laws of statistics analogous to Pearson's chi-square. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* **9** (1978), no. 4, 531-548. (Lionel Weiss) **80k:62062** 62G10 (62E20)
- Vinet, Luc** (with Harnad, J.; Shnider, S.) The Yang-Mills system in compactified Minkowski space; invariance conditions and SU(2) invariant solutions. *J. Math. Phys.* **20** (1979), no. 5, 931-942. (Daniel A. Akyeampong) **80d:81073** 81E10 (57S15)
- Vinberg, E.** See Vinberg, É. B.
- Vink, H. A.** Minimal TANT networks of functions with DON'T CARE's and some complemented input variables. *IEEE Trans. Comput.* **27** (1978), no. 11, 1073-1078. (B. Hazeltine) **80b:94046** 94C10 (93A99)
- Vinnik, B. V.** Representation of functions by the series  $\sum_{n=1}^{\infty} d_n f_n(z)$ . (Russian) *Ukrain. Mat. Ž.* **31** (1979), no. 3, 256-265, 334. (C. Tanaka) **80j:30008** 30B50
- Vinnik, A. A.** (with Eidus, D. M.) The principle of limit amplitude for domains of paraboloid type. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 3, 28-37. (A. Ramm) **80g:35019** 35B99
- Vinod, Hrishikesh D.** Equivariance of ridge estimators through standardization. A note on: "Two methods of evaluating Hoerl and Kennard's ridge regression" [Comm. Statist. A—Theory Methods 7 (1978), no. 12, 1133-1155; MR **80b:62052**] by P. A. V. B. Swamy, J. S. Mehta and P. N. Rappoport. With a reply by Swamy, Mehta and Rappoport, a rejoinder by Vinod and a further reply. *Comm. Statist. A—Theory Methods* **7** (1978), no. 12, 1157-1172. (R. W. Farebrother) **80c:62053** 62J07 (62J05)  
A survey of ridge regression and related techniques for improvements over ordinary least squares. *Rev. Econom. Statist.* **60** (1978), no. 1, 121-131. (Jerry A. Hausman) **80b:62085** 62J07
- Vinograd, R. É.** (with Bylov, B. F.; Lin, V. Ja.; Lokucievskii, O. V.) Topological causes of the anomalous behavior of some almost periodic systems. (Russian) *Problems of the asymptotic theory of nonlinear oscillations (Russian)*, pp. 54-61, 276, *Naukova Dumka, Kiev*, 1977. (Editors) **80d:58034** 58F10 (34D30)  
(with Elefteriadi, Ju. I.) Attainability of the estimate in the freezing method. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 11, 2089-2092, 2111. (Wolfgang Hahn) **80m:34049** 34D05



- Vinogradov, A. L. (with Venkov, A. B.) Asymptotic distribution of the norms of the classes and the spectral characteristics of cusp forms of weight zero for a Fuchsian group. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 6, 1373-1376. (Larry J. Goldstein) **80i:10035** 10D40 (10D45, 10H10)
- Vinogradov, A. M. The theory of higher infinitesimal symmetries of nonlinear partial differential equations. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 2, 274-278. (J. Christina) **80m:58045** 58H15 (5A30)
- Vinogradov, I. M. ★ Trigonometrical sums in number theory. Translated from the Russian. Statistical Publishing Society, Calcutta, 1978. viii+152 pp. (Editors) **80i:10055** 10G05
- Vinogradov, M. M. Algebraic de Rham and Spencer cohomology of smooth manifolds. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 5, 989-992. (B. Cenkl) **80i:58052** 58H10 (58A12, 58A99)
- Vinogradov, S. A. Continuity of perturbed integral operators, Cauchy type integrals, maximal operators. (Russian. English summary) Investigations on linear operators and the theory of functions, VIII. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 73 (1977), 24-34, 229-230. (Author's summary) **80i:47083** 47G05 (30E20)
- Vinogradov, S. S. (with Tuckin, Ju. A.; Šestopalov, V. P.) An effective solution to paired summator equations with the kernel in the form of adjoint Legendre functions. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 1, 80-83. (B. A. Bondarenko) **80i:33014** 33A45 (39B40)
- Vinogradov, V. S. Power growth solutions of systems of elliptic type. (Russian) *Complex analysis and its applications* (Russian), pp. 120-125, 665, "Nauka", Moscow, 1978. (From the text) **80i:35053** 35J45
- Vinogradova, I. A. A generalization of the Green formula. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 4, 26-35. (J. Mafik) **80i:26010** 26B20
- Vinogradskaja, A. V. (with Girko, V. L.) The control of the spectrum of linear operators in Hilbert space. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 38 (1979), 111-114, 166. (Editors) **80i:47016** 47A70 (47Bxx, 93C25)
- Vinogradskaja, T. M. Some singularities in the use of a linear model in multicriterion decision making problems. (Russian) *Current questions in control theory and practice* (Russian), pp. 125-130, 251, "Nauka", Moscow, 1977. (A. Aganbegian) **80i:90104** 90C30
- (with Makarov, I. M.) Global characteristic of the preference structure in the problems of choice. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 2, 312-315. (Ju. G. Pavlov) **80i:90012** 90A06 (90A07)
- Hierarchical relations and an algorithm for identifying nondominant sets. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 5, 1073-1077. (B. G. Mirkin) **80i:90003** 90A05
- Vinokurov, V. A. Extension of a linear mapping to the completion with the preservation of injectivity. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 5, 1036-1037. (M. M. Day) **80i:47004** 47A05
- Vinokurov, V. G. (with Ganibodžev, N. N.) Conditional functions in the trajectory theory of dynamical systems. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 5, 928-964, 1181. (K. Jacobs) **80i:28038** 28D05 (46L55)
- Vinsonhaler, C. Almost quasi-power injective abelian groups. *Rocky Mountain J. Math.* 9 (1979), no. 3, 569-576. (L. Procházka) **80i:20057** 20K15
- Vinter, R. B. Semigroups on product spaces with application to initial value problems with nonlocal boundary conditions. *Control of distributed parameter systems* (Proc. Second IFAC Sympos., Coventry, 1977), pp. 91-98, IFAC, Düsseldorf, 1978. (Andrzej W. Olbrot) **80i:93053** 93C99
- (with Stassinopoulos, G. I.) Conditions for convergence of solutions in the computation of optimal controls. *J. Inst. Math. Appl.* 22 (1978), no. 1, 1-14. (V. L. Bakke) **80i:65042** 65K10
- (with Stassinopoulos, G. I.) Continuous dependence of solutions of a differential inclusion on the right hand side with applications to stability of optimal control problems. *SIAM J. Control Optim.* 17 (1979), no. 3, 432-449. (Authors' summary) **80i:93068** 93C30
- (with Lewis, Richard M.) A verification theorem which provides a necessary and sufficient condition for optimality. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 84-89. (Authors' summary) **80i:49017** 49B10 (49C20)
- Vinti, Calogero A brief survey of the results obtained by a group of researchers at the University of Perugia on questions concerning the calculation of variations. (Italian) *Rend. Circ. Mat. Palermo* (2) 26 (1977), no. 1-3, 131-155 (1978). (Oscar Montaldo) **80i:49072** 49F25
- Viola, C. (with Goldfeld, D.) Mean values of L-functions associated to elliptic, Fermat and other curves at the centre of the critical strip. *J. Number Theory* 11 (1979), no. 3, 3. *Chowla Anniversary Issue*, 305-320. (A. I. Vinogradov) **80i:10046** 10H08 (14G10)
- Viola, Tullio (with Giacardi, Livia) The possible origins of a theorem of arithmetic known to the Greeks, in the light of their relations with the civilization that preceded them. (Italian) *Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* 112 (1978), no. 3-4, 185-191. (J. L. Berggren) **80m:01006** 01A20
- Dubois-Violette, E. See Dubois-Violette, E.
- Dubois-Violette, Michel See Dubois-Violette, Michel
- Vint, M. (with Fleming, Wendell H.) Some measure-valued population processes. *Stochastic analysis* (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1978), pp. 97-108, Academic Press, New York, 1978. (K. Gopalasamy) **80i:92016** 92A10
- Vinjanjan, G. V. The spectrum of a class of selfadjoint quadratic operator pencils. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 66 (1978), no. 4, 205-211. (H. Langer) **80i:47018** 47A70
- Spectral decomposition of a class of nonselfadjoint operators. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 68 (1979), no. 1, 24-28. (T. Ando) **80i:47016** 47A45
- Virag, I. A note on a theorem of Frobenius. *Mathematica (Cluj)* 20(43) (1978), no. 1, 89-90. (Gernot Stroth) **80i:20037** 20D45
- (with Maurer, I. Gy.) Sur les classes de tolérance d'une algèbre universelle. *Publ. Math. Debrecen* 25 (1978), no. 3-4, 237-240. (M. Gould) **80i:08003** 08A30
- Vissaro, M. A. (with Giozzi, F.) The interaction among dual strings as a manifestation of the gauge group. *Nuclear Phys. B* 164 (1980), no. 1, 141-151. (Authors' summary) **80i:81088** 81G05 (81E10)
- Vireer, A. D. Matrix and operator random products. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 2, 361-370. (Michael Keane) **80i:60018** 60B15 (60J05)
- Virian, Ion On certain Chern-Vranceanu spaces. *An. Univ. Craiova Mat. Fiz.-Chim. No. 5* (1977), 77-80. (A. P. Stone) **80i:53024** 53B25
- Viro, O. Ja. Construction of M-surfaces. (Russian) *Funkcional. Anal. i Priložen.* 13 (1979), no. 3, 71-72. (V. M. Harlamov) **80i:14034** 14J99
- Virovjanek, A. L. (with Malahov, A. N.) Approximate calculation of transition probability density of one-dimensional Markov processes. (Russian. English summary) *Izv. Vysš. Učebn. Zaved. Radiofizika* 22 (1979), no. 5, 560-565. (From the summary) **80i:82019** 82A15 (81C35)
- Viry, Guy Factorisation des polynômes à plusieurs variables à coefficients entiers. *RAIRO Inform. Théor.* 12 (1978), no. 4, 305-318. (Sami Harari) **80i:94056** 94B05 (10M05, 13B25, 90C99)
- Viscusi, W. Kip Insurance and individual incentives in adaptive contexts. *Econometrica* 47 (1979), no. 5, 1195-1207. (Author's summary) **80i:90033** 90A15
- Visentin, Francesca On the ordinal and absolute stability properties. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 64 (1978), no. 1, 67-72. (S. Ahmad) **80i:54045** 54H05 (34C35)
- Limiting equations and total stability. *Applied nonlinear analysis* (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978), pp. 721-726, Academic Press, New York, 1979. (A. I. Kirjanen) **80i:34060** 34D05
- Vishnavajjala, Rama Lakshmi On an optimization problem for a Wiener process. *Optimization in statistics. Comm. Statist. B—Simulation Comput.* 7 (1978), no. 4, 399-415. (Author's summary) **80i:90153** 90C50 (90C15)
- Vishwakarma, J. P. (with Verma, B. G.) Axially symmetric explosion in magnetogasdynamics. *Astrophys. and Space Sci.* 69 (1980), no. 1, 177-188. (Authors' summary) **80m:76056** 76L05 (76W05, 85A30)
- Višik, M. I. (with Komeč, A. I.) Infinite-dimensional parabolic equations connected with stochastic partial differential equations. (Russian) *Dokl. Akad. Nauk SSSR* 233 (1977), no. 5, 769-772. (Zbl 389:60046) **80i:35119** 35R15 (60H15)
- (with Komeč, A. I.) The solvability of the Cauchy problem for Kolmogorov's direct equation that corresponds to a stochastic equation of Navier-Stokes type. (Russian) *Complex analysis and its applications* (Russian), pp. 126-136, 665, "Nauka", Moscow, 1978. (A. A. Arsen'ev) **80i:35128** 35R60 (35Q10, 58D25, 60Hxx)
- (with Fursikov, A. V.) Translationally homogeneous statistical solutions and individual solutions with infinite energy of a system of Navier-Stokes equations. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 5, 1005-1031, 1213. (A. A. Arsen'ev) **80i:35149** 35Q10 (28C20, 65H15)
- (with Komeč, A. I.) The Cauchy problem for infinite-dimensional second-order parabolic differential equations. (Russian) *Trudy Sem. Petrovsk.* No. 4 (1978), 3-31. (L. A. Ivanov) **80i:35090** 35R15 (58D25)
- Višik, M. M. Applications of the Šnirel'man integral in non-Archimedean analysis. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 1(205), 223-224. (Neal Koblitz) **80i:12015** 12B40 (46P05, 47A60, 47B99)
- Višik, S. M. (with Obuhov, A. M.) Symmetrizable and Hamiltonian systems. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 3, 502-511, 691. (J. S. Joel) **80i:34039** 34C20 (35Q20, 58F05)
- Vjelnescu, M. (with Ghika, G.) Zeta-function regularization of the one-loop effective potential. (Italian and Russian summaries) *Nuovo Cimento A* (11) 46 (1978), no. 1, 25-36. (Aubrey Truman) **80i:81079** 81E15
- Vilins'kij, V. A. (with Rabinovič, Z. L.) Possible improvement of computer performance by increasing the speed of vector-matrix operations. *Kibernetika (Kiev)* 1979, no. 1, 120-123 (Russian); translated as *Cybernetics* 15 (1979), no. 1, 142-147. (From the text) **80i:68022** 68B20 (68C05)
- Violante, Augusto Study of a free boundary filtration problem by a nonlinear variational equation. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 1, 212-237. (Sadakazu Aizawa) **80i:35121** 35Q20 (76S05)
- Višnevskij, B. L. (with Grigorjan, V. G.) Regularization of the solution of an integral Wiener-Hopf equation in a frequency domain. (Russian) *Voprosy Teor. Sistem Avtomat. Upravlenija* 1978, no. 4, 21-30, 132. (Authors' summary) **80i:93111** 93D99
- Visscher, W. (with Goldman, André) Applications of integral equations in particle-size statistics. Issue devoted to numerical methods for solving integral equations. *J. Optim. Theory Appl.* 24 (1978), no. 1, 207-220. (Authors' summary) **80i:52010** 52A45 (52A22, 60D05, 65R10)
- Visser, Patrice E. (with de Haan, Werner A.) Quotas and equilibrium relative prices in the trade restricting country. *Econom. Lett.* 2 (1979), no. 3, 251-255. (Ralf Kern) **80i:90028** 90A14
- Viswanathan, V. (with Liu, Ruey Wen) Sequentially linear fault diagnosis. I. Theory. Special issue on automatic analog fault diagnosis. *IEEE Trans. Circuits and Systems* 26 (1979), no. 7, 490-496. (G. Saucier) **80i:94031a** 94C05
- (with Liu, Ruey Wen) Sequentially linear fault diagnosis. II. The design of diagnosable systems. Special issue on automatic analog fault diagnosis. *IEEE Trans. Circuits and Systems* 26 (1979), no. 7, 558-564. (G. Saucier) **80i:94031b** 94C05
- Viswanadham, N. (with Kudva, P.; Ramakrishna, A.) Observers for linear systems with unknown inputs. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 113-115. (Authors' summary) **80i:93020** 93B07
- Viswanath, K. Quaternionic representations of topological groups. *J. Indian Math. Soc. (N.S.)* 41 (1977), no. 1-2, 149-162. (Gerald A. Goldin) **80i:22003** 22A25
- Viswanathan, B. (with Banerjee, P. K.; Kalbfleisch, J. G.) Three-way decision with a coin. *Utilities Math.* 15 (1979), 183-191. (Authors' summary) **80i:90180** 90D35 (65C99)
- Viswanathan, K. (with Sharma, J. P.) On the matched asymptotic solution of the diffraction of a plane elastic wave by a semi-infinite rigid boundary of finite width. *Modern problems in elastic wave propagation* (Proc. IUTAM Sympos., Northwestern Univ., Evanston, Ill., 1977), pp. 171-195, Wiley, New York, 1978. (F. V. Pohle) **80i:73028** 73D25 (86A15)
- Viswanathan, K. S. (with Yee, Jae Hyung) Massless fermions coupled to N-pseudoparticle field: isospin  $\frac{1}{2}$ . (French summary) *Canad. J. Phys.* 56 (1978), no. 11, 1442-1446.

- (Authors' summary) **80f:81116** 81G45
- Vit, K. Smith-like predictor for control of parameter-distributed processes. *Internat. J. Control* **30** (1979), no. 2, 179–193. (T. Prasad) **80j:93063** 93C20
- Vitale, Richard A. Regression with given marginals. *Ann. Statist.* **7** (1979), no. 3, 653–658. (C. R. Rao) **80g:62052** 62J05 (62G05)
- Vitányi, Paul M. B. (with van Emde Boas, Peter) A note on the recursive enumerability of some classes of recursively enumerable languages. *Inform. Sci.* **14** (1978), no. 1, 89–91. (Authors' summary) **80f:68037** 68C30 (03D05)
- (with Savitch, Walter J.) On inverse deterministic pushdown transductions. *J. Comput. System Sci.* **16** (1978), no. 3, 423–444. (I. Hal Sudborough) **80a:68066** 68D35
- Vitásek, E. (with Taufer, J.)  $A$ -stability and numerical solution of abstract differential equations. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977)*, pp. 415–423. *Lecture Notes in Math.*, **703**, Springer, Berlin, 1979. (U. Tippenhauer) **80k:65050** 65J05 (65L05)
- Vitek, V. Remarks to the meteorological applications of finite difference methods. *The use of finite element method and finite difference method in geophysics (Proc. Summer School, Liblice, 1977)*, pp. 37–43. *Česk. Akad. Věd, Prague, 1978.* (J. S. Joel) **80g:86007** 86A10 (65P05)
- Viterbo, Francesco M. (with Frosini, Graziano) An algorithm for evaluating the frequency of a rotating vector. *IEEE Trans. Comput.* **28** (1979), no. 8, 560–566. (Authors' summary) **80g:94012** 94A12 (68C05)
- Vitiello, G. (with Martellini, M.; Sodano, P.) Vacuum structure for a quantum field theory in curved space-time. (Italian and Russian summaries) *Nuovo Cimento A* (11) **48** (1978), no. 3, 341–358. (J. G. Taylor) **80a:81087** 81E15 (58E30, 83C45)
- (with Barut, A. O.; Rabuffo, I.) On electrostatics with internal fermionic excitations. *Lett. Nuovo Cimento* (2) **26** (1979), no. 8, 253–255. (P. Achuthan) **80h:81084** 81L05 (81G25)
- (with de Concini, Corrado) Quantization about a Yang-Mills pseudoparticle and the conformal group contraction. (Italian and Russian summaries) *Nuovo Cimento A* (11) **51** (1979), no. 3, 358–366. (G. Vitiello) **80c:81054** 81E10
- Vitins, M. Error bounds in the method of averaging based on properties of average motion. *SIAM J. Math. Anal.* **10** (1979), no. 2, 331–336. (M. M. Konstantinov) **80h:34050** 34C29
- Vitiška, N. I. Multistage one-way and nonordinary switching systems with an arbitrary number of separate inputs and outputs. (Russian) *Information networks and their analysis (Russian)*, pp. 135–140, 218, "Nauka", Moscow, 1978. (Author's summary) **80k:94056** 94C10
- Vitjaev, E. E. Regularities in the language of empirical systems. (Russian) *Vychisl. Sistemy* **76** (1978), 3–14, 154. (Author's summary) **80k:68083** 68G10 (03B99)
- Vitjuk, A. N. Numerical solution of the Goursat problem for partial differential-functional equations. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* **38** (1979), 16–26, 162. (I. P. Gavriljuk) **80k:65081** 65N10
- de Vito, Paola (with Zirilli, Francesco) Normal elliptic curves and  $C^{*+1}$ -systems. (Italian) *Ricerche Mat.* **27** (1978), no. 2, 319–332. (H. Mizuno) **80d:14019** 14H45 (20N15)
- Vitória, José Matricial norms and the difference between the zeros of determinants with polynomial elements. *Linear Algebra Appl.* **28** (1979), 279–283. (Donald Kershaw) **80k:15014** 15A18 (15A42, 65F35)
- Vital, P. R. (with Vasudevan, R.; Vijayakumar, A.) On a first passage time problem. *Proceedings of the Conference on Mathematical Analysis and its Applications (Inst. Engrs., Mysore, 1977)*, pp. M82–M91. *Mathematics Rep.*, **91**, Inst. Math. Sci., Madras, 1978. (Authors' summary) **80k:60108** 60J75
- Vitrih, V. A. (with Kuklin, G. N.; Tomnikov, G. N.; Cybatov, V. A.) Optimization of the structures of experimental data acquisition systems. (Russian) *Automat. i Vychisl. Tehn. (Riga)* **1978**, no. 2, 64–71, 93. (Authors' summary) **80k:90063** 90B10
- Vivaldi, Maria Agostina (with Platone Garroni, Maria Giovanna) Existence, regularity and dual estimates for the solution of a quasivariational inequality relative to a quasilinear operator. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) **16** (1979), no. 1, 154–167. (Carlo Sbordone) **80i:35062** 35J20
- (with Matzeu, Michele) On the regular solution of a nonlinear parabolic quasivariational inequality related to a stochastic control problem. *Comm. Partial Differential Equations* **4** (1979), no. 10, 1123–1147. (Emmanuel Nicholas Barron) **80h:49005** 49A29 (93C99)
- (with Platone Garroni, Maria Giovanna) Régularité de la solution forte de problèmes non linéaires d'évolution. *Czechoslovak Math. J.* **29(104)** (1979), no. 3, 430–450. (Jacques Robert) **80i:35095** 35K22
- Vivros, T. M. (with Homenko, M. P.) Properties of  $S\bar{K}$ -graphs. (Russian) *Graph theory (Russian)*, pp. 128–134. *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev, 1977.* (E. Hakinullin) (RZMat 1978:12 V980) **80f:05034** 05C10
- (with Homenko, M. P.) Properties of the matrix of independent cycles of a graph. (Russian) *Graph theory (Russian)*, pp. 202–209. *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev, 1977.* (From the text) **80f:05061** 05C50 (05C10)
- Vizgin, V. P. Hilbert and the problem of general covariant equations of gravitation. (Russian) *Istor.-Mat. Issled.* **24** (1979), 226–246, 388. (H. Tredor) **80k:01049** 01A60 (83–03)
- Právková-Vizková, Zuzana See Právková-Vizková, Zuzana
- Vizviri, B. Lagrange multipliers in integer programming. (Russian summary) *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* **7** (1978), no. 5, 393–406. (C. R. Bector) **80f:90094** 90C10
- Vjateslavov, N. S. The rate of approximation of piecewise-analytic functions by rational fractions in  $L_p$  metrics,  $0 < p < \infty$ . (Russian) *Mat. Sb. (N.S.)* **108(150)** (1979), no. 2, 219–228, 304. (Anthony G. O'Farrell) **80h:41006** 41A20
- Vjaklin, A. K. (with Bermant, M. A.) Simulation of specialists' training profile. *Automat. i Telemekh.* **1978**, no. 10, 95–103. (Russian. English summary; translated as *Automat. Remote Control* **39** (1978), no. 10, part 1, 1485–1492 (1979). (Authors' summary) **80c:93019** 93A99
- Vjazovik, A. P. Discrete synthesis of systems with a finite time of existence. (Russian) *Control of dynamical systems (Russian)*, pp. 28–34, 311. *Leningrad. Univ., Leningrad, 1978.* (Author's summary) **80c:93044** 93B05
- V'jugin, O. V. Transition phenomena in branching processes with a final type. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **23** (1978), no. 1, 169–175. (A. I. Nagaez) **80c:60108** 60J80
- Vlaar, N. J. (with Nolet, G.) Seismic surface waves. *Modern problems in elastic wave propagation (Proc. IUTAM Sympos., Northwestern Univ., Evanston, Ill., 1977)*, pp. 419–443. *Wiley, New York, 1978.* (I. M. Longman) **80f:86003** 86A15 (73D05)
- Vlach, Milan Augmented penalty function technique for optimal control problems. *Optimization and operations research (Proc. Workshop, Univ. Bonn, Bonn, 1978)*, pp. 255–260. *Lecture Notes in Econom. and Math. Systems*, **157**, Springer, Berlin, 1978. (Gerhard Telschow) **80c:49017** 49B21
- (with Zimmermann, Karel) On an important jubilee in the life of František Nožička. (Czech) *Ekon.-Mat. Obzor* **14** (1978), no. 3, 331–332. (Editors) **80b:01027** 01A70
- One-processor scheduling with nonuniform ready times. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* **10** (1979), no. 1, 93–96. (Author's summary) **80g:90066** 90B35 (68C15)
- Vladimirov, A. A. Methods of calculating many-loop diagrams and renormalization group analysis of  $\varphi^4$ -theory. (Russian. English summary) *Teoret. Mat. Fiz.* **36** (1978), no. 2, 271–278. (V. V. Sokolov) **80c:81090** 81E15 (32L20)
- (with Nesterov, Ju. E.; Čekanov, Ju. N.) Uniformly convex functionals. (Russian) *Vestnik Moskov. Univ. Ser. XV Vychisl. Mat. Kibernet.* **1978**, no. 3, 12–23. (Vladimir L. Levin) **80h:49006** 49A27 (46G05)
- (with Nesterov, Ju. E.; Čekanov, Ju. N.) Uniformly quasiconvex functionals. (Russian) *Vestnik Moskov. Univ. Ser. XV Vychisl. Mat. Kibernet.* **1978**, no. 4, 18–27. (M. M. Cvetanov) **80f:49021** 49B34 (46G99)
- (with Kazakov, D. I.; Tarasov, O. V.) Calculation of critical exponents by quantum field theory methods. *Ž. Eksp. Teoret. Fiz.* **77** (1979), no. 3, 1035–1045. (Russian; translated as *Soviet Phys. JETP* **50** (1979), no. 3, 521–526. (Authors' summary) **80m:82024** 82A25 (81E15)
- Vladimirov, D. A. ★ *Boolesche Algebren*. Translated from the Russian and edited by Günther Eisenreich. *Mathematische Lehrbücher und Monographien, II. Abteilung Mathematische Monographien*, **29**, Akademie-Verlag, Berlin, 1978. viii + 245 pp. (Editors) **80b:06001** 06–01 (06E99)
- The independence of subalgebras and partitions. (Russian. English summary) *Investigations in the theory of probability distributions, IV. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **85** (1979), 30–38, 238, 244. (T. Neubrunn) **80j:60004** 60A10 (28A60)
- Vladimirov, V. ★ *Distributions en physique mathématique*. Translated from the Russian by Irina Pétrova. "Mir", Moscow, 1979. 280 pp. (Editors) **80k:46046** 46F10 (00A69, 32A40)
- Vladimirov, V. A. Stability of a tornado type flow. (Russian) *Dinamika Splošn. Sredy* **30** 37 *Nestacionarnye Problemy Mekhaniki* (1978), 50–62, 150. (Author's summary) **80c:76024** 76E20
- Vortex impulse of bounded flows of an ideal incompressible fluid. (Russian) *Ž. Prikl. Meh. i Tehn. Fiz.* **1979**, no. 2, 43–51, 181. (Author's summary) **80c:76011** 76C99
- Vladimirov, V. S. Estimation of the boundary values of the growth of nonnegative pluriharmonic functions in a tube domain over a skew cone. (Russian) *Complex analysis and its applications (Russian)*, pp. 137–148, 665, "Nauka", Moscow, 1978. (Guy Laville) **80b:32003** 32A07 (32F05)
- ★ *Обобщенные функции в математической физике*. (Russian) [Generalized functions in mathematical physics] Second edition, corrected and supplemented. *Современные Физико-Технические Проблемы. [Contemporary Problems in Physics and Engineering]* "Nauka", Moscow, 1979. 319 pp. (Editors) **80j:46062a** 46Fxx (00A69, 32–01)
- ★ *Generalized functions in mathematical physics*. Translated from the second Russian edition by George Yankovsky [G. Jankovskij]. "Mir", Moscow, 1979. xii + 362 pp. (Editors) **80j:46062b** 46Fxx
- See also Favorov, S. Ju. **80c:32015**; Conference: *Mathematical Problems of Quantum Field Theory and Quantum Statistics*, **80m:81005a**; and Conference: *Mathematical Problems of Quantum Field Theory and Quantum Statistics*, **80m:81005b**
- Vladimirova, L. V. (with Ermakov, S. M.) Numerical construction of cubature formulae. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* **51** (1978), 16–37, 226. (Authors' summary) **80c:65056** 65D32
- Vladimirskij, Ju. N. Some topological properties of countably additive cylindrical measures. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 1, 211–215. (A. Badrikian) **80h:28020** 28C20 (60B11)
- On conditions for extendibility of a cylindrical measure in a conjugate Banach space to Radon measure. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 3, 574–579. (Werner Linde) **80h:28019** 28C15 (47B10, 60B11)
- Vlasov, A. A. ★ *Нелокальная статистическая механика*. (Russian) [Nonlocal statistical mechanics] "Nauka", Moscow, 1978. 264 pp. (Andrzej Zardecki) **80c:82013** 82A05
- (with Folomeškin, V. N.) Energy of gravitational waves in the Einstein gravitation theory. (Russian. English summary) *Teoret. Mat. Fiz.* **38** (1979), no. 2, 147–152. (S. G. Mamaev) **80g:83014** 83C35
- (with Logunov, A. A.; Denisov, V. I.; Mestvirishvili, M. A.; Folomeškin, V. N.) New concepts of space-time and gravitation. (Russian. English summary) *Teoret. Mat. Fiz.* **40** (1979), no. 3, 291–328. (Kishore Marathe) **80c:83046** 83D05
- Vlasov, A. T. (with Komrakov, B. P.) Automorphisms of structures on smooth manifolds. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **23** (1979), no. 2, 104–107, 188. (P. Ver Eecke) **80c:53034** 53C10 (58H05)
- Vlasov, Ju. A. (with Lebedev, V. I.; Finogenov, S. A.) Asymptotically optimal iteration methods that take into account information on the spectrum of the operator and the distribution of the initial error. (Russian) *Computational methods in linear algebra (Proc. Fourth All-Union Conf., Acad. Sci. USSR, Novosibirsk, 1976)*, pp. 61–78. *Akad. Nauk SSSR Sibirsk. Otdel., Vychisl. Centr, Novosibirsk, 1977.* (E. G. Djakonov) **80m:65034** 65F10 (65F15)
- Vlasov, L. P. The uniqueness of generalized elements of best approximation. (Russian) *Mat. Zametki* **25** (1979), no. 2, 161–175, 317. (M. Vlach) **80j:41065** 41A65 (41A52, 46B99)
- Vlasov, V. K. (with Ljubimova, E. A.) Mathematical models in geothermy. (Russian)



- Problems in mathematical physics and numerical mathematics* (Russian), pp. 81-91, 324, "Nauka", Moscow, 1977. (Authors' summary) **80b:86007** 86A99
- Vitek, Vladimir A note to a certain pair of parametric integrals. (Czech and Russian summaries) *Sb. Práci Přírodověd. Fak. Univ. Palackého v Olomouci Mat.* **57** (1978), 13-26. (F. I. Ibragimov) **80b:44008** 44A10 (30C35)
- van Vleck, F. S. See Van Vleck, F. S.
- V'leva, V'rbinska (with Marinov, Penčo) Thermoelastic behavior of two-continuum in a small deformation field. (Bulgarian. English summary) *Annuaire Univ. Sofia Fac. Math. Méc.* **69** (1974/75), 107-117 (1979). (Authors' summary) **80m:73073** 73U05
- van Vliet, K. M. On the two Green's function procedures for transport noise. *Phys. A* **99** (1979), no. 1-2, 345-349. (Authors' summary) **80i:82035** 82A70
- V'nder, Dimit'r L. (with Dimitrova, S. S.) Optimal kernels of Rosenblatt-Parzen type. (Russian) *C. R. Acad. Bulgare Sci.* **31** (1978), no. 4, 381-383. (L. Rejto) **80b:62054** 62G05
- A proof of the Lévy-Hinčin formula via the Bochner and the Krein-Mil'man theorems. (Russian) *C. R. Acad. Bulgare Sci.* **31** (1978), no. 4, 385-387. (V. M. Kruglov) **80b:60036** 60E07 (42A38)
- See also Kublits, J., **80d:10075**
- Voss, C. H. (with Lau, August V. W.) Connectedness of the hyperspace of closed connected subsets. *Comment. Math. Prace Mat.* **20** (1977/78), no. 2, 393-396. (A. G. Hitchcock) **80b:54009** 54B20 (54D05)
- Vock, E. (with Deift, P.; Hunziker, W.; Simon, Barry) Pointwise bounds on eigenfunctions and wave packets in  $N$ -body quantum systems. IV. *Comm. Math. Phys.* **64** (1978/79), no. 1, 1-34. (Teruo Ikebe) **80b:81016** 81C05 (35P15, 81H05)
- Vodop'janov, S. K. (with Gol'dštejn, V. M.; Latfullin, T. G.) A criterion for the extension of functions of the class  $L_2$  from unbounded plane domains. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 2, 416-419, 464. (W. R. Madych) **80i:46061** 46E35
- Vodop'janova, G. I. (with Krylov, V. V.; Ponomarev, D. M.) Matrix representation of the identification operator and its application in measurement techniques. (Russian) *Avtomat. i Vychisl. Tehn. (Riga)* **1978**, no. 1, 58-62, 95. (K. P. Haderler) **80g:65017** 65D25
- Voelkel, Lutz (with Nepomnjaščij, V. A.) Zur Vollständigkeit von Befehlssystemen. (English and Russian summaries) *Elektron. Informatsionnaya Kibernet.* **14** (1978), no. 1-2, 43-48. (George Tourlakis) **80a:03052** 03D10 (68C20)
- Voeller, J. (with Funke, Helmut) Characterization of Fisher's "ideal index" by three reversal tests—a note. *Statist. Hefte (N.F.)* **20** (1979), no. 1, 54-60. (Kazuo Sato) **80g:90016** 90A12
- Voevodin, A. F. (with Pavlov, N. N.) Solution of mixed boundary value problems for two-dimensional heat equations. (Russian) *Dinamika Splošn. Sredy No. 35 Dinamicheskie Zadachi Mehaniki Splošnykh Sred* (1978), 29-39, 173. (Authors' summary) **80c:65120** 65P05
- (with Šugrin, S. M.) Numerical calculation of one-dimensional flows of water in river channel and canal systems. (Russian) *Dinamika Splošn. Sredy No. 35 Dinamicheskie Zadachi Mehaniki Splošnykh Sred* (1978), 40-60, 173. (Authors' summary) **80c:65139** 65P05 (76B99)
- The double sweep method for difference equations with constant coefficients. (Russian) *Dinamika Splošn. Sredy No. 36 Dinamika Židkosti so Svobodnymi Granitsami* (1978), 19-37, 159-160. (Authors' summary) **80c:65121** 65Q05
- Voevodin, V. V. ★Вычислительные основы линейной алгебры. (Russian) [Numerical foundations of linear algebra] "Nauka", Moscow, 1977. 303 pp. (D. Greenspan) **80c:65007** 65-01 (65Fxx)
- Conjugate direction methods. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **19** (1979), no. 5, 1313-1317, 1358. (Authors' summary) **80i:65035** 65F10
- Vogan, David A., Jr. Irreducible characters of semisimple Lie groups. I. *Duke Math. J.* **46** (1979), no. 1, 61-108. (A. U. Klimyk) **80g:22016** 22E46
- Vogel, Annie Mesures de probabilité sur le spectre d'un anneau régulier et applications. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 3, A153-A156. (Authors' summary) **80m:16010** 16A30
- Vogel, Helmut Eine beweistheoretische Anwendung partieller stetiger Funktionale. *Arch. Math. Logik Grundlag.* **19** (1978/79), no. 1-2, 65-78. (Carlo Cellucci) **80b:03087** 03F35 (03D65)
- Über die mit dem Bar-Rekursor vom Typ 0 definierbaren Ordinalzahlen. *Arch. Math. Logik Grundlag.* **19** (1978/79), no. 3-4, 165-173. (H. Schwichtenberg) **80m:03092** 03F10 (03F15)
- Über ein mit der Bar-Induktion verwandtes Schema. *Z. Math. Logik Grundlag. Math.* **25** (1979), no. 5, 465-473. (H. Schwichtenberg) **80m:03095** 03F50 (03F10)
- Vogel, Pierre (with Hausmann, Jean-Claude) The plus construction and lifting maps from manifolds. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part I*, pp. 67-76. *Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I., 1978.* (R. M. F. Moss) **80c:57016** 57N70 (57R90)
- (with Hausmann, Jean-Claude) Reduction of structures on manifolds by semi-s-cobordism. *Topology and algebra (Proc. Colloq., Eidgenöss. Tech. Hochschule, Zurich, 1977)*, pp. 117-124. *Monographies Enseignement Math.*, 26. Univ. Genève, Genève, 1978. (J. P. E. Hodgson) **80b:57031** 57R80
- Vogel, Walter Halbnormen und Vektoroptimierung. *Quantitative Wirtschaftsforschung*, pp. 703-714. *Mohr, Tübingen*, 1977. (Authors' summary and introduction) **80b:90134** 90C30 (49A50)
- See also Stochastic control theory and stochastic differential systems, **80f:60004**
- Vogel, Wolfgang (with Stückrad, Jürgen) Toward a theory of Buchsbaum singularities. *Amer. J. Math.* **100** (1978), no. 4, 727-746. (Manfred Herrmann) **80d:14004** 14B05 (13H15)
- (with Stückrad, Jürgen) On Segre products and applications. *J. Algebra* **54** (1978), no. 2, 374-389. (Mary Schaps) **80c:14031** 14M05
- (with Boda, Eduard) On system of parameters, local intersection multiplicity and Bezout's theorem. *Proc. Amer. Math. Soc.* **78** (1980), no. 1, 1-7. (D. Kirby) **80i:14011** 14B99 (13H15)
- Vogelung, Ingo (with Finsinger, Jörg) A regulatory adjustment process for optimal pricing by multiproduct monopoly firms. *Bell J. Econom.* **10** (1979), no. 1, 157-171. (Authors' summary) **80c:90012** 90A12
- Vogl, F. Das Wachstum ganzer Lösungen gewisser linearer Funktional-Differentialgleichungen. (English summary) *Monatsh. Math.* **86** (1978/79), no. 3, 239-250. (Ch. G. Philos) **80b:34093** 34K15
- Vogt, Dietmar (with Börgens, Manfred; Meise, Reinhold) Fonctions holomorphes sur certains espaces échelonnés et  $\lambda$ -nuclearité. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 5, A229-A232. (Authors' summary) **80m:46008** 46A45 (46G20)
- Vogt, E. (with Epstein, D. B. A.) A counterexample to the periodic orbit conjecture in codimension 3. *Ann. of Math.* (2) **108** (1978), no. 3, 539-552. (C. S. Hartzman) **80c:57014** 57R30 (34C25, 58F18, 58F22, 58F25)
- Vogt, H. (with Haderler, K. P.; Rothe, Franz) Stationary solutions of reaction-diffusion equations. *Math. Methods Appl. Sci.* **1** (1979), no. 3, 418-431. (C. V. Pao) **80i:35091** 35K20 (92A05)
- Vogt, R. M. (with Boardman, J. M.) Tensor products of theories, application to infinite loop spaces. *J. Pure Appl. Algebra* **14** (1979), no. 2, 117-129. (J. P. May) **80i:55012** 55P47 (18C10)
- Vogt, Renate Cobordismus von Knoten. *Knot theory (Proc. Sem., Plans-sur-Bex, 1977)*, pp. 218-226. *Lecture Notes in Math.*, 685. Springer, Berlin, 1978. (Oscar Burlet) **80b:57065** 57R90 (57Q45)
- Vogt, W. Stabile Differenzenschemata hoher Konvergenzordnung für Randwertprobleme bei Systemen gewöhnlicher Differentialgleichungen. *Wiss. Z. Tech. Hochsch. Ilmenau* **25** (1979), no. 1, 105-130. (Author's introduction) **80i:65095** 65L10
- Vogt, William G. (with Lee, Jang G.; Mickle, Martin H.) Optimal decomposition of large-scale networks. *IEEE Trans. Systems Man Cybernet.* **9** (1979), no. 7, 369-375. (Authors' summary) **80g:94103** 94C15 (90B10, 93A15)
- (with Mahmoud, M. S.; Mickle, Martin H.) Decomposition and coordination methods for constrained optimization. *J. Optim. Theory Appl.* **28** (1979), no. 4, 549-584. (Authors' summary) **80c:65070** 65K10 (90C30)
- Vo Han' Fuk (with Četverikov, V. M.) Generalized solitons of the Schrödinger equation with a unitary nonlinearity. (Russian. English summary) *Teoret. Mat. Fiz.* **36** (1978), no. 3, 345-351. (V. E. Šestopal) **80i:81025** 81C05 (35Q20)
- Voichevskii, S. A. (with Makarov, V. L.; Prikazčikov, V. G.) Error of the method of nets in an eigenvalue problem for fourth-order ordinary differential equations. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* **No. 38** (1979), 138-145, 167. (Authors' summary) **80i:65090** 65L15
- Voicu, Mihail Dissipative and codissipative operators, and applications. (Romanian. English summary) *Stud. Cerc. Mat.* **31** (1979), no. 3, 365-383. (Authors' summary) **80g:47042** 47B44 (47D05)
- Voiculescu, Dan (with Pearcy, Carl; Foias, Ciprian) Biquasitriangular operators and quasimilarity. *Linear spaces and approximation (Proc. Conf., Math. Res. Inst., Oberwolfach, 1977)*, pp. 47-52. *Internat. Ser. Numer. Math.*, 40. Birkhäuser, Basel, 1978. (K. Veselić) **80b:47022** 47A65
- Some results on norm-ideal perturbations of Hilbert space operators. *J. Operator Theory* **2** (1979), no. 1, 3-37. (Richard Bouldin) **80m:47012** 47A55 (47B15)
- Voigt, Alexander The method of lines for nonlinear parabolic differential equations with mixed derivatives. *Numer. Math.* **32** (1979), no. 2, 197-207. (Todd Dupont) **80c:65087** 65M10 (65N10)
- Voigt, Jürgen (with Tafel, Werner; Weidmann, Joachim) The singular sequence problem. *Acta Sci. Math. (Szeged)* **40** (1978), no. 3-4, 383-388. (Harro Heuser) **80a:47008** 47A10 (47B15)
- On properties related to  $A$ -compactness, an example. *Proc. Roy. Soc. Edinburgh Sect. A* **81** (1978), no. 3-4, 259-265. (Harro Heuser) **80b:47037** 47B25
- (with Greenberg, William; Zweifel, P. F.) Discretized Boltzmann equation: lattice limit and non-Maxwellian gases. *J. Statist. Phys.* **21** (1979), no. 6, 649-657. (Carlo Cercignani) **80m:82033** 82A40 (35Q20, 76P05, 82A67)
- (with Greenberg, William; Zweifel, P. F.) Convergence of a lattice model of the Boltzmann equation. *Lett. Math. Phys.* **3** (1979), no. 4, 293-296. (T. Kahan) **80i:82085** 82A05
- (with Arthur, M. D.; Zweifel, P. F.) An existence and uniqueness theorem for the Vlasov-Maxwell equations. *Transport Theory Statist. Phys.* **8** (1979), no. 1, 23-28. (M. Drăganu) **80b:82027** 82A45 (35K99, 82A70)
- Voigt, R. G. (with George, Alan; Poole, W. G., Jr.) Analysis of dissection algorithms for vector computers. *Comput. Math. Appl.* **4** (1978), no. 4, 287-304. (Authors' summary) **80c:65084** 65F30
- Voikov, G. K. Combinatorial complexity of finite semigroups. (Russian) *C. R. Acad. Bulgare Sci.* **31** (1978), no. 6, 635-638. (J. Dénès) **80b:20067** 20M35
- Voikov, T. Synthesis of minimal dynamical circuits. (Bulgarian. Russian and English summaries) *Avtomat. Izčisl. Tehn.* **12** (1978), no. 6, 39-48, 2, 3. (From the summary) **80g:94095** 94C10
- Voina, O. A. Sojourn time in a fixed subset and consolidation of the states of random processes with an arbitrary phase space. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist.* **No. 20** (1979), 30-39, 156. (Stefan P. Niculescu) **80c:60103** 60K15
- Voinalović, V. M. The Benders method in two-level linear hierarchical systems. (Russian) *Kibernet. i Vychisl. Tehn.* **No. 43** (1979), 25-29, 133. (Authors' summary) **80j:90010** 93A13
- Volina, Christine (with Malgoire, Jean) Spectre d'un espace annelé et dualité de Stone généralisée. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 8, A449-A451. (Authors' summary) **80j:53026** 55U30 (18F20)
- (with Malgoire, Jean) Découpe d'un espace topologique suivant un fermé. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 10, A507-A510. (Authors' summary) **80b:57033** 57N99
- Voitila, Ju. V. (with Kornilova, L. E.) Some properties of antichains of partially ordered sets. (Russian. English summary) *Kibernetika (Kiev)* **1978**, no. 5, 90-91. (T. Katriňák) **80c:06004** 06A10 (05C35, 94C15)
- Voitländer, J. (with Brüggemann, R.) Zur Unabhängigkeit und Wohldefiniertheit der Hückel-Parameter. (English summary) *Math. No.* **5** (1979), 73-103. (J. S. Joel) **80b:81088** 81G55 (58C28)
- (with Brüggemann, R.) Konsequenzen einer abbildungstheoretischen Deutung von Hückel-Parametern für die Diskussion von Charge-Transfer-Effekten in Dreizentrensystemen. (English summary) *Z. Naturforsch.* **A 34** (1979), no. 1, 13-21. (J. S. Joel) **80b:81081** 81G55 (58C27)

- Vojir, W. (with Kurs, H.) A resonant response to random excitation. *SIAM J. Appl. Math.* 37 (1979), no. 2, 382-395. (S. M. Hrisanov) **80a:34076** 34F05 (60H10)
- Vojtech, László On some problems in the elementary theory of numbers. (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* 32 (1975), 47-67. (L. C. Egan) **80i:10021** 10A99
- Vojvodić, Gradimir Some theorems for model theory of mixed-valued predicate calculi. *Publ. Inst. Math. (Beograd) (N.S.)* 23(37) (1978), 229-234. (Tōru Miyama) **80a:03050** 03C90 (03B50)
- Voković, V. L. (with Lavrinenko, V. P.; Mal'cev, V. V.) Methods of the theory of sensitivity in the problem of determining the domains of admissible variations of parameters of an automatic control system. (Russian) *Kibernet. i Vychisl. Tehn.* 1978, no. 39, 98-102, 115. (From the introduction) **80a:93161** 93E10
- Vokčić, Aleš On the set of definition of measures. (Italian, English summary) *Boll. Un. Mat. Ital. A (5)* 16 (1979), no. 1, 186-189. (V. M. Klimkin) **80e:28004** 28A05
- Vodinskaja, M. I. (with Gol'din, V. Ja.; Gol'dina, D. A.; Kalitkin, N. N.; Kuzjuk, V. A.) Gas dynamics scheme of density integration. (Russian, English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 116* (1979), 19 pp. (Authors' summary) **80k:76064** 76N15 (65P05)
- Volevski, L. R. Investigation of Helmholtz-Kelvin instability. (Russian, English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 38* (1979), 71 pp. (Author's summary) **80e:76026** 76E99
- (with Gindikin, S. G.) Sur le problème mixte pour des opérateurs différentiels  $(2b+1)$ -hyperboliques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 7, A437-A439. (Authors' summary) **80i:35122** 35L99
- Volger, Hugo Preservation theorems for limits of structures and global sections of sheaves of structures. *Math. Z.* 166 (1979), no. 1, 27-54. (J. Lambek) **80d:03029** 03C40 (03C60, 18F20)
- Volin, A. P. See Questions in the dynamical theory of seismic wave propagation. **80m:73033a**
- Volk, Günter Grundfunktionen und verallgemeinerte Funktionen auf topologischen Gruppen. III. *Math. Nachr.* 87 (1979), 161-170. (Paul Milnes) **80g:46035** 46F05 (22A10, 43A15)
- Volk, Otto Über rhombische Netzeinteilung auf Flächen. (English summary) *Z. Angew. Math. Phys.* 30 (1979), no. 2, 374-387. (Vladislav Goldberg) **80e:53003** 53A05 (01A55)
- Volkenshtajn, È. (with Jastrenskii, A. I.) Randomness of demand and stochastic models of industrial production. (Russian, English summary) *Izvest. Operacii i ASU No. 13* (1979), 112-116, 136. (Authors' summary) **80g:90118** 90C50 (90A11, 90C15)
- Volkman, Lutz Ein einfacher Beweis eines Satzes von Chung-Chun Yang über das Wachstum von  $f(g)$ . *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 22(70) (1979), no. 3, 329-330. (L. R. Sons) **80c:30028** 30D30
- A simple proof of a theorem of J. M. Whittaker in the theory of meromorphic functions. *Mathematica (Cluj)* 20(43) (1978), no. 1, 91-92. (From the text) **80g:30019** 30D35
- Volkman, Peter Ausdehnung eines Satzes von Max Müller auf unendliche Systeme von gewöhnlichen Differentialgleichungen. *Funkcial. Ekvac.* 21 (1978), no. 2, 81-96. (Russell C. Thompson) **80d:34093** 34G20
- Ein Störungssatz für abgeschlossene, lineare Operatoren. *Math. Ann.* 234 (1978), no. 2, 139-144. (S. N. Kračkovskii) **80d:47019** 47A53 (47A55)
- (with Lemmert, Roland) Über die Existenz von Lösungen für Randwertprobleme in konvexen Mengen. *Arch. Math. (Basel)* 32 (1979), no. 1, 68-74. (C. Corduneanu) **80h:34000** 34G20
- (with Redheffer, Raymond) Differential equations in operator algebras. I. Invariance of the Siegel disk. *Math. Ann.* 239 (1979), no. 2, 97-110. (L. J. Grimm) **80i:34106** 34G20 (46G99, 47D25)
- Volkodurov, V. F. (with Nikolaev, N. Ja.) The Gellerstedt problem for a particular form of the Euler-Darboux equation. (Russian) *Differencial'nye Uravnenija (Ryazan) No. 12* (1978), 24-35. (Authors' summary) **80b:35110** 35M05
- Volkov, Anatole B. (with Lichtner, Peter C.; Griffin, James J.; Schultheis, Hildegard; Schultheis, Rainer) Variational derivation of a time-dependent Hartree-Fock Hamiltonian. *Phys. Rev. C* (3) 20 (1979), no. 2, 845-846. (Authors' summary) **80f:81115** 81G45 (49H05)
- Volkov, D. V. (with Akulov, V. P.) Riemannian superspaces of minimal dimension. (Russian, English summary) *Teoret. Mat. Fiz.* 41 (1979), no. 2, 147-156. (Z. Janković) **80m:53036** 53C20 (83E99)
- Volkov, E. A. An efficient method of cubic networks for solving the Laplace equation on a parallelepiped under discontinuous boundary conditions. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 6, 1296-1299. (Murlu M. Gupta) **80m:65072** 65N10
- Smoothness of solutions of the Dirichlet problem, and the composite grid method on polyhedra. (Russian) Studies in the theory of differentiable functions of several variables and its applications, VII. *Trudy Mat. Inst. Steklov.* 150 (1979), 67-98, 321. (V. L. Makarov) **80m:65067** 65N05 (35J15)
- See also Theory and applications of differentiable functions of several variables. **80d:00022**
- Volkov, E. V. (with Ivanov, V. V.) Radiative transfer: principles of invariance for Green functions. (Russian, English summary) *Leningrad. Gos. Univ. Učen. Zap. No. 400 Ser. Mat. Nauk Vyp. 57 Trudy Astronom. Obs.* 35 (1979), 3-30, 217. (D. A. Sulaja) **80m:80003** 80A20
- Volkov, G. G. (with Liparteli, A. G.; Nikitin, Ju. P.) Gauge schemes of weak and electromagnetic interactions. (Russian, English summary) *Fiz. Elementar. Častic i Atom. Jadr.* 10 (1979), no. 1, 191-254. (Authors' summary) **80b:81101** 81G15 (47B99)
- Volkov, M. V. Lattices of varieties of algebras. (Russian) *Mat. Sb. (N.S.)* 109(151) (1979), no. 1, 60-79, 165. (A. A. Iskander) **80g:08013** 08B15 (16A38)
- Volkov, R. A. (with Bektaev, A. Ja.) Quantum theory of the dissipative oscillator. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1978, no. 9, 99-105. (M. E. Mayer) **80d:81009** 81C05
- Volković, V. L. (with Volodin, A. F.) A scheme of the method of successive analysis and elimination of variants. (Russian, English summary) *Kibernetika (Kiev)* 1978, no. 4, 98-105. (Joachim Hirche) **80b:90101** 90C10
- Volle, Michel (with Domenges, Dominique) Analyse factorielle sphérique: une exploration. (English and Spanish summaries) *Ann. I.N.S.É.É. No. 35* (1979), 3-84. (Authors' summary) **80i:62053** 62H25
- Vollenberg, M. See Vollenberg, Manfred
- Vollmer, H. D. (with Risken, H.) Brownian motion in periodic potentials in the low-friction limit; nonlinear response to an external force. *Z. Phys. B* 35 (1979), no. 2, 177-184. (G. Della Riccia) **80m:82007** 82A05 (60J65)
- Volobuev, I. P. (with Kadyševskii, V. G.; Mateev, M. D.; Mir-Kasimov, R. M.) Equations of motion for scalar and spinor fields in four-dimensional non-Euclidean momentum space. (Russian, English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 3, 363-372. (Authors' summary) **80i:81089** 81M05
- Volodarskaja, G. F. (with Rubin, B. S.) An imbedding theorem for convolutions on a finite interval and its application to integral equations of the first kind. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 6, 1322-1326. (A. Ramm) **80j:45009** 45E10 (46E35)
- Volodin, A. G. (with Zel'man, M. B.) Resonance interaction of Tollmien-Schlichting waves in a boundary layer. (Russian) *Čisl. Metody Meh. Splošn. Sredy* 9 (1978), no. 1. *Modelirovanie*, 31-38. (From the text) **80g:76032** 76N05
- Volodin, I. A. (with Fomenko, A. T.) Manifolds. Knots. Algorithms. (Russian) *Trudy Sem. Vektor. Tenzor. Anal.* 18 (1978), 94-128. (O. Krötenheerdt) **80h:57014** 57N10 (20F38, 57Q45)
- Volodin, I. N. Optimum sample size in statistical inference procedures. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 12, 33-45. (R. A. Wijsman) **80h:62065** 62L12
- Lower bounds for average sample size and efficiency of procedures of statistical inference. (Russian, English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 1, 119-129. (W. Hoeffding) **80f:62038** 62F12 (62L10)
- Volodin, N. A. (with Azharov, T. A.) The strong law of large numbers for random variables with values in a Banach space. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 8, 3-4. (W. A. Woyczyński) **80b:60013** 60B12
- Volodina, L. N. (with Malevič, T. L.) Inequalities for the moments of the number of zeros of a stationary Gaussian process. I. (Russian, Uzbek summary) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1978, no. 5, 30-36. (Ju. M. Ryžov) **80d:60046** 60G15
- (with Malevič, T. L.) Inequalities for the moments of the number of zeros of a stationary Gaussian process. II. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 2, 29-33, 99. (Ju. M. Ryžov) **80m:60048** 60G15
- Volosjanovskaja, S. N. Solvability of a geometrically and physically nonlinear problem of plate bending. (Russian) Application of computers to the solution of problems in mathematical physics and automatic control systems (Russian), pp. 77-93. Kazan. Univ., Kazan, 1978. (From the text) **80f:73061** 73K10
- Iteration schemes for some problems of the nonlinear theory of plates. (Russian) Application of computers to the solution of problems in mathematical physics and automatic control systems (Russian), pp. 93-112. Kazan. Univ., Kazan, 1978. (From the text) **80j:73029** 73K10 (65N99)
- Volodin, A. F. (with Volković, V. L.) A scheme of the method of successive analysis and elimination of variants. (Russian, English summary) *Kibernetika (Kiev)* 1978, no. 4, 98-105. (Joachim Hirche) **80b:90101** 90C10
- Volodin, S. A. A class of monotone finite difference approximations of a first-order quasilinear differential equation. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 1, 14-16. (E. Schechter) **80i:65099** 65M10
- (with Kuznecov, N. N.) Stability of a class of implicit finite-difference schemes. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 3, 525-528. (G. W. Hedstrom) **80b:65122** 65M10 (65H10)
- Volosina, M. S. (with Gupalo, A. S.; Lopušanskaja, G. P.) A generalized Dirichlet problem for a class of strongly elliptic systems of differential equations in the case of a multiply connected domain. (Russian) *Mat. Fiz. No. 25* (1979), 81-85, 119. (V. A. Kondrat'ev) **80k:35037** 35J55
- Volović, I. V. Quasiclassical expansion of the Euclidean  $P(\varphi)_2$ -model. (Russian, English summary) *Teoret. Mat. Fiz.* 39 (1979), no. 3, 302-306. (Author's summary) **80e:81075** 81E10
- Volovikov, A. Ju. Generalization of the Borsuk-Ulam theorem. (Russian) *Mat. Sb. (N.S.)* 108(150) (1979), no. 2, 212-218, 303. (V. M. Harlamov) **80k:55008** 55M20 (54H25)
- Volpe, Celso (with da Silva, Eurípedes Alves; Azevedo, Paulo Roberto F.) Contact equivalence. (Portuguese, English summary) *Naturalia* 4 (1978), 45-53. (Felix Ronga) **80k:58026** 58C27 (57R45)
- Voltaire See Kuznecov, B. G. **80d:01012**
- Volterra, V. See Golden age of theoretical ecology: 1923-1940. **80c:01021**
- Volynskii, È. I. Some extrapolation approaches in solving complex optimization problems. (Russian) *Avtomat. i Vychisl. Tehn. (Riga)* 1978, no. 2, 30-36, 93. (Gerhard Teischow) **80a:90130** 90C30 (65K05)
- (with Zil'berman, I. A.) On the choice of penalty coefficient in iterative methods of linear programming. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 3, 32-37. (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 3, 27-33. (Robert A. Abrams) **80f:90084** 90C05
- (with Počtman, Ju. M.) Some smoothing algorithms of random search. A survey. (Russian) *Problemy Slučajn. Poiska No. 6 Zadači Optimizacii* (1978), 95-120, 332. (G. S. Tarasenko) **80h:90091** 90B40 (90C99)
- Vom Scheidt, Jürgen See vom Scheidt, Jürgen
- Von Borzeszkowski, H.-H. See von Borzeszkowski, H.-H.
- Von Essen, Erik See von Essen, Erik
- Von Golitschek, M. See von Golitschek, M.
- Von Grudninski, Olaf See von Grudninski, Olaf
- Von Grünhagen, Wolfgang See von Grünhagen, Wolfgang
- Von Hohenbalken, B. See von Hohenbalken, B.
- Von Lienen, Horst See von Lienen, Horst
- Von Plato, Jan See von Plato, Jan
- Von Renteln, M. See von Renteln, M.
- Von Rothkirch, Christoph See von Rothkirch, Christoph
- Von Solms, S. H. See von Solms, S. H.
- Von Wahl, Wolf See von Wahl, Wolf
- Von Waldenfels, Wilhelm See von Waldenfels, Wilhelm



- Von Weizsäcker, Heinrich See von Weizsäcker, Heinrich
- Von Westenholz, C. See von Westenholz, C.
- Von Winterfeldt, D. See von Winterfeldt, D.
- Von Wright, G. H. See von Wright, G. H.
- van de Vooren, A. L. (with Van Stijn, Th. L.) An accurate method for solving the Orr-Sommerfeld equation. *J. Engrg. Math.* 14 (1980), no. 1, 17-26. (Authors' summary) 80j:76034 76E99
- Voorhoeve, M. (with Györy, K.; Tijdeman, R.) On the Diophantine equation  $x^4 + y^4 + \dots + x^k + y^k = R(x) = y^2$ . *Acta Math.* 143 (1979), no. 1-2, 1-8. (E. L. Cohen) 80e:10020 10B15
- A lower bound for the permanents of certain (0, 1)-matrices. *Nederl. Akad. Wetensch. Indag. Math.* 41 (1979), no. 1, 83-86. (D. J. Hartfiel) 80e:15005 15A15 (15A45)
- Voráček, Jan Dissipativeness of a certain nonlinear differential equation of the third order with  $\tau$ -variable coefficients. (Czech and Russian summaries) *Knižnice Odborn. Věd. Spisů Vysoké. Učení Tech. v Brně A 12* (1976), 7-17 (1978). (Editors) 80e:34006 34A34 (34C11)
- Vorčičková, Dana Sufficient conditions for the asymptotic efficiency of estimates. *Comment. Math. Univ. Carolin.* 20 (1979), no. 3, 501-506. (A. N. Philippou) 80e:62048 62F12
- Vorob'ev, N. N. See Vorob'ev, Nikolai Nikolaevič
- Vorob'ev, N. N. See Vorob'ev, M. M.
- Vorob'ev, N. T. Maximal screens of generated formations. (Russian. English summary) *Dokl. Akad. Nauk SSSR* 23 (1979), no. 2, 115-117, 188. (J. Wiegold) 80e:20028 20D10
- Vorob'ev, Nikolai Nikolaevič Nash's optimality principle for general bargaining schemes. (Russian. English summary) *Game theory questions of decision making (Russian)*, pp. 26-38, 126. Nauka Leningrad. Otdel., Leningrad, 1978. (V. G. Ramm) 80g:90141 90D40 (90A05, 90D35)
- Noncooperative games. (Russian) *Problemy Kibernet. No. 33* (1978), 69-90, 232. (Author's summary) 80e:90162 90D10 (90-02)
- See also Fishburn, Peter C., 80b:90008 and Game theory questions of decision making, 80d:90092
- Vorob'ev, V. M. (with Ganiev, R. F.; Ljutyi, A. I.) ★Резонансные колебания гироскопических систем. (Russian) [Resonant oscillations of gyroscopic systems] "Naukova Dumka", Kiev, 1979. 185 pp. (Vadim Komkov) 80d:70008 70E05 (93D05)
- Vorob'eva, V. N. See Fishburn, Peter C., 80b:90008
- Vorob'ev, M. M. ★Die Fibonacciischen Zahlen. Translated from the third Russian edition by Brigitte Mai and Hartwig Quabeck. Kleine Ergänzungssreihe zu den Hochschulbüchern für Mathematik, I. VEB Deutscher Verlag der Wissenschaften, Berlin, 1977. 127 pp. (Editors) 80k:10008 10A35 (10-01)
- Vorob'ov, M. M. ★Теория рядов. (Russian) [Theory of series] Fourth edition, revised and augmented. Избранные главы высшей математики для инженеров и студентов вузов. [Selected Chapters in Higher Mathematics for Engineers and Technical University Students] "Nauka", Moscow, 1979. 408 pp. (Editors) 80i:40001 40-01
- Vorob'ov, A. Ju. (with Blazhkevič, B. I.) The use of topological properties of symmetric graphs for the synthesis of the structures of RLC-circuits. (Russian) *Otbor i Peredača Informaci No. 53* (1978), 44-49, 130. (Authors' summary) 80e:94029 94C15
- Voronecov, M. A. (with Korjabin, A. V.) Active stabilization of systems with distributed parameters. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 4, 93-100. (Vadim Komkov) 80a:93145 93D99
- (with Česnokov, S. S.) Optimization of light beam focusing in moving nonlinear media. (Russian. English summary) *Izv. Vysš. Učebn. Zaved. Radiofizika* 22 (1979), no. 11, 1318-1323. (Authors' summary) 80k:78006 78A10 (49H05)
- (with Vasil'ev, F. P.; Litvinova, O. A.) Optimal control of the thermal self-interaction process. (Russian) *Zh. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 1053-1058, 1085. (Authors' summary) 80g:93047 93C22
- Voroneckaja, D. K. (with Aksenov, G. S.; Fomin, V. N.) A construction of program movements of a manipulator with the aid of a computer. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 4, 50-55 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 4, 40-45 (1979). (Authors' summary) 80k:68082 68G99
- Voroneckij, I. Ja. (with Boičuk, L. M.; Ohmakič, V. F.) Method of synthesis of two-level control systems for interconnected objects. (Russian) *Kibernet. i Vyčisl. Tehn.* No. 43 (1979), 3-8, 133. (I. Randev) 80j:93066 93C35
- Voroneckaja, D. K. See Voroneckaja, D. K.
- Voronets, S. M. Analytic properties of the derivatives of Dirichlet functions of arithmetic objects. (Russian) *Mat. Zametki* 24 (1978), no. 6, 879-884, 895. (Matti Jutila) 80b:10058 10H08 (10H05)
- Vorona, V. V. (with Cecoho, V. A.) The collocation method in the solution of integral equations and systems. (Russian) *Mathematical models and numerical methods (Papers, Fifth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 273-276, Banach Center Publ., 3, PWN, Warsaw, 1978. (V. B. Dybin) 80b:65160 65R20 (65N35)
- Voronev, A. A. ★Устойчивость, управляемость, наблюдаемость. (Russian) [Stability, controllability, observability] "Nauka", Moscow, 1979. 335 pp. (Vadim Komkov) 80g:93065 93D05
- Voros, André Semiclassical ergodicity of quantum eigenstates in the Wigner representation. *Stochastic behavior in classical and quantum Hamiltonian systems (Volta Memorial Conf., Como, 1977)*, pp. 326-333, *Lecture Notes in Phys.*, 93, Springer, Berlin, 1979. (Author's summary) 80k:81060 81C99 (58F11, 58G15)
- Vorotina, L. G. (with Husid, B. M.) ★Диффузионный массоперенос в многокомпонентных системах. (Russian) [Diffusion mass transport in multicomponent systems] "Nauka i Tekhnika", Minsk, 1979. 256 pp. (From the publisher's description) 80i:82058 82A70 (35K99)
- Vorović, I. I. Spectral properties of a boundary value problem of elasticity theory for a nonuniform band. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 4, 817-820. (J. Mazumdar) 80h:73016 73C30 (49A99)
- Resonance properties of an elastic inhomogeneous band. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 5, 1076-1079. (Editors) 80h:73024 73D05 (49H05)
- Vorot'cov, E. V. (with Alhimov, A. P.; Papyrin, A. N.; Fomin, V. M.) Theoretical and experimental investigation of the motion of a gas mixture with hard particles in a Laval nozzle. (Russian) *Cisl. Metody Meh. Splajn. Sredy* 9 (1978), no. 2 *Gazovaja Dinamika*, 5-15. (Editors) 80e:76052 76T05 (76N15)
- (with Janenko, N. N.; Kovenja, V. M.; Liselkin, V. D.; Fromin, V. M.) On some methods for the numerical simulation of flows with complex structure. *Sixth International Conference on Numerical Methods in Fluid Dynamics (Proc. Conf., Tbilisi, 1978)*, pp. 565-578, *Lecture Notes in Phys.*, 90, Springer, Berlin, 1979. (Christopher Caldwell) 80j:76044 76N15 (65P05, 76D05)
- (with Janenko, N. N.; Kovenja, V. M.; Liselkin, V. D.; Fomin, V. M.) On some methods for the numerical simulation of flows with complex structure. *Comput. Methods Appl. Mech. Engrg.* 17/18 (1979), part 3, 659-671. (From the text) 80d:65019 65C20 (76B99)
- (with Janenko, N. N.) On the theory of differential analyzers of contact discontinuities. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 1, 48-52. (Editors) 80h:76025 76L05
- Vorst, Tom Localization of the K-theory of polynomial extensions. With an appendix by Wilberd van der Kallen. *Math. Ann.* 244 (1979), no. 1, 33-53. (Daniel R. Grayson) 80i:18016 18F25 (13F20)
- Vosáňo, J. (with Havránek, Tomáš) A GUHA procedure with correlational quantifiers. {Special issue devoted to the GUHA method of mechanized hypothesis formulation} *Internat. J. Man-Mach. Stud.* 10 (1978), no. 1, 67-74. (Authors' summary) 80g:68118 68G10
- Vosátka, Karel Intermittent-assertion method as a structural induction. *Kybernetika (Prague)* 15 (1979), no. 2, 122-135. (From the introduction) 80h:68007 68B10
- Voščinin, A. P. Peculiarities of the realization of optimal control algorithms on a low-speed general-purpose computer. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst.* No. 380 (1978), 108-114. 80a:93078 93C05
- Vosyljus, R. B. See Vosyljus, R.
- Voskresenskij, D. N. (with Popov, V. S.; Eletskij, V. L.; Mur, V. D.) WKB method at  $Z > 137$  and its applications to the theory of supercritical atoms. *Z. Eksp. Teoret. Fiz.* 76 (1979), no. 2, 431-459 (Russian); translated as *Soviet Phys. JETP* 49 (1979), no. 2, 218-231. (J. V. Greenman) 80i:81072 81G45
- Voskresenskij, E. V. Characteristic indices of a quasilinear system of differential equations. (Russian) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1979, no. 1, 74-77, 93. (G. P. Los') 80e:34031 34D05
- Voskresenskij, V. E. R-equivalence questions on semisimple groups. (Russian) Algebraic numbers and finite groups. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 86 (1979), 49-65, 189-190. (Daniel Coray) 80j:14021 14G05 (12B35, 14L30, 20G25)
- Vosmanek, Jaromír (with Neuman, František) Functions (sequences) whose derivatives (differentiations) are of constant signs. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 34 (1978), no. 7, 8-12. (J. Mařík) 80e:26006 26E10
- Voss, H.-J. Maximal circuits and paths in graphs. Extreme cases. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 1099-1122, *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (Fan R. K. Chung) 80c:05092 05C38
- Voss, Heinrich Nichtlineare Eigenwertaufgaben und Kegeliterationen. (English summary) *Numerische Behandlung von Eigenwertaufgaben (Tagung, Tech. Univ. Clausthal, Clausthal, 1978)*, pp. 189-203, *Internat. Schriftenreihe Numer. Math.*, 43, Birkhäuser, Basel, 1979. (K. Najzar) 80m:65049 65J15 (47H10)
- Existence and bounds for positive solutions of superlinear Uryson equations. *Applicable Anal.* 9 (1979), no. 2, 81-91. (M. Joshi) 80i:47075 47H07 (45N05)
- (with Sprekels, Jürgen) Pointwise inclusions of fixed points by finite-dimensional iteration schemes. *Numer. Math.* 32 (1979), no. 4, 381-392. (J. Sprekels) 80i:65060 65J15 (65R20)
- Voss, W. Gruppen und Graphen. II. *Wiss. Z. Tech. Hochschule Ilmenau* 24 (1978), no. 4, 47-61. (H. Sachs) 80c:05082 05C25
- Vostokov, S. V. An explicit form of the reciprocity law. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 6, 1288-1321, 1439. (Helmut Koch) 80i:12014 12B25
- Vostřý, Zdeněk Polynomial approach to conversion between Laplace and Z transforms. *Kybernetika (Prague)* 14 (1978), no. 4, 292-306. (Akira Ichikawa) 80a:44002 44A10 (93C99)
- Suboptimal control on finite time interval. *Kybernetika (Prague)* 15 (1979), no. 3, 231-240. (Author's summary) 80e:93056 93C05
- Vosyljus, R. Categories of spaces with structure equations. (Russian. Lithuanian and English summaries) *Lietosk. Mat. Sb.* 18 (1978), no. 1, 59-78, 241. (J. Vanžura) 80b:58070 58H05 (22E15, 53C30, 58A15, 58H15)
- Vo Thanh Liem Homotopy characterization of weakly flat knots. *Fund. Math.* 102 (1979), no. 1, 61-72. (Oscar Burlet) 80g:57026 57Q45
- (with Curtis, D. W.) Infinite products which are homeomorphic to Hilbert space. *General Topology Appl.* 10 (1979), no. 1, 19-25. (R. R. Summerhill) 80h:57020 57N20
- A counterexample in  $l_2$ -manifold theory. *Proc. Amer. Math. Soc.* 73 (1979), no. 1, 119-120. (T. Dobrowolski) 80g:57018 57N17 (57N20)
- Votjakov, A. A. (with Buzickij, P. L.) An algorithmic criterion of optimality in integer programming. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 4, 15-23 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 4, 10-17 (1979). (Authors' summary) 80g:90081 90C10
- Vought, Eldon J. (with Grace, E. E.) Semi-confluent and weakly confluent images of tree-like and atretic continua. *Fund. Math.* 101 (1978), no. 2, 151-158. (T. Maczkowiak) 80e:54032 54F20 (54C10, 54F50)
- Vo Van Tan On the embedding problem for  $l$ -convex spaces. *Trans. Amer. Math. Soc.* 256 (1979), 185-197. (Shigeo Nakano) 80j:32032 32F10
- Vo Van Tho (with Alo, Richard A.; de Korvin, André) Nonlinear integration on  $L^p$ -spaces. *J. Math. Anal. Appl.* 63 (1978), no. 3, 563-590. (J. J. Uhl, Jr.) 80d:47096 47H99 (46G99)
- Vovsi, S. M. Semigroups of radical classes of representations of groups and associative algebras. (Russian) *A collection of papers on algebra (Russian)*, pp. 332-340, *Minist. Oborony SSSR*, 1978. (N. G. Šahova) 80a:20022 20C99
- Vovsi, S. M. Infinite triangular products of representations of groups. (Russian) *Math.*

- Slovaca 27 (1977), no. 4, 337-358. (From the introduction) **80g:20012** 20C15  
 Prevarieties of generalized stable groups. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 2, 267-279, 477. (Robert G. Burns) **80c:20040** 20E10 (20C99)
- Vrabie, Ioan I. (with Barbu, Viorel) An existence result for a nonlinear boundary-value problem of hyperbolic type. *Nonlinear Anal.* 1 (1976/77), no. 4, 373-382. (Maria Cincinici-Cibario) **80g:35077** 35L50  
 Time optimal control for contingent equations in Hilbert spaces. *An. Științ. Univ. "Al. I. Cuza" Iași Sec. I a Mat. (N.S.)* 24 (1978), no. 1, 125-133. (Theodore Guinn) **80f:49013** 49A50 (93C99)
- Vrănceanu, G. G. Some remarks on Copson's generalization of monotonic sequences. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 2, 319-324. (K. Chandrasekhara Rao) **80e:40001** 40A05
- Vrănceanu, Gheorghe A classification of closed, orientable surfaces. (Italian. English summary) *Rend. Sem. Mat. Fis. Milano* 46 (1976), 95-100 (1978). (M. St. Botez) **80a:53005** 53A05  
 Courbes cylindriques fermées et formule de Čilugăreanu. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 6, 955-959. (Wendelin Degen) **80b:53003** 53A04  
 Algebras associated with Riemannian spaces. (Romanian. French summary) *Stud. Cerc. Mat.* 30 (1978), no. 3, 353-355. (R. Miron) **80a:53023** 53B20  
 Models of non-Euclidean hyperbolic geometry. (Romanian) *Stud. Cerc. Mat.* 30 (1978), no. 4, 477-478. (R. Miron) **80f:51007** 51M10  
 Über Riemannsche Räume  $V_n^{(1)}$ . *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 2, 315-318. (Ryszard Dęszc) **80b:53035** 53B20  
 (with Cristescu, Romulus; Andreian Cazacu, Cabiria; Marcus, Solomon; Lazăr, Dragoș; Burghilea, Dan; Iosifescu, Marius) L'académicien Nicolae Teodorescu (à l'occasion de son 70 anniversaire). *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 5, 671-672. (Editors) **80i:01035** 01A70  
 Differential geometry and Erlangen Programme. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 5, 829-835. (J. Dieudonné) **80b:53033** 53C05 (01A55, 53C22)  
 Invariants centro-affines d'une surface. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 6, 979-982. (L. Tamásy) **80b:53030** 53B05 (53A15)  
 Tzitzica fondateur de la géométrie centro-affine. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 6, 983-988. (Esther Portnoy) **80i:01013** 01A60 (35A30, 53B05)  
 Une interprétation géométrique du théorème de Fermat. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 7, 1137-1140. (F. Beukers) **80b:10026** 10B15  
 Sur les fondements de la géométrie différentielle. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 10, 1543-1549. (J. Dieudonné) **80b:53036** 53B20  
 See also **Obituary: Vrănceanu, Gheorghe**, **80b:01037a** and **Cristescu, Romulus**; et al. **80b:01037b**
- Vranich, John Digons in digraphs. *Utilitas Math.* 14 (1978), 305-310. (Author's summary) **80a:05107** 05C20
- Vranesic, Z. G. (with Druzeta, A.) A higher radix technique for fault detection in many-valued multithreshold networks. *IEEE Trans. Comput.* 27 (1978), no. 11, 1070-1073. (Authors' summary) **80a:94053** 94C10
- Vrat, Prem (with Kumar, Upendra) Optimization of single-item multi-stage stochastic production-inventory systems. *J. Oper. Res. Soc.* 30 (1979), no. 6, 547-553. (N. U. Prabhu) **80f:90055** 90B05
- Vrbová, Pavla (with Petzelová, Hana) Factorization in the algebra of rapidly decreasing functions on  $\mathbb{R}^n$ . *Comment. Math. Univ. Carolin.* 19 (1978), no. 3, 489-499. (Mohammed Akkar) **80f:46056** 46J15 (46E25)
- Vrem, Richard C. Lacunarity on compact hypergroups. *Math. Z.* 164 (1978), no. 2, 93-104. (John R. McMullen) **80g:43014** 43A46 (43A10)
- Vreugdenhil, C. B. Two-layer shallow-water flow in two dimensions, a numerical study. *J. Comput. Phys.* 33 (1979), no. 2, 169-184. (C. Taylor) **80b:76076** 76V05
- de Vries, G. (with Balasubramanian, R.; Norrie, D. H.) The application of the least squares finite element method to Abel's integral equation. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 2, 201-209. (Authors' summary) **80b:65150** 65R20
- de Vries, H. (with van den Hombergh, Adolf) On the differential operators on the quasi-affine variety  $G/N$ . *Nederl. Akad. Wetensch. Indag. Math.* 40 (1978), no. 4, 460-466. (J. E. Humphreys) **80b:17011** 17B35 (22E60)
- de Vries, J. The local weight of an effective locally compact transformation group and the dimension of  $L^2(G)$ . *Colloq. Math.* 39 (1978), no. 2, 319-323. (A. Lakshmi) **80b:54049** 54H15 (22A10, 54A25)
- Vrkoč, Ivo (with Mandl, Petr; Lánská, Věra) Exercises in stochastic analysis. *Kybernetika (Prague) Suppl.* 14 (1978), no. 4-5, 36 pp. (A. T. Bharucha-Reid) **80a:60077b** 60H05 (60H10)  
 A new definition and some modifications of Filippov cone. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977)*, pp. 433-441, *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (S. Leela) **80b:34017** 34A60
- de Vroedt, C. (with Roos, C.) A short proof of a theorem of W. M. Kantor. *Delft Progr. Rep.* 4 (1979), no. 1, 3-4. (W. M. Kantor) **80d:05015** 05B20
- Vä Duy Mân Berechnung von Wortfunktionen auf deterministischen  $n$ -dimensionalen iterativen Automaten. (English and Russian summaries) *Elektron. Informationsverarb. Kybernet.* 14 (1978), no. 7-8, 341-360. (Hidenosuke Nishio) **80a:68054** 68D20 (03D05)  
 Über einige Akzeptierungsarten bei eindimensionalen iterativen Automaten. (English and Russian summaries) *Elektron. Informationsverarb. Kybernet.* 14 (1978), no. 9, 435-444. (Hidenosuke Nishio) **80b:68038** 68D05 (68D20)  
 (with Đỗ Long Vân) Bemerkungen zu einer Klasse von durch eindimensionalen iterativen Automaten akzeptierten Sprachen. (English and Russian summaries) *Elektron. Informationsverarb. Kybernet.* 14 (1978), no. 10, 507-517. (W. Vollmerhaus) **80b:68066** 68F10 (68B05, 68D05)
- Vugal'ter, S. A. (with Žilins, G. M.) The discrete spectrum of the  $n$ -particle quantum system energy operator. (Russian) *Dokl. Akad. Nauk SSSR* 240 (1978), no. 4, 817-820. (Dietrich A. Uhlenbrock) **80a:81028** 81C10 (35P25, 47F05)  
 The discrete spectrum of many-particle systems which have no stable subsystems. (Russian) *Funkcional. Anal. i Priložen.* 12 (1978), no. 3, 74-75. (R. A. Minlos) **80i:81010** 81C10 (35P99)
- Vuillemin, Jean (with Françon, J.; Viennot, Gérard) Description and analysis of an efficient priority queue representation. *19th Annual Symposium on Foundations of Computer Science (Ann Arbor, Mich., 1978)*, pp. 1-7, *IEEE, Long Beach, Calif.*, 1978. (Authors' summary) **80c:68045** 68B15 (68C15, 68C25)  
 (with Raoult, Jean-Claude) Operational and semantic equivalence between recursive programs. (French summary) *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 75-85, *ACM, New York*, 1978. (G. Berry) **80c:68036** 68B10  
 (with Flajolet, Philippe; Raoult, Jean-Claude) The number of registers required for evaluating arithmetic expressions. *Theoret. Comput. Sci.* 9 (1979), no. 1, 99-125. (Authors' summary) **80c:68101** 68C25 (05C05)
- Vuillermot, Pierre-A. (with Sarbach, Stéphane) Phase transitions in quantum XY- and Heisenberg models: critique of N. Szabo's discussion. *Helv. Phys. Acta* 52 (1979), no. 2, 230-237. (Authors' summary) **80a:82023** 82A25 (82A15)
- Vujanović, B. D. Conservation laws of dynamical systems via d'Alembert's principle. (French and German summaries) *Internat. J. Non-Linear Mech.* 13 (1978), no. 1, 185-197. (Vadim Komkov) **80d:70040** 70H30 (34C99, 49B10)  
 A geometrical approach to the conservation laws of non-conservative dynamical systems. *Tensor (N.S.)* 32 (1978), no. 3, 357-365. (From the introduction) **80a:70030** 70G99 (49A05)
- Vujić, Vera Some new antizigzagging precautions for feasible directions method. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section I, pp. 689-703, *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (Albert Buckley) **80f:90127** 90C30
- Vujić, M. (with Božović, I. B.; Herbut, F.) Irreducible representations of the symmetry groups of polymer molecules. *J. Phys. A* 11 (1978), no. 11, 2133-2147. (T. Janssen) **80b:20012** 20C35 (82A55)
- Vujić, Veljko A. Quasilinear oscillations of mechanical systems. (Russian. English and Serbo-Croatian summaries) *Teor. Primen. Meh.* No. 4 (1978), 165-170. (Gh. Silag) **80c:70031** 70K99 (53B20, 58F27)
- Vukobrat, M. (with Jarić, J.) On conservation laws in elastodynamics. (Russian and Serbo-Croatian summaries) *Teor. Primen. Meh.* No. 4 (1978), 83-95. (Benjamin Plybon) **80d:73054** 73D99 (49B99)
- Vu Kuok Fong Quasi-hyponormal operators and operators of class  $K$ . (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* No. 31 (1979), 13-16, 164. (Author's summary) **80f:47038** 47B20 (47A10)  
 Operators of class  $K$ . (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* No. 32 (1979), 19-22, 1. (F.-H. Vasilescu) **80f:47037** 47B20
- Vul'pe, I. M. Some properties of differential equations with solutions close to one another. (Russian) *Studies in functional analysis and differential equations (Russian)*, pp. 49-53, 78, "Štiinca", Kishinev, 1978. (Author's summary) **80f:34044** 34D15  
 The determination of periodic solutions of nonlinear systems by the averaging method. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 9, 1558-1565, 1721. (D. Bainov) **80a:35011** 35B15 (34C29)
- Vulpe, N. I. The number of linearly independent compacta of a system of differential equations. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 6, 963-973, 1147. (G. B. Gurevič) **80b:53023** 53A45 (15A72, 34A25)  
 Construction of a polynomial basis of comitants of a differential system. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 8, 1399-1410, 1532. (F. Neuman) **80j:34035** 34C20 (53A15)
- Vulpiani, A. (with Jona-Lasinio, G.; Pierini, S.) Absence of breakdown of a continuous symmetry in more than two dimensions. *Lett. Nuovo Cimento* (2) 23 (1978), no. 10, 353-356. (From the text) **80a:82019** 82A25 (58G99)
- Vunš, Gerhard See Wunsch, Gerhard
- Vu Tien Khang, J. (with de Rochambeau, H.; Chevalet, Claude; Gillois, Michel) Analyse des pedigrees et calcul des coefficients d'identité par les arbres géniques. (English summary) *Biometrical J.* 21 (1979), no. 4, 367-387. (Authors' summary) **80b:92008** 92A10
- Vũ Truong Tuân Some theorems on the stability of degree  $n$  with respect to the matrix  $\Phi(t)$ . (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 9, 1718-1720, 1728. (A. A. Martinko) **80b:34064** 34D20
- Vuvrnjkan, Ju. M. (with Erugin, N. P.; Bogdanov, Ju. S.; Ivanov, E. A.; Krylov, V. I.; Kudrjavcev, L. D.; Radyno, Ja. V.; Uspenskii, S. V.) Sergei L'vovič Sobolev (on the occasion of his seventieth birthday). (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 10, 1907-1910. (Editors) **80b:01013** 01A70 (35-03, 65-03, 70-03)  
 (with Karakozov, S. D.) The  $V$ -principle and Paley-Wiener theorems for vector-valued generalized functions. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 1, 11-14. (P. Szepietcki) **80j:46069** 46F10 (46G99)
- Vuza, Dan A generalisation of Ghika rings. (Romanian. French summary) *Stud. Cerc. Mat.* 31 (1979), no. 2, 251-274. (S. K. Berberian) **80b:46053** 46H99 (06F25, 46J25, 46L99)
- Vvedenskaja, N. D. (with Gel'fand, S. I.) Systematic codes that can be realized by simple circuits. *Problemy Peredaci Informacii* 14 (1978), no. 4, 13-23 (Russian); translated as *Problems Inform. Transmission* 14 (1978), no. 4, 246-254 (1979). (Philippe Piret) **80j:94026** 94B05
- Vvedenskii, O. M. Computation of the Selmer group and order of divisibility of the elements  $u$  in the groups  $H^1(K, E; q)$  of an elliptic curve. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 9, 771-774, 660. (M. Balmakov) **80e:14007** 14G15 (10B10, 14G25, 14K07, 14K15)  
 Pairings in elliptic curves over global fields. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 2, 237-260, 469. (J. W. S. Cassels) **80j:14037** 14K15 (10B15, 14G25, 14K07)  
 The frequency of the appearance of the Artin-Milne effect in elliptic curves. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 4, 780-781. (J. W. S. Cassels) **80j:14037** 14K15
- V. Welck, U. See v. Welck, U.
- V. Westenholz, Cornelius See v. Westenholz, Cornelius
- V. Wolfersdorf, Lothar See v. Wolfersdorf, Lothar
- Vyatkin, A. K. See Vjatkin, A. K.
- Vyblý, Ju. P. Interpretation of Einstein's theory of gravitation by means of tensor theory in flat space-time. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat.*



- Naruk 5 (1979), no. 5, 69-74, 140. (Kishore Marathe) **80k:83006** 83C05 (83D05)
- Výborný, R. On the use of a differentiable homotopy in the proof of the Cauchy theorem. *Amer. Math. Monthly* **86** (1979), no. 5, 380-382. (Horst Tietz) **80f:30033** 30E20
- de Vylder, F. L. See De Vylder, F. L.
- Vyshinskii, V. A. See Vilins'kii, V. A.
- Vylin, Jan. See Kraemer, Emil, **80c:01026**
- Vyushov, V. A. (with Česnokov, S. S.; Egorov, K. D.; Kandidov, V. P.) The finite element method in problems of nonlinear optics. *Internat. J. Numer. Methods Engrg.* **14** (1979), no. 11, 1581-1596. (Nima Geffen) **80j:78001** 78A10 (65N30)
- Vyrot, T. M. See Vivrot, T. M.
- Waadland, Haakon General T-fractions corresponding to functions satisfying certain boundedness conditions. *J. Approx. Theory* **26** (1979), no. 4, 317-328. (W. J. Thron) **80k:30010** 30B70 (40A15, 41A21)
- Limit-periodic general T-fractions and holomorphic functions. *J. Approx. Theory* **27** (1979), no. 4, 329-345. (W. J. Thron) **80k:30011** 30B70 (40A15, 41A21)
- de Waal, D. J. (with van der Merwe, A. J.) The asymptotic expansion of the Stein estimators for the vector case. *Ann. Inst. Statist. Math.* **30** (1978), no. 3, 385-395. (Arthur Cohen) **80j:62009** 62C15 (62E20, 62H12)
- The expected values of the elementary symmetric functions of some matrices. *South African Statist. J.* **12** (1978), no. 1, 75-82. (Goro Nagase) **80k:62064** 62H10
- (with Groenewald, P. C. N.) An asymptotic distribution for the coefficient in a multiple time series. *South African Statist. J.* **13** (1979), no. 1, 15-28. (P. C. B. Phillips) **80m:62088** 62M10 (62E20)
- On the normalizing constant for the Bingham - von Mises - Fisher matrix distribution. *South African Statist. J.* **13** (1979), no. 2, 103-112. (C. G. Khatri) **80m:62050** 62H10
- van der Waal, Robert W. On the structure of the minimal non-M-groups. *Nederl. Akad. Wetensch. Indag. Math.* **40** (1978), no. 3, 398-405. (R. W. Carter) **80c:20025** 20D10 (20C15)
- On the structure of the groups related to the 3-local subgroups of the finite simple groups of Ree type. *J. Reine Angew. Math.* **309** (1979), 156-175. (Shui Chi Chang) **80j:20020** 20D05
- Waberski, Aleksander Stochastic vibrations of plates with a complex form that are clamped on the boundary. (Polish. Russian and English summaries) *Rozprawy Inż.* **26** (1978), no. 2, 349-364. (Author's summary) **80k:73026** 73D30 (65P05)
- Wachnicki, Eugeniusz On the Green function for certain problems concerning the fourth-order equation. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 6, 961-964. (Rolf Leis) **80b:35058** 35J40
- On homogeneous linear equations with coefficients in fields algebraically nonclosed. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979), no. 3-4, 291-293. (I. Fenyő) **80k:47015** 47A50
- Wachta, Krystyna Sur un espace complet de champs tayloriens réguliers. *Ann. Polon. Math.* **36** (1979), no. 2, 195-203. (J. Bochnak) **80g:58015** 58C25 (26B99)
- Wacker, Hansjörg A summary of the developments on imbedding methods. *Continuation methods (Proc. Sympos., Johannes Kepler Univ., Linz, 1977)*, pp. 1-35. Academic Press, New York, 1978. (W. C. Rheinboldt) **80k:65059** 65H10
- (with Zarzer, E. A.; Zulehner, W.) Optimal stepsize control for the globalized Newton method. *Continuation methods (Proc. Sympos., Johannes Kepler Univ., Linz, 1977)*, pp. 249-276. Academic Press, New York, 1978. (Hansgeorg Jeggle) **80k:65044** 65H05
- Wackerly, Dennis (with Agresti, Alan; Boyett, James M.) Exact conditional tests for cross-classifications: approximation of attained significance levels. *Psychometrika* **44** (1979), no. 1, 75-83. (Authors' summary) **80k:62051** 62H17
- Wada, Hidehito (with Koyama, Hideyuki) Invariant imbedding and Hamiltonian formalism of stochastic control. *Math. Japan* **23** (1978/79), no. 6, 615-626. (Authors' summary) **80b:93076** 93E20
- Wada, Hideo A note on the Pell equation. *Tokyo J. Math.* **2** (1979), no. 1, 133-136. (Richard T. Bumby) **80k:10011** 10B05 (10A32)
- Wadati, Miki Infinitesimal transformations and conservation laws; field theoretic approach to the theory of soliton. *Nonlinear evolution equations solvable by the spectral transform (Internat. Sympos., Acad. Lincei, Rome, 1977)*, pp. 33-63. *Res. Notes in Math.*, **26**, Pitman, London, 1978. (G. L. Lamb, Jr.) **80d:35132** 35Q20 (58A99)
- (with Matsumoto, H.; Takahashi, Yasushi; Umezawa, H.) Quantum field theory of crystals and dislocations. *Fortschr. Phys.* **26** (1978), no. 6, 357-396. (P. M. van den Broek) **80a:82037** 82A60 (35Q99)
- (with Konno, Kimiaki; Ichikawa, Yoshi Hiko) A generalization of inverse scattering method. *J. Phys. Soc. Japan* **46** (1979), no. 6, 1965-1966. (Authors' summary) **80c:81114** 81F99
- (with Hirota, Ryogo) A functional integral representation of the soliton solution. *J. Phys. Soc. Japan* **47** (1979), no. 4, 1385-1386. (A. Degasperis) **80m:35066** 35Q20 (81M05)
- Waddell, Marcellus E. Some properties of a generalized Fibonacci sequence modulo  $m$ . *Fibonacci Quart.* **16** (1978), no. 4, 344-353. (Reinhard Razen) **80b:10016** 10A35
- Wade, M. J. (with Slatkin, M.) Group selection on a quantitative character. *Proc. Nat. Acad. Sci. U.S.A.* **75** (1978), no. 7, 3531-3534. (Charles J. Mode) **80a:92022** 92A15
- Wade, W. R. (with Skvortsov, V. A.) Generalization of some results concerning Walsh series and the dyadic derivative. (Russian summary) *Anal. Math.* **5** (1979), no. 3, 249-255. (W. Spletstößer and P. L. Butzer) **80i:42017** 42C10 (26A24)
- Wadhwa, A. D. Some convergent subseries of the harmonic series. *Amer. Math. Monthly* **85** (1978), no. 8, 661-663. (E. Reimers) **80a:40002** 40A05
- Wadhwa, Bhushan L. (with Buoni, John J.) On joint numerical ranges. *Pacific J. Math.* **77** (1978), no. 2, 303-306. (A. T. Dash) **80c:47003** 47A12
- Wadsworth, Adrian R. (with Elman, R.; Lam, T. Y.) Function fields of Pfister forms. *Invent. Math.* **51** (1979), no. 1, 61-75. (Ron Brown) **80m:10017** 10C01 (10C05, 12D15)
- The Krull dimensions of tensor products of commutative algebras over a field. *J. London Math. Soc.* (2) **19** (1979), no. 3, 391-401. (Robert Gilmer) **80k:13014** 13C15
- (with Elman, R.; Lam, T. Y.) Orderings under field extensions. *J. Reine Angew. Math.* **306** (1979), 7-27. (M. E. Shanks) **80e:12029** 12J15 (12D15, 12F99)
- (with Resco, Richard; Small, Lance W.) Tensor products of division rings and finite generation of subfields. *Proc. Amer. Math. Soc.* **77** (1979), no. 1, 7-10. (H. J. Weinert) **80g:16020** 16A39 (16A08, 16A33, 16A45)
- Waelbroeck, Jean (with Ginsburgh, Victor) A note on the simultaneous stability of tatonnement processes for computing equilibria. *Internat. Econom. Rev.* **20** (1979), no. 2, 367-380. (Milan Mareš) **80f:90027** 90A14
- Waelbroeck, Lucien Les quotients banachiques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 1, A37-A39. (Author's summary) **80a:46043** 46M99 (46B20)
- van der Waerden, Bartel Leendert ★Алгебра. (Russian) [Algebra] Translated from the German by A. A. Bel'skii. Second edition. With a foreword by Ju. I. Merzjakov. "Nauka", Moscow, 1979. 624 pp. (Editors) **80k:00002** 00A05 (12-01)
- Die Postulate und Konstruktionen in der frühgriechischen Geometrie. *Arch. Hist. Exact Sci.* **18** (1977/78), no. 4, 343-357. (E. Neuenschwander) **80a:01004** 01A20
- The Great Year in Greek, Persian and Hindu astronomy. *Arch. Hist. Exact Sci.* **18** (1977/78), no. 4, 359-383. (R. C. Gupta) **80b:01007** 01A32 (01A20, 01A30)
- On the motion of the planets according to Heracles of Pontus. *Arch. Internat. Hist. Sci.* **28** (1978), no. 103, 167-182 (1979). (N. Swerdlow) **80k:01004** 01A20 (85-03)
- Gerrit Mannoury and his "surfaces-images". *Nieuw Arch. Wisk.* (3) **26** (1978), no. 1, 108-115. (E. J. F. Primrose) **80i:51002** 51-03 (01A55)
- Wafi, Abdul (with Habib, Anwar; Khan, Huzoor H.) On generalized Bernstein polynomials. *Indian J. Pure Appl. Math.* **9** (1978), 867-870. (Martin E. Price) **80c:41003** 41A10
- Wage, Michael L. The dimension of product spaces. *Proc. Nat. Acad. Sci. U.S.A.* **75** (1978), no. 10, 4671-4672. (K. Nagami) **80a:54064** 54F45
- Almost disjoint sets and Martin's axiom. *J. Symbolic Logic* **44** (1979), no. 3, 313-318. (A. Kanamori) **80j:03079** 03E50 (03E05)
- Wagener, Diane (with Barakat, Richard) Solutions of the forward diallelic diffusion equation in population genetics. *Math. Biosci.* **41** (1978), no. 1-2, 65-79. (David Pickard) **80a:92034** 92A10
- Wagenführer, E. (with Lang, H.) Berechnung des charakteristischen Exponenten der endlichen Hillschen Differentialgleichung durch numerische Integration. (English summary) *Numer. Math.* **32** (1979), no. 1, 31-50. (H. Brunner) **80k:65162** 65L07
- Wagh, Meghnad D. (with Kekre, Hemachandra B.; Kanetkar, Sharad V.) On group theoretic transforms and the automorphism groups. *Inform. and Control* **41** (1979), no. 2, 147-155. (Authors' summary) **80g:94013** 94A12 (20D45)
- Wagner, Ascher The minimal number of involutions generating some finite three-dimensional groups. (Italian summary) *Boll. Un. Mat. Ital. A* (5) **15** (1978), no. 2, 431-439. (Ulrich Dempwolff) **80a:20053** 20G40
- Wagner, Bernd (with Klemm, Michael) A matrix of combinatorial numbers related to the symmetric groups. *Discrete Math.* **28** (1979), no. 2, 173-177. (M. S. Cheema) **80k:05005** 05A10 (20B05)
- Wagner, Carl Consensus through respect: a model of rational group decision making. *Philos. Stud.* **34** (1978), no. 4, 335-349. (Dennis J. Packard) **80f:90014** 90A07 (90A05)
- Wagner, Donald Blackmore An early Chinese derivation of the volume of a pyramid: Liu Hui, third century A.D. (German summary) *Historia Math.* **6** (1979), no. 2, 164-188. (R. C. Gupta) **80e:01001** 01A25 (51-03)
- Wagner, Eric G. (with Thatcher, James W.; Wright, Jesse B.) Data type specification: parameterization and the power of specification techniques. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 119-132. ACM, New York, 1978. (Authors' summary) **80d:68025** 68B15
- (with Thatcher, James W.; Wright, Jesse B.) Programming languages as mathematical objects. *Mathematical foundations of computer science, 1978 (Proc. Seventh Sympos., Zakopane, 1978)*, pp. 84-101. *Lecture Notes in Comput. Sci.*, **64**, Springer, Berlin, 1978. (G. Berry) **80b:68008** 68B10
- Wagner, F. Binary and states sequences generated by counter-registers. (French and German summaries) *Digital Process.* **4** (1978), no. 3-4, 245-258. (Author's summary) **80g:94096** 94C10 (68D35)
- Wagner, Franz (with Langmaack, Hans; Lippe, Wolfram) The formal termination problem for programs with finite ALGOL 68-modes. *Inform. Process. Lett.* **9** (1979), no. 3, 155-159. (Authors' introduction) **80m:68045** 68C30
- Wagner, Gerold The ergodic behaviour of piecewise monotonic transformations. *Z. Wahrsch. Verw. Gebiete* **46** (1979), no. 3, 317-324. (Harriet Fell) **80m:28015** 28D05
- Wagner, Klaus (with Stieger, Ludwig) Rekursive Folgenmengern. *I. Z. Math. Logik Grundleh. Math.* **24** (1978), no. 6, 523-538. (G. Asser) **80f:03044** 03D25 (03D10, 03D55, 68C40)
- Wagner, M. (with Junker, W.) High temperature series expansions in cooperative Jahn-Teller T-systems. *Phys. A* **94** (1978), no. 3-4, 385-402. (Authors' summary) **80b:82022** 82A25
- Wagner, Robert A. (with Trivedi, Kishor S.) A decision model for closed queueing networks. *IEEE Trans. Software Engrg.* **5** (1979), no. 4, 328-332. (Authors' summary) **80k:68245** 68J10 (68C15)
- Wagner, Terry J. (with Devroye, Luc P.) The  $L_1$  convergence of kernel density estimates. *Ann. Statist.* **7** (1979), no. 5, 1136-1139. (M. Bertrand-Retali) **80k:62054** 62G05
- (with Devroye, Luc P.) Distribution-free inequalities for the deleted and holdout error estimates. *IEEE Trans. Inform. Theory* **25** (1979), no. 2, 202-207. (László Györfi) **80g:62039** 62H30 (60E15, 62C99)
- (with Devroye, Luc P.) Distribution-free performance bounds with the resubstitution error estimate. *IEEE Trans. Inform. Theory* **25** (1979), no. 2, 208-210. (Tohru Katayama) **80d:94005** 94A15 (62G05, 68G10)
- (with Devroye, Luc P.) Distribution-free performance bounds for potential function rules. *IEEE Trans. Inform. Theory* **25** (1979), no. 5, 601-604. (Authors' summary) **80b:62044** 62H30 (68C25, 68G10, 68G99)
- Wagneur, Edouard Formes de Pfaff à singularités non dégénérées. (English summary) *Ann. Inst. Fourier (Grenoble)* **28** (1978), no. 3, 165-176. (Robert Roussarie) **80c:58003** 58A17 (57R30)
- Saturation locale et concepts primitifs de la théorie du consommateur. *Econometrica* **47** (1979), no. 6, 1549-1553. (Yves Balasko) **80j:90027** 90A12

- Wagon, Stanley** (with Baumgartner, James E.; Taylor, Alan) Ideals on uncountable cardinals. *Logic Colloquium '77* (Proc. Conf., Wrocław, 1977), pp. 67-77, *Studies in Logic and Foundations of Math.*, 96, North-Holland, Amsterdam, 1978. (Andreas Blass) 80c:03058 03E05 (06E10)
- Infinite triangulated graphs. *Discrete Math.* 22 (1978), no. 2, 183-189. (H. Sachs) 80i:05078 05C99
- Wagoner, J. B.** Diffeomorphisms,  $K_2$ , and analytic torsion. *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 1, pp. 23-33, *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (S. Maumary) 80c:57036 57R50 (18F25, 58G10)
- $K_2$  and diffeomorphisms of two and three dimensional manifolds. *Geometric topology* (Proc. Georgia Topology Conf., Athens, Ga., 1977), pp. 557-577, Academic Press, New York, 1979. (Gerald A. Anderson) 80b:57043 57R50
- Wagreich, Philip** Automorphic forms and singularities of complex surfaces. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 3, 585-588. (I. Dolgachev) 80b:30046 30F35 (10D15, 14J17)
- Wagschal, Claude** Problème de Cauchy à caractéristiques multiples dans les classes de Gevrey. *Équations aux dérivées partielles* (Proc. Conf., Saint-Jean-de-Monts, 1977), pp. 206-216, *Lecture Notes in Math.*, 660, Springer, Berlin, 1978. (Jorge Hounie) 80f:35004 35A07
- (with de Paris, J.-Cl.) Problème de Cauchy non caractéristique à données Gevrey pour un opérateur analytique à caractéristiques multiples. *J. Math. Pures Appl.* (9) 57 (1978), no. 2, 157-172. (Maria Cingini-Cibrario) 80d:35005 35A05 (35L99)
- Une nouvelle démonstration d'un théorème de Lednev. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 280 (1979), no. 3, A213-A216. (Author's summary) 80d:35006 35A10
- Le problème de Goursat non linéaire dans les espaces de Gevrey. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 280 (1979), no. 13, A653-A656. (Author's summary) 80i:35030 35G25
- Wagstaff, Samuel S., Jr.** The least prime in an arithmetic progression with prime difference. *J. Reine Angew. Math.* 301 (1978), 114-115. (Jean-Marie De Koninck) 80c:10044 10H20 (10H32)
- Some questions about arithmetic progressions. *Amer. Math. Monthly* 86 (1979), no. 7, 579-582. (Friedrich Roessler) 80j:10020 10A99 (10L20)
- Solution of Nathanson's exponential congruence. *Math. Comp.* 33 (1979), no. 147, 1097-1100. (R. J. Evans) 80b:10004 10A10
- Walsh, Grace** Improper priors, spline smoothing and the problem of guarding against model errors in regression. *J. Roy. Statist. Soc. Ser. B* 40 (1978), no. 3, 364-372. (Adolfo Gili) 80i:62047 62G05 (41A15, 62F15, 62J05)
- How to smooth curves and surfaces with splines and cross-validation. *Proceedings of the Twenty-Fourth Conference on the Design of Experiments* (Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1978), pp. 167-192, *ARO Rep.* 79, 2, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Author's summary) 80m:65010 65D07 (41A15)
- (with Athavale, Manohar L.) Determination of an optimal mesh for a collocation-projection method for solving two-point boundary value problems. *J. Approx. Theory* 25 (1979), no. 1, 38-49. (Jacob Steinberg) 80i:65009 65L10
- Wahl, Jonathan M.** Simultaneous resolution of rational singularities. *Compositio Math.* 38 (1979), no. 1, 43-54. (Philip Wagreich) 80c:14013 14J17 (32B30)
- Simultaneous resolution and discriminantal loci. *Duke Math. J.* 46 (1979), no. 2, 341-375. (Henry C. Pinkham) 80j:14008 14B07 (14D15, 32B30)
- von Wahl, Wolf** Die stationären Gleichungen von Navier-Stokes und semilineare elliptische Systeme. *Amer. J. Math.* 100 (1978), no. 6, 1173-1184. (D. E. Edmunds) 80i:35055 35J65 (35Q10)
- Über die stationären Gleichungen von Navier-Stokes, semilineare elliptische und parabolische Gleichungen. *Jahresber. Deutsch. Math.-Verein.* 80 (1978), no. 3, 129-149. (Piero de Mottoni) 80b:35061 35J65 (35K65, 35Q10)
- (with Gärtner, Michael) Quasilineare elliptische Gleichungen höherer Ordnung. *Nachr. Akad. Wiss. Göttingen Math.-Phys. Kl. II* 1978, no. 1, 1-29. (G. Albinus) 80d:35056 35J60
- Existenzsätze für nichtlineare elliptische Systeme. *Nachr. Akad. Wiss. Göttingen Math.-Phys. Kl. II* 1978, no. 3, 53-62. (G. Albinus) 80d:35057 35J60
- Waight, Roy D.** (with Bardsley, William G.) Factorability of the Hessian of the binding polynomial. The central issue concerning statistical ratios between binding constants, Hill plot slope and positive and negative co-operativity. *J. Theoret. Biol.* 72 (1978), no. 2, 321-372. (P. Holgate) 80a:92009 92A05 (15A72)
- Wainer, Stanley S.** The 1-section of a nonnormal type-2 object. *Generalized recursion theory, II* (Proc. Second Sympos., Univ. Oslo, Oslo, 1977), pp. 407-417, *Studies in Logic and Foundations of Math.*, 94, North-Holland, Amsterdam, 1978. (Peter G. Hinman) 80j:03065 03D65
- Walinger, Stephen** (with Stein, Elias M.) Problems in harmonic analysis related to curvature. *Bull. Amer. Math. Soc.* 84 (1978), no. 6, 1239-1295. (Alberto Torchinsky) 80k:42023 42B20 (28A15)
- (with Shea, Daniel F.) Growth problems for a class of entire functions via singular integral estimates. *Complex analysis Joensuu 1978* (Proc. Colloq., Univ. Joensuu, Joensuu, 1978), pp. 366-368, *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (Fred Gross) 80j:30034 30D15
- See also Harmonic analysis in Euclidean spaces, 80f:42001a and Harmonic analysis in Euclidean spaces, 80f:42001b
- Walwright, J.** (with Ince, W. C. W.; Marshman, B. J.) Spatially homogeneous and inhomogeneous cosmologies with equation of state  $p = \mu$ . *Gen. Relativity Gravitation* 10 (1979), no. 3, 259-271. (C. B. Collins) 80a:83075 83F05 (35Q99)
- Walwright, Roger L.** Acceleration techniques for a class of x-projection methods for solving systems of linear equations. *Comput. Math. Appl.* 5 (1979), no. 1, 59-73. (A. M. Cohen) 80i:65036 65F10
- Walt, James R.** Theories of scattering from wire grid and mesh structures. *Electromagnetic scattering*, pp. 253-287, Academic Press, New York, 1978. (Y. Hayashi) 80j:78008 78A45
- Walt, R.** ★The numerical solution of algebraic equations. *Wiley-Interscience [John Wiley & Sons]*, Chichester-New York, 1979. x + 158 pp. ISBN 0-471-99755-2 (W. Niethammer) 80k:65004 65-01 (65Fx, 65Hxx)
- (with Morris, J. Ll.) Crack-tip elements with curved boundaries and variable nodes. *Appl. Math. Modelling* 3 (1979), no. 4, 259-262. 80d:65119 65N30
- Wakabayashi, Seichiro** Microlocal parametrices for hyperbolic mixed problems in the case where boundary waves appear. *Publ. Res. Inst. Math. Sci.* 14 (1978), no. 2, 283-307. (M. Babić) 80f:35069 35L25
- Wakamatsu, Takayoshi** Pseudo-projectives and pseudo-injectives in abelian categories. *Math. Rep. Toyama Univ.* 2 (1979), 133-142. (Wolfgang Grözl) 80i:18017 18E0 (16A63)
- Wakeman, W. A.** (with Khalifa, H. E.; Kestin, J.) The theory of the transient hot-wire cell for measuring the thermal conductivity of gaseous mixtures. *Phys. A* 97 (1979), no. 2, 273-286. (M. Dutta) 80k:80004 80A15 (34Axx)
- el Wakil, S. A.** See El Wakil, S. A.
- Wakimura, Yoshiaki** (with Tohma, Yoshihiro) Design of checking experiments based on the ordering relation of state transitions. *Systems-Comput.-Controls* 8 (1977), no. 5, 79-87 (1978). (Authors' summary) 80k:68047 68D50 (68D15, 94C10)
- Wakita, Masu** A remark on the functional dimension of the space of solutions of semi-elliptic equations. *Bull. Fac. Ed. Wakayama Univ. Natur. Sci.* No. 27 (1978), 5-9. (M. Z. Berkolaiko) 80b:35037 35H05
- Wakulicz, Andrzej** Numerical methods for solving variational inequalities. *Mathematical models and numerical methods* (Papers, Fifth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975), pp. 119-127, Banach Center Publ., 3, PWN, Warsaw, 1978. (Jaures P. Ceconni) 80c:65127 65J15 (47H05)
- See also Mathematical models and numerical methods, 80a:65012
- Walczak, P. G.** Invariant metrics on the tangent bundle of a homogeneous space. *Colloq. Math.* 39 (1978), no. 2, 297-300. (Y. Tashiro) 80h:53050 53C30 (93B05)
- Walczak, Stanislaw** Investigations of conditional extrema in the class of Hardy functions and in the family of  $u$ -valent functions. I. (Polish summary) *Bull. Soc. Sci. Lett. Łódź* 27 (1977), no. 7, 15 pp. (Y. Komatu) 80f:30026 30D55 (30C75)
- Euler-Lagrange conditions for controls with bounded variation. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 2, 125-128. (Thomas S. Angell) 80g:49027 49B10
- (with Mikolajczyk, Leon) Theorems on the number of switchings for linear analytical systems. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 26 (1978), no. 6, 617-624. (J. Warg) 80a:49028 49B10 (34H05)
- Investigations of conditional extrema in the class of Hardy functions and in the family of univalent functions. II. (Polish summary) *Bull. Soc. Sci. Lett. Łódź* 28 (1978), no. 1, 14 pp. (Y. Komatu) 80f:30026 30D55 (30C55, 30C75)
- Wald, Burkhard** A note on slender groups. *Arch. Math. (Basel)* 31 (1978/79), no. 5, 432-434. (L. Fuchs) 80c:20074 20K20
- Wald, J. David** Geach on atomistic and singular propositions. *Notre Dame J. Formal Logic* 20 (1979), no. 2, 285-294. (Ruth Manor) 80d:03008 03A05
- Wald, Robert M.** (with Fulling, Stephen A.; Sweeny, Mark) Singularity structure of the two-point function quantum field theory in curved spacetime. *Comm. Math. Phys.* 63 (1978), no. 3, 257-264. (B. K. Nayak) 80i:81085 81M05 (83C45)
- Existence of the  $S$ -matrix in quantum field theory in curved spacetime. *Am. J. Physics* 118 (1979), no. 2, 490-510. (Charles A. Nelson) 80c:81116 81M05
- Note on the stability of the Schwarzschild metric. *J. Math. Phys.* 20 (1979), no. 6, 1056-1058. (Author's summary) 80c:83012a 83C15 (49H05)
- Entropy and black-hole thermodynamics. *Phys. Rev. D* (3) 20 (1979), no. 6, 1271-1282. (Brian DeFazio) 80j:82013 82A30 (83C99)
- Construction of metric and vector potential perturbations of a Reissner-Nordström black hole. *Proc. Roy. Soc. London Ser. A* 369 (1979), no. 1736, 67-81. (A. F. de F. Teixeira) 80m:83025 83C50
- Erratum: "Note on the stability of the Schwarzschild metric" (J. Math. Phys. 20 (1979), no. 6, 1056-1058). *J. Math. Phys.* 21 (1980), no. 1, 218. (Editors) 80c:83012b 83C20
- von Waldenfels, Wilhelm** (with Hantsch, Lutz) A random walk on the general linear group related to a problem of atomic physics. *Probability measures on groups* (Proc. Fifth Conf., Oberwolfach, 1978), pp. 131-143, *Lecture Notes in Math.*, 706, Springer, Berlin, 1979. (Hubert Hennion) 80k:60089 60J15 (81G40)
- Waldenström, S.** On the Dirac equation for the hydrogen atom. *Amer. J. Phys.* 47 (1979), no. 12, 1098-1100. (From the text) 80k:81022 81C05
- Waldhausen, Friedhelm** Recent results on sufficiently large 3-manifolds. *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 2, pp. 21-38, *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (James W. Cannon) 80c:57010 57N10
- Some problems on 3-manifolds. *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 2, pp. 313-322, *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (J. S. Birman) 80g:57013 57N10 (57-01)
- Waldi, Rolf** Vollständige Durchschnitte in Cohen-Macaulay-Ringen. *Arch. Math. (Basel)* 31 (1978/79), no. 5, 439-442. (Manfred Herrmann) 80d:14029 14M10 (13H10)
- Deformation von Gorenstein-Singularitäten der Kodimension 3. *Math. Ann.* 242 (1979), no. 3, 201-208. (Henry C. Pinkham) 80k:14008 14B07
- Waldmann, K.-H.** Numerical aspects in Bayesian inventory control. (German summary) *Z. Oper. Res. Ser. A-B* 23 (1979), no. 1, A49-A60. (N. U. Prabhu) 80b:90053 90B05
- Waldmann, L.** (with Vestner, H.) Nonequilibrium thermodynamics of the gas kinetic boundary value problem. *Phys. A* 99 (1979), no. 1-2, 1-33. (Carlo Cercignani) 80m:82036 82A40
- (with Vestner, H.) Boundary conditions for the distribution function and for the moments of a gas at a moving wall. *Z. Naturforsch. A* 34 (1979), no. 3, 269-283. (Carlo Cercignani) 80f:82034 82A40
- Waldschmidt, Michel** Nombres transcendants et fonctions sigma de Weierstrass. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 2, 111-114. (D. W. Masser) 80f:10044 10F35
- Transcendence measures for exponentials and logarithms. *J. Austral. Math. Soc. Ser. A* 25 (1978), no. 4, 445-465. (P. L. Cjsouw) 80c:10039 10F35
- Waldspurger, J.-L.** Engendrement par des séries theta de certains espaces de formes modulaires. *Invent. Math.* 50 (1978/79), no. 2, 135-168. (Henri Cohen) 80d:10037 10D12



- Waldvogel, Jörg. La variété de collision triple. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 12, A635-A637. (Author's summary) 80b:70014 70F07 (58F05)
- The Newtonian potential of homogeneous polyhedra. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 2, 388-398. (D. H. Armitage) 80i:31005 31B15
- The variational equation of the three-body problem. Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics (Math. Forschungsinstitut, Oberwolfach, 1978), Part II. *Celestial Mech.* 21 (1980), no. 2, 171-175. (Author's summary) 80m:70010 70F07
- Wales, David B. Connections between finite linear groups and linear algebra. *Linear and Multilinear Algebra* 7 (1979), no. 4, 267-279. (From the introduction) 80g:20002 20-02 (15-02, 20G15)
- Wales, Terence J. (with Howe, Howard; Pollak, Robert A.) Theory and time series estimation of the quadratic expenditure system. *Econometrica* 47 (1979), no. 5, 1231-1247. (Authors' introduction) 80g:90035 90A20
- Wali, Kameswar C. (with Sage, Martin L.) Computation of a class of 3j-coefficients. *J. Math. Phys.* 20 (1979), no. 3, 393-395. (Authors' summary) 80d:81035 81C40
- (with O'Riartaigh, Lochlainn; Park, Soo Yong) Magnetic-monopole interactions. *Phys. Rev. D* (3) 20 (1979), no. 8, 1941-1950. (Authors' summary) 80m:81052 81E10 (81D20)
- Walkiewicz, W. See Handbook: Mathematics, 80f:00007
- Walk, H. Martingales and the Robbins-Monro procedure in  $D[0, 1]$ . *J. Multivariate Anal.* 8 (1978), no. 3, 430-452. (V. Fabian) 80g:62066 62L20 (35R60, 60F15)
- Walke, Bernhard. Improved bounds and an approximation for a dynamic priority queue. Measuring, modelling and evaluating computer systems (Proc. Third Internat. Sympos., Bad Godesberg, 1977), pp. 321-346. North-Holland, Amsterdam, 1977. (Author's summary) 80c:68091 68C15
- Walker, D. P. 17th century scientists' views on intonation and the nature of consonance. *Arch. Internat. Hist. Sci.* 27 (1977), no. 101, 263-273 (1978). (Edwin Hewitt) 80m:01023 01A45
- Walker, Elbert A. (with Richman, Fred) Valuated groups. *J. Algebra* 56 (1979), no. 1, 145-167. (Donald Cook) 80c:20053 20K40 (20K35)
- Walker, Glenn A. (with Saw, John G.) The distribution of linear combinations of  $t$ -variables. *J. Amer. Statist. Assoc.* 73 (1978), no. 364, 876-878. (Lennart Bondesson) 80c:62024 62E15
- Walker, Homer F. (with Peters, B. Charles, Jr.) The numerical evaluation of the maximum-likelihood estimate of a subset of mixture proportions. *SIAM J. Appl. Math.* 35 (1978), no. 3, 447-452. (G. S. Lingappaiah) 80c:62036 62F10
- Walker, J. A. Some results on Liapunov functions and generated dynamical systems. *J. Differential Equations* 30 (1978), no. 3, 424-440. (T. Yoshizawa) 80c:34046 34C35 (34D20)
- (with Infante, E. F.) A stability investigation for an incompressible simple fluid with fading memory. *Arch. Rational Mech. Anal.* 72 (1979/80), no. 3, 203-218. (C. F. Chan Man Fong) 80j:76032 76E99 (35B35, 76A10)
- Erratum: "Some results on Liapunov functions and generated dynamical systems" [*J. Differential Equations* 30 (1978), no. 3, 424-440; MR 80c:34046]. *J. Differential Equations* 33 (1979), no. 2, 273-274. (T. Yoshizawa) 80c:34065 34C35
- Walker, J. D. A. The boundary layer due to rectilinear vortex. *Proc. Roy. Soc. London Ser. A* 359 (1978), no. 1697, 167-188. (Author's summary) 80a:76020 76C99 (65D99)
- Walker, Joseph J. An asymptotic expansion for unbalanced quadratic forms in normal variables. *J. Amer. Statist. Assoc.* 74 (1979), no. 366, part 1, 389-392. (A. W. Davis) 80c:62017 62E20 (62H10)
- Walker, K. P. (with Krempel, E.) An implicit functional theory of viscoplasticity. *Mech. Res. Comm.* 5 (1978), no. 4, 179-184. (F. Erdogan) 80d:73014 73B05
- (with Krempel, E.) An implicit functional representation of stress-strain behavior. *Mech. Res. Comm.* 5 (1978), no. 4, 185-190. (Authors' introduction) 80c:73032 73E99
- Walker, Marshall. Homotopy pullbacks and the Hopf invariant. *J. London Math. Soc.* (2) 19 (1979), no. 1, 153-158. (A. Dold) 80g:55012 55P10 (55P99)
- Walker, Peter L. On the functional equations satisfied by modular functions. *Mathematika* 25 (1978), no. 2, 185-190. (Christian Radoux) 80c:10024 10D05
- On the partial fraction expansion for  $\theta(x)$ . *Math. Z.* 166 (1979), no. 1, 55-66. (W. H. Simons) 80k:10044 10J05
- Walker, Robert J.  $\star$ Algebraic curves. Reprint of the 1950 edition. Springer-Verlag, New York-Heidelberg, 1978. x+201 pp. ISBN 0-387-90361-5 (Editors) 80c:14001 14-01 (01A75)
- Walker, Roland (with Holcombe, Michael) Radicals in categories. *Proc. Edinburgh Math. Soc.* (2) 21 (1978/79), no. 2, 111-128. (Syed A. Huq) 80b:18009 18E40
- Walsh, David W. On the expected value of a random assignment problem. *SIAM J. Comput.* 8 (1979), no. 3, 440-442. (Author's summary) 80c:68176 68E99 (05C99)
- Wall, Byron E. F. Y. Edgeworth's mathematical theories. Greatest happiness with the calculus of variations. *Math. Intelligencer* 1 (1978/79), no. 3, 177-181. (Editors) 80c:01023 01A55 (90-03)
- Wall, C. T. C. Free actions of finite groups on spheres. *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 1, pp. 115-124. *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (J. A. Schafer) 80k:57076 57S25
- Are maps finitely determined in general? *Bull. London Math. Soc.* 11 (1979), no. 2, 151-154. (J. Bochnak) 80j:58013 58C27
- (with Bruce, J. W.) On the classification of cubic surfaces. *J. London Math. Soc.* (2) 19 (1979), no. 2, 245-256. (I. Dolgachev) 80f:14021 14J25 (14J17)
- Affine cubic functions. I. The complex plane. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 3, 387-401. (I. Dolgachev) 80k:14011 14H10 (10C10, 57R45, 58C27)
- Note on the invariant of plane cubics. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 3, 403-406. (Miles Reid) 80k:14031 14H45 (14N10)
- See also Homological group theory, 80m:20001
- Wall, Charles R. Some congruences involving generalized Fibonacci numbers. *Fibonacci Quart.* 17 (1979), no. 1, 29-33. (S. P. Mohanty) 80c:10022 10A35
- Wall, Frederick T. (with Cheung, Agnes S.; Chan, Albert) Monte Carlo determination of eigenvalues associated with self-avoiding random walks of large finite order. *J. Chem. Phys.* 68 (1978), no. 6, 2922-2928. (From the summary) 80c:65018 65C05
- Wall, G. E. Lie methods in group theory. *Topics in algebra* (Proc. 18th Summer Res. Inst., Austral. Math. Soc., Austral. Nat. Univ., Canberra, 1978), pp. 137-173. *Lecture Notes in Math.*, 697, Springer, Berlin, 1978. (B. Hartley) 80b:20057 20F40 (17B60)
- Commutator collection and module structure. *Topics in algebra* (Proc. 18th Summer Res. Inst., Austral. Math. Soc., Austral. Nat. Univ., Canberra, 1978), pp. 174-196. *Lecture Notes in Math.*, 697, Springer, Berlin, 1978. (Timo Neuvonen) 80i:16035 16A68 (16A64)
- A formula in noncommutative differential calculus. *Austral. Math. Soc. Gaz.* 5 (1978), no. 1, 29-36. (Joseph C. Ferrar) 80g:22018a 22E60
- A formula in noncommutative differential calculus. II. *Austral. Math. Soc. Gaz.* 5 (1978), no. 2, 37-43. (Joseph C. Ferrar) 80g:22018b 22E60
- On the Lie ring of a group of prime exponent. II. *Bull. Austral. Math. Soc.* 19 (1978), no. 1, 11-28. (I. Stewart) 80b:20052 20F40
- Wall, J. R. (with Haynsworth, Emilie) Group inverses of certain nonnegative matrices. *Linear Algebra Appl.* 25 (1979), 271-288. (Thomas H. Foregger) 80b:15006 15A09
- Rank factorizations of positive operators. *Linear and Multilinear Algebra* 8 (1979/80), no. 2, 137-144. (Michael G. Strintzis) 80k:15031 15A48 (15A09)
- Wall, K. D. (with Lehman, W.) A new nonparametric approach to the comparison of  $K$  independent samples of response curves. (German summary) *Biometrical J.* 20 (1978), no. 3, 261-273. (Authors' summary) 80c:62058 62G10
- Wallace, C. S. (with Gupta, G. K.) A new step-size changing technique for multistep methods. *Math. Comp.* 33 (1979), no. 145, 125-138. (Authors' summary) 80b:65098 65L05 (65D30)
- Wallace, D. J. Some applications of instantons in statistical mechanics. *Solitons and condensed matter physics* (Proc. Sympos. Nonlinear (Soliton) Structure and Dynamics in Condensed Matter, Oxford, 1978), pp. 104-115. *Springer Ser. in Solid-State Sci.*, 8, Springer, Berlin, 1978. (Author's summary) 80c:82073 82A99
- (with McKane, A. J.) Instanton calculations using dimensional regularisation. *J. Phys. A* 11 (1978), no. 11, 2285-2304. (Don Weingarten) 80c:81070 81E10 (58D20)
- Wallach, Nolan R. Representations of reductive Lie groups. *Automorphic forms, representations and L-functions* (Proc. Sympos. Pure Math., Oregon State Univ., Corvallis, Ore., 1977), Part 1, pp. 71-86. *Proc. Sympos. Pure Math.*, XXXIII, Amer. Math. Soc., Providence, R.I., 1979. (A. U. Klimyk) 80m:22024 22E45
- Wallach, Nolan R. Representations of semi-simple Lie groups and Lie algebras. *Lie theories and their applications* (Proc. Ann. Sem. Canad. Math. Congr., Queen's Univ., Kingston, Ont., 1977), pp. 154-246. *Queen's Papers in Pure and Appl. Math.*, 48, Queen's Univ., Kingston, Ont., 1978. (A. U. Klimyk) 80d:22019 22E46
- Wallach, Y. (with Conrad, V.) Alternating methods for sets of linear equations. *Numer. Math.* 32 (1979), no. 1, 105-108. (B. Levinger) 80c:65042 65F10 (15A09)
- Waller, Derek A. Covering projections of chemical reaction graphs. *Math. No. 4* (1978), 87-92. (Norman Biggs) 80a:05175 05C99 (80A30)
- Waller, W. G. (with Jones, Bush; Feldman, Arnold) Root isolation using function values. *BIT* 18 (1978), no. 3, 311-319. (David R. Hill) 80c:65052 65H05 (65-04)
- (with Jain, Anil K.) On the monotonicity of the performance of Bayesian classifiers. *IEEE Trans. Inform. Theory* 24 (1978), no. 3, 392-394. (Authors' summary) 80g:68117 68G10
- Wallerath, P. (with Görlich, E.) An example of a best possible Zamosky type inequality with exponential order. Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 1-2, 81-87. (Pier Luigi Papini) 80k:42003 42A10 (41A10, 41A25)
- Walley, Peter (with Fine, Terrence L.) Varieties of modal (classificatory) and comparative probability. *Synthese* 41 (1979), no. 3, 321-374. (Lawrence Sklar) 80j:03016 03A05 (03B45, 60A05)
- Wallin, Hans. Some general extension and restriction problems. *The theory of the approximation of functions* (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 61-69. "Nauka", Moscow, 1977. (J. Musielak) 80c:46027 46E35
- (with Jonsson, A.) A trace theorem for generalized Besov spaces with three indexes. *Fourier analysis and approximation* (Proc. Colloq., Budapest, 1976), Vol. I, pp. 429-449. *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (Angelo Favini) 80g:46029 46E35
- The trace to closed sets of the Zygmund class of quasismooth functions in  $\mathbb{R}^n$ . *Multivariate approximation* (Sympos., Univ. Durham, Durham, 1977), pp. 83-93. Academic Press, London, 1978. (W. W. Breckner) 80i:26023 26E10
- Wallis, G. Nonlinear wave interactions in plasmas. *VII. Internationale Konferenz über nichtlineare Schwingungen* (Berlin, 1975), Band II, 2, pp. 455-467. *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977, 6. Akademie-Verlag, Berlin, 1978. (Ian Lerche) 80c:82036 82A45 (35Q99)
- Wallis, Jennifer Seberry. See Seberry, Jennifer
- Wallis, R. F. (with Mills, D. L.; Maradudin, A. A.) Attenuation of Rayleigh waves by point defects. *Phys. Rev. B* (3) 19 (1979), no. 8, 3981-3995. (I. M. Longman) 80c:73025 73D20 (35Q99)
- Wallis, W. Allen. See Encyclopedia: Statistics, 80h:62001a
- Wallis, W. D. (with Cooper, Joan; Milas, James) Hadamard equivalence. *Combinatorial mathematics* (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977), pp. 126-135. *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (A. L. Whiteman) 80c:05043 05B20
- (with Beaman, I. R.) Pairwise orthogonal symmetric Latin squares. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1978), pp. 113-118. *Congress. Numer.*, XXI, Utilitas Math., Winnipeg, Man., 1978. (D. Sotheau) 80c:05035 05B15
- (with Hedayat, A.) Hadamard matrices and their applications. *Ann. Statist.* 6 (1978), no. 6, 1184-1238. (K. Vijayan) 80c:05037 05B20 (62K10, 94B25)
- (with Heinrich, Katherine) Hamiltonian cycles in certain graphs. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 1, 89-98. (A. P. Street) 80m:05066 05C35 (05C65)
- (with Heinrich, Katherine) Graphs with symmetric automorphism group. *J. Graph Theory* 2 (1978), no. 4, 329-336. (F. Harary) 80b:05030 05C25
- (with Heinrich, Katherine; Van Rees, G. H. J.) A general construction for equidistant permutation arrays. *Graph theory and related topics* (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977), pp. 247-252. Academic Press, New York, 1979. (F. De Clerck) 80k:05021 05B15 (05B30)

- (with Mullin, Ronald C.; Stinson, D. R.) Skew squares of low order. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1978)*, pp. 413-434, Congress. Numer., XXII, Utilitas Math., Winnipeg, Man., 1979. (Judith Q. Longyear) **80i:05021** 05B15 (62K10)
- See also *Combinatorial mathematics*, **80i:05002**
- Walther, R. (with Thirring, Walter) The use of exterior forms in field theory. *Differential geometrical methods in mathematical physics, II (Proc. Conf., Univ. Bonn, Bonn, 1977)*, pp. 171-178, *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (Andrzej Trautman) **80d:83002** 83-02 (53B50, 58A10)
- Walls, D. F. (with Carmichael, H. J.; Gragg, R. F.; Schieve, William C.) Detailed balance, Liapounov stability, and entropy in resonance fluorescence. *Phys. Rev. A* (3) **18** (1978), no. 4, 1622-1627. (Authors' summary) **80b:82031** 82A30
- Walls, Gary Trivial intersection groups. *Arch. Math. (Basel)* **32** (1979), no. 1, 1-4. (Bhama Srinivasan) **80e:20040** 20E34
- (with Bertholf, Dennis) Finite quasi-injective groups. *Glasgow Math. J.* **20** (1979), no. 1, 29-33. (Author's review (G. W.)) **80b:20021** 20D10
- Walrand, Jean (with Varaiya, Pravin) On delayed sharing patterns. *IEEE Trans. Automat. Control* **23** (1978), no. 3, 443-445. (Authors' summary) **80a:93160** 93E10
- (with Varaiya, Pravin) Decentralized control in packet switched satellite communication. *IEEE Trans. Automat. Control* **24** (1979), no. 5, 794-796. (Frits C. Schoute) **80m:93097** 93E20 (94A40)
- Walsh, Ann Marie (with Burkhard, Walter A.) Efficient algorithms for (3, 1) graphs. *Inform. Sci.* **13** (1977), no. 1, 1-10. (Authors' summary) **80e:68173** 68E10 (05C99)
- Walsh, Bertram More on gradient characterizations of analyticity. *Amer. Math. Monthly* **86** (1979), no. 6, 490-491. (From the text) **80b:30004** 30A99
- Walsh, Edward K. (with Nunziato, Jace W.) A thermodynamic theory for the effects of localized heating in granular materials. (German summary) *Z. Angew. Math. Phys.* **30** (1979), no. 5, 733-748. (Dominic G. B. Edelen) **80j:80003** 80A20
- Walsh, John R. Vector measures and the L<sub>0</sub> integral. *Vector space measures and applications (Proc. Conf., Univ. Dublin, Dublin, 1977)*, II, pp. 188-197, *Lecture Notes in Math.*, 645, Springer, Berlin, 1978. (M. Métivier) **80b:60077** 60H05
- (with Cairoli, R.) Régions d'arrêt, localisations et prolongements de martingales. *Z. Wahrsch. Verw. Gebiete* **44** (1978), no. 4, 279-306. (R. Morkvéna) **80k:60063** 60G44 (60G40)
- Convergence and regularity of multiparameter strong martingales. *Z. Wahrsch. Verw. Gebiete* **46** (1978/79), no. 2, 177-192. (R. T. Smythe) **80d:60066** 60G44
- Walsh, John J. (with Schori, R. M.) Examples of hereditarily strongly infinite-dimensional compacta. *Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978)*, II, *Topology Proc.* **3** (1978), no. 2, 495-506 (1979). (Michel Smith) **80m:54051** 54F45
- (with Rubin, Leonard R.; Schori, R. M.) New dimension-theory techniques for constructing infinite-dimensional examples. *General Topology Appl.* **10** (1979), no. 1, 93-102. (A. R. Pears) **80e:54049** 54F45 (57N20)
- (with Lay, Terry L.) ANR's admitting an interval factor are Q-manifolds. *Proc. Amer. Math. Soc.* **73** (1979), no. 2, 279-280. (R. R. Sumnerhill) **80e:57012** 57N20
- Infinite-dimensional compacta containing no  $n$ -dimensional ( $n > 1$ ) subsets. *Topology* **18** (1979), no. 1, 91-95. (A. V. Zarelua) **80e:54050** 54F45
- Isotoping mappings to open mappings. *Trans. Amer. Math. Soc.* **250** (1979), 121-145. (P. T. Church) **80m:70005** 57N37 (54C10, 57N25, 57N60)
- Walster, G. William (with Tretter, Marietta J.) Additions and corrections: "Continued fractions for the incomplete beta function" (Ann. Math. Statist. **12** (1941), 218-223) by L. A. Aroian. *Ann. Statist.* **7** (1979), no. 2, 462-465. (Authors' summary) **80d:62019** 62E15
- Comments-Walster, Beate See Comments-Walster, Beate
- Walter, G. G. (with Salamon, N. J.) Limits of Lipschitz-Hankel integrals. *J. Inst. Math. Appl.* **24** (1979), no. 3, 237-254. (Authors' summary) **80b:65011** 65D30
- Walter, Hans-Peter Elementarisierung und Modellierung von Fertigungsprozessen. (English, Russian and French summaries) *Wiss. Z. Humboldt-Universität Berlin Math.-Natur. Reihe* **27** (1978), no. 2, 153-165. (Author's summary) **80e:90078** 90B30
- Walter, Johann On the definition of the absolute temperature—a reconciliation of the classical method with that of Carathéodory. *Proc. Roy. Soc. Edinburgh Sect. A* **82** (1978/79), no. 1-2, 87-94. (Author's summary) **80d:80003** 80A05 (01A60)
- Walter, Stanley (with Kern, Malcolm) Ballot theorem and lattice path crossings. (French summary) *Canad. J. Statist.* **6** (1978), no. 1, 87-90. (S. G. Mohanty) **80b:60093** 60J15 (60C05)
- Walter, Wolfgang (with Acker, Andrew) On the global existence of solutions of parabolic differential equations with a singular nonlinear term. *Nonlinear Anal.* **2** (1978), no. 4, 499-504. (J. Vencko) **80c:35054** 35K65
- (with Schmitt, Klaus; Thompson, Russell C.) Existence of solutions of a nonlinear boundary value problem via the method of lines. *Nonlinear Anal.* **2** (1978), no. 5, 519-535. (From the introduction) **80b:65132** 65N40 (35J65)
- (with Mawhin, Jean) Periodic solutions of ordinary differential equations with one-sided growth restrictions. *Proc. Roy. Soc. Edinburgh Sect. A* **82** (1978/79), no. 1-2, 95-106. (A. Halanay) **80i:34063** 34C25 (34K15)
- (with Rhee, H.) Entire solutions of  $\Delta^2 u = f(r, u)$ . *Proc. Roy. Soc. Edinburgh Sect. A* **82** (1978/79), no. 3-4, 189-192. (C. Bardos) **80i:35074** 35J40 (35B60)
- (with Schaefer, Philip W.) On pointwise estimates for metaharmonic functions. *J. Math. Anal. Appl.* **69** (1979), no. 1, 171-179. (G. Albinus) **80f:35050** 35J40 (31B30)
- Existence theorems for a two-point boundary value problem in Banach space. *Math. Ann.* **244** (1979), no. 1, 55-64. (B. G. Pachpatte) **80j:34083** 34G20
- Walters, Peter (with Palmer, Marion Rachel; Parry, William) Large sets of endomorphisms and of  $g$ -measures. *The structure of attractors in dynamical systems (Proc. Conf., North Dakota State Univ., Fargo, N.D., 1977)*, pp. 191-210, *Lecture Notes in Math.*, 668, Springer, Berlin, 1978. (Nathaniel Friedman) **80b:28025** 28D05 (58F11)
- On the pseudo-orbit tracing property and its relationship to stability. *The structure of attractors in dynamical systems (Proc. Conf., North Dakota State Univ., Fargo, N.D., 1977)*, pp. 231-244, *Lecture Notes in Math.*, 668, Springer, Berlin, 1978. (A. Morimoto) **80d:58055** 58F15 (28D99)
- Walters, T. (with Kartsatos, Athanasios G.) Origins of oscillation criteria of operator differential equations in Hilbert space. *J. Math. Anal. Appl.* **67** (1979), no. 1, 12-16. (A. Ramm) **80b:34074** 34G10
- Walther, Hans-Otto A theorem on the amplitudes of periodic solutions of differential delay equations with applications to bifurcation. *J. Differential Equations* **29** (1978), no. 3, 396-404. (M. I. Kamenskii) **80g:34081** 34K15 (58E07)
- On instability,  $\omega$ -limit sets and periodic solutions of nonlinear autonomous differential delay equations. *Functional differential equations and approximation of fixed points (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978)*, pp. 489-503, *Lecture Notes in Math.*, 730, Springer, Berlin, 1979. (Wolfgang Ali) **80i:34125** 34K15 (34K25)
- See also *Functional differential equations and approximation of fixed points*, **80g:00005**
- Waltman, Paul A threshold model of antigen-stimulated antibody production. *Theoretical immunology*, pp. 437-453, *Immunology Ser.*, 8, Dekker, New York, 1978. (Kuang-Ho Chen) **80e:92015** 92A09 (34K05)
- (with Hsu, S. B.; Hubbell, S. P.) Competing predators. *SIAM J. Appl. Math.* **38** (1978), no. 4, 617-625. (Nishan Krikorian) **80a:92047** 92A15
- Walton, D. J. (with Hoskins, W. D.) The numerical solution of the time-dependent matrix equation  $A(t)V(t) + WA(t) = G(t)$ . *Internat. J. Systems Sci.* **9** (1978), no. 9, 1019-1028. (Authors' summary) **80a:93125** 93D05 (65F30)
- (with Hoskins, W. D.; Meek, Derek S.) High-order iterative methods for the solution of the matrix equation  $XA + AY = F$ . *Linear Algebra Appl.* **23** (1979), 121-131. (H. R. Schwarz) **80b:65043** 65F10
- (with Hoskins, W. D.) Methods for solving the matrix equation  $TB + CT = -A$  and its generalizations. *Linear Algebra Appl.* **23** (1979), 217-225. (D. S. Henderson) **80b:65044** 65F10 (15A09)
- (with Hoskins, W. D.) A faster, more stable method for computing the  $p$ th roots of positive definite matrices. *Linear Algebra Appl.* **26** (1979), 139-163. (Ludwig Elsner) **80f:65047** 65F30
- See also *Barraud, A. Y.*, **80k:65033**
- Walton, I. C. (with Hocking, L. M.; Moore, D. W.) The drag on a sphere moving axially in a long rotating container. *J. Fluid Mech.* **90** (1979), no. 4, 781-793. (J. C. Burns) **80b:76010** 76D99 (65R10)
- Walton, J. R. (with Nachman, A.; Schapery, R. A.) The sliding of a rigid indenter over a power-law viscoelastic half-space. *Quart. J. Mech. Appl. Math.* **31** (1978), no. 3, 295-321. (Steen Krenk) **80a:73037** 73F15 (45E05)
- Walum, H. See Suryanarayana, D., **80a:10063**
- Wan, C. B. (with Davis, M. H. A.) Existence of optimal controls for stochastic jump processes. *SIAM J. Control Optim.* **17** (1979), no. 4, 511-524. (Jean-Pierre Lepeltier) **80j:93145** 93E20
- Wan, F. S. (with Wilson, S. J.; Sen, K. K.) On the moment method for radiative transfer in spherical dust shells with a core. *Astrophys. and Space Sci.* **67** (1980), no. 1, 99-103. (Authors' summary) **80m:85002** 85A05
- Wan, Henry Y., Jr. (with Leitmann, George) A stabilization policy for an economy with some unknown characteristics. *J. Franklin Inst.* **306** (1978), no. 1, 23-33. (W. F. Tyndall) **80c:90036** 90A16
- Discussion paper. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 549-552, *Ann. New York Acad. Sci.*, 316, New York Acad. Sci., New York, 1979. (From the text) **80m:90038** 90A16 (58F14)
- (with Clemhout, Simone) Interactive economic dynamics and differential games. *J. Optim. Theory Appl.* **27** (1979), no. 1, 7-30. (Authors' summary) **80b:90163** 90D25
- Wan, Jo Hsin On the exact controllability for hyperbolic systems. *Bull. Inst. Math. Acad. Sinica* **7** (1979), no. 2, 177-186. (D. L. Russell) **80j:93019** 93B05 (35L20)
- Wan, Kay Kong (with Viazminsky, Cesar) Quantization in spaces of constant curvature. *Prog. Theoret. Phys.* **58** (1977), no. 3, 1030-1044. (J. H. Rawnsley) **80b:58054** 58F06 (81E10)
- (with Viazminsky, Cesar) Lie algebra and the quantisation of momenta and the Hamiltonian. *J. Phys. A* **12** (1979), no. 5, 643-647. (Authors' introduction) **80b:81038** 81D05 (58F06)
- Wan, Yieh Hsi Bifurcation into invariant tori at points of resonance. *Arch. Rational Mech. Anal.* **68** (1978), no. 4, 343-357. (G. R. Sell) **80b:58046** 58F14 (34C40, 70H99)
- On the structure and stability of local Pareto optima in a pure exchange economy. *J. Math. Econom.* **5** (1978), no. 3, 255-274. (A. C. Williams) **80a:90027** 90A14 (58C27)
- On the algebraic criteria for local Pareto optima. II. *Trans. Amer. Math. Soc.* **245** (1978/79), 385-397. (Carl P. Simon) **80a:58018** 58E17 (58C27, 90A14)
- Wan, Zhe Xian (with Liu, Mu Lan) Automorphisms and homomorphisms of the de Bruijn-Good graph. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 2, 170-177. (Hugo S. Sun) **80i:05047** 05C25 (05C20)
- Wand, Mitchell Fixed-point constructions in order-enriched categories. *Theoret. Comput. Sci.* **8** (1979), no. 1, 13-30. (Walter Tholen) **80e:18002** 18B35 (06B30)
- Continuation-based program transformation strategies. *J. Assoc. Comput. Mach.* **27** (1980), no. 1, 164-180. (Author's summary) **80m:68025** 68B10 (68C05)
- Wang, A. H. (with Klein, R. L.) Optimal quadrature formula nonlinear estimators. *Inform. Sci.* **16** (1978), no. 3, 169-184. (Kailash C. Kapur) **80e:93120** 93E10
- Wang, C. C. See Wang, Chao Yen
- Wang, C. Y. See Wang, Chang Chi
- Wang, Cecilia Y. Stiffness of harmonic functions. *Proc. Amer. Math. Soc.* **77** (1979), no. 1, 103-106. (Thomas McCoy) **80i:30064** 30F15
- Wang, Chang Bin (with Wu, Lian Da; Tong, Fu) A seminumerical method for computing the second-order perturbation of artificial satellites. *Chinese Astronom.* **3** (1979), no. 3, 238-257. (Authors' summary) **80i:70027** 70M05
- Wang, Chang Yi (with Watson, Layne T.) Squeezing of a viscous fluid between elliptic plates. *Appl. Sci. Res.* **35** (1979), no. 2-3, 195-207. (Authors' summary) **80j:76030** 76D99
- Wang, Chang Yu Minimization of  $\sum_{i=1}^n c_i \|x - a_i\|$  over closed convex sets. (Chinese) *Acta Math. Appl. Sinica* **1** (1978), no. 2, 145-150. (Su-shing Chen) **80c:90120** 90C20 (65K10, 90C25)
- Extensions and convergence of linear approximation methods in problems concerning a nonlinear network of pipelines. (Chinese) *Acta Math. Appl. Sinica* **1**



- (1978), no. 4, 269–282. (Kai-Yuen Chan) **80d:90087** 90C50 (90B99)
- Wang, Chao Chen** ★Mathematical principles of mechanics and electromagnetism. Part A: Analytical and continuum mechanics. Mathematical Concepts and Methods in Science and Engineering, 16. Plenum Press, New York-London, 1979. xiv+198+xv–xix pp. ISBN 0-306-40211-4 (Gérard A. Maugin) **80m:73001a** 73–02 (00A69, 58F05, 70–02, 78–02, 83–02)
- ★Mathematical principles of mechanics and electromagnetism. Part B: Electromagnetism and gravitation. Mathematical Concepts and Methods in Science and Engineering, 17. Plenum Press, New York-London, 1979. pp. xiv and 199–386 and xv–xix. ISBN 0-306-40212-2 (Gérard A. Maugin) **80m:73001b** 73–02 (00A69, 58F05, 70–02, 78–02, 83–02)
- Quasistatic controllable processes of incompressible isotropic homogeneous anelastic material bodies. *Arch. Rational Mech. Anal.* **69** (1979), no. 3, 263–291. (From the introduction) **80e:73011** 73B99 (49H05)
- (with Marris, A. W.) Proof that motions obtained in the preceding paper by Marris are universal for all incompressible isotropic simple materials. *Arch. Rational Mech. Anal.* **69** (1979), no. 4, 381–390. (R. L. Fosdick) **80h:7604b** 76A05 (73F99)
- Wang, Chih Ming** (with Graybill, Franklin A.) Confidence intervals for proportions of variability in two-factor nested variance component models. *J. Amer. Statist. Assoc.* **74** (1979), no. 366, part 1, 368–374. (J. Kieffe) **80i:62026** 62F25 (62J05)
- Wang, Chung Lie** Applications of variants of the Hölder inequality and its inverses: extensions of Barnes, Marshall-Olkin, and Nehari inequalities. *Canad. Math. Bull.* **21** (1978), no. 3, 347–354. (V. Ganapathy Iyer) **80b:26026** 26D15
- Extensions of determinantal inequalities. *Utilitas Math.* **13** (1978), 201–210. (W. Ledermann) **80g:15019** 15A45 (15A15)
- Functional equation approach to inequalities. *J. Math. Anal. Appl.* **71** (1979), no. 2, 423–430. (E. F. Beckenbach) **80i:26022** 26D15
- On development of inverses of the Cauchy and Hölder inequalities. *SIAM Rev.* **21** (1979), no. 4, 550–557. (E. F. Beckenbach) **80g:26023** 26D15
- Gramian expansions and their applications. *Utilitas Math.* **15** (1979), 97–111. (Robert Grone) **80e:15013** 15A45 (46C99)
- Wang, Chung Shin** On Nörlund sequence spaces. *Tamkang J. Math.* **9** (1978), no. 2, 269–274. (Kenneth A. Jukes) **80g:40005** 40D25 (40H05)
- Wang, Da Lun** (with Wang, Ping) Some results about the Chvátal conjecture. *Discrete Math.* **24** (1978), no. 1, 95–101. (D. J. Kleitman) **80b:05003** 05A05
- (with Bixby, Robert E.) An algorithm for finding Hamiltonian circuits in certain graphs. *Polyhedral combinatorics. Math. Programming Stud.* No. 8 (1978), 35–49. (D. J. Kleitman) **80e:05075** 05C45 (68E10)
- (with Gessel, Ira) Depth-first search as a combinatorial correspondence. *J. Combin. Theory Ser. A* **26** (1979), no. 3, 308–313. (D. Ja. Kessel'man) **80k:05042** 05C05 (05C40, 68E10)
- Wang, Edward T. H.** When is the permanent function convex on the set of doubly stochastic matrices? *Amer. Math. Monthly* **86** (1979), no. 2, 119–121. (R. A. Brualdi) **80b:15016** 15A15
- (with Brenner, J. L.) Permanent pairs of doubly stochastic matrices. II. *Linear Algebra Appl.* **28** (1979), 39–41. (R. A. Brualdi) **80k:15011** 15A15 (15A51)
- A combinatorial application of the Frobenius inequality on rank function to maximum set of commuting nilpotent matrices. *Linear and Multilinear Algebra* **8** (1979/80), no. 1, 79–82. (Cs. J. Hegedüs) **80k:15019** 15A30 (15A27)
- Wang, Fan** (with Chen, Jin Quan; Yu, Zu Rong; Gao, Mei Juan) The relation between the permutation group and the unitary group. (Chinese) *Kexue Tongbao* **1978**, no. 5, 291–294. (Takayuki Nono) **80k:22024** 22E70
- Wang, Frank J. S.** (with Derrick, William R.) On deterministic epidemic models. *Bull. Inst. Math. Acad. Sinica* **6** (1978), no. 1, 73–84. (Authors' summary) **80h:92019** 92A15
- Perturbation and maximum number of infectives of some SIR epidemic models. *SIAM J. Math. Anal.* **10** (1979), no. 4, 721–727. (Andris Abakus) **80i:92024** 92A15
- Wang, Guo Jun** A remark on the connectedness of sets of limit points of sequences. (Chinese) *Kexue Tongbao* **24** (1979), no. 12, 533–537. (Kim-Peu Chew) **80i:54020** 54D05 (54A20)
- Wang, Hual Ch'ian** (with Ting, Mei Ling) Homogeneous Banach spaces of locally integrable functions. *Nanta Math.* **12** (1979), no. 1, 62–70. (Hans G. Feichtinger) **80i:43004** 43A15 (46E30)
- Wang, James Li Ming** Approximation by rational modules on nowhere dense sets. *Pacific J. Math.* **80** (1979), no. 1, 293–295. (Author's summary) **80g:30026** 30E10
- Wang, Jong C.** (with Mickle, Marlin H.; Hoelzeman, Ronald G.) Simplification of Boolean-valued data by minimum coverage. *Inform. Sci.* **12** (1977), no. 2, 163–178. (Authors' summary) **80j:68016** 68B15 (68G10, 94C10)
- Wang, Kai** On the characteristic polynomials of isolated complete intersection singularities. *Quart. J. Math. Oxford Ser. (2)* **29** (1978), no. 116, 505–512. (Richard Randell) **80d:14018** 14H20
- Wang, Kang Ning** Observability and controllability of an elastic vibrating system with controller. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 1, 28–44. (Author's summary) **80h:93032** 93B05 (70K99)
- Wang, Ko Chung** (with Huang, Wen Tao) On a sum of product of combinations that arises in a test of homogeneity of  $k$  binomial populations. *Tamkang J. Math.* **9** (1978), no. 1, 71–78. (I. J. Good) **80f:62025** 62F03 (62E15)
- (with Huang, Wen Tao) Tables of conditional probabilities and moments of the sample range from binomial population conditioned on the total sum. *Tamkang J. Math.* **9** (1978), no. 1, 135–144. **80d:62097** 62Q05
- Wang, L. C.** (with Han, K. W.) Analysis of sampled-data control systems by the stability-equation method. *J. Franklin Inst.* **306** (1978), no. 1, 87–106. (Authors' summary) **80g:93130** 93D05
- Wang, Lie Heng** The problem of convergence of an iterative method for solving linear algebraic equations. II. (Chinese) *Knowledge Practice Math.* No. 2 (1979), 46–51. (Author's introduction) **80h:65021** 65F10
- Wang, Mike W.** (with Chen, Hubert J.; Tsai, Paul J.) Confidence intervals for the largest mean from  $k$  correlated normal populations. *Comm. Statist. B—Simulation Comput.* **7** (1978), no. 3, 205–222. (Khurshed Alam) **80m:62048** 62F25
- Wang, Nae Sheng** (with Huang, T'i Yuan) On best fractional linear generating function bounds. *J. Appl. Probab.* **16** (1979), no. 2, 449–453. (Warren Esty) **80d:60110** 60J80
- Wang, Nan Qian** (with Zhang, Qian Er; Lin, Lian Tang) Graphical method of Hückel matrix. *Sci. Sinica* **22** (1979), no. 10, 1169–1184. (P. J. Roberts) **80m:81113** 81G55
- Wang, P. K. C.** Identification problems in plasma physics. *Distributed parameter systems: modelling and identification (Proc. IFIP Working Conf., Rome, 1976)*, pp. 424–445. *Lecture Notes in Control and Information Sci.*, 1, Springer, Berlin, 1978. (Shinzo Kitamura) **80a:78023** 78A45 (93B30)
- Wang, Paul S.** (with Trager, Barry M.) New algorithms for polynomial squarefree decomposition over the integers. *SIAM J. Comput.* **8** (1979), no. 3, 300–305. (Authors' summary) **80e:68093** 68C20 (68C05)
- Wang, Peter C. C.** See Information linkage between applied mathematics and industry, **80e:00004**
- Wang, Ping** (with Wang, Da Lun) Some results about the Chvátal conjecture. *Discrete Math.* **24** (1978), no. 1, 95–101. (D. J. Kleitman) **80b:05003** 05A05
- Wang, Run Wen** (with Tan, Wei Han; Ding, Li Ming) Thermal convection instabilities of spherically symmetric plasmas. (Chinese. English summary) *Kexue Tongbao* **24** (1979), no. 16, 727–730. (Authors' summary) **80h:82030** 82A45 (80A20)
- Wang, S. P.** On  $L$ -subgroups of locally compact groups. *Adv. in Math.* **28** (1978), no. 2, 89–100. (Helmut Bock) **80e:22006** 22D05 (22E40)
- Correction: "On density properties of certain subgroups of locally compact groups" (Duke Math. J. **43** (1976), no. 3, 561–578). *Duke Math. J.* **45** (1978), no. 4, 953. (Editors) **80b:22016** 22E40
- On algebras of operators of finite rank. *J. Funct. Anal.* **30** (1978), no. 1, 60–73. (G. A. Elliott) **80a:47072** 47D25 (22D25)
- Wang, Shan Shan** (with Nahmias, Steven) Approximating partial inverse moments for certain normal variates with an application to decaying inventories. *Naval Res. Logist. Quart.* **25** (1978), no. 3, 405–413. (Authors' summary) **80a:90053** 90B05
- Wang, Shih Ho** (with Davison, Edward J.; Gesing, W.) An algorithm for obtaining the minimal realization of a linear time-invariant system and determining if a system is stabilizable-detectable. *IEEE Trans. Automat. Control* **23** (1978), no. 6, 1048–1054. (Authors' summary) **80h:93023** 93B05 (93A99)
- (with Davison, Edward J.) Minimization of transmission cost in decentralized control systems. *Internat. J. Control* **28** (1978), no. 6, 889–896. (P. Bertrand) **80h:93125** 93D15
- Wang, Si Lei** The behavior of functions regular in the unit circle. (Chinese) *Acta Math. Sinica* **21** (1978), no. 1, 91–93. (P. S. Chang) **80d:30036** 30D55
- Wang, T. S.** (with Dobrovt, D.) Suppression of inherent instabilities in initial value methods. *J. Comput. Phys.* **29** (1978), no. 1, 93–100. (Authors' summary) **80a:65159** 65L05
- Wang, Theodore J.** (with Johnson, Charles R.; Beine, William B.) Right-left asymmetry in an eigenvector ranking procedure. *J. Math. Psych.* **19** (1979), no. 1, 61–64. (James B. MacQueen) **80i:92027** 92A25
- Wang, Te Lin** (with Liu, Chao Kai) Error-correcting codes in binary-coded-decimal arithmetic. *IEEE Trans. Comput.* **27** (1978), no. 11, 977–984. (Authors' summary) **80a:94037** 94B40
- Wang, Xian** (with Ye, Yan Qian) Nonlinear differential equations arising in the theory of electron beam focusing. (Chinese) *Acta Math. Appl. Sinica* **1** (1978), no. 1, 13–41. (P. F. Hsieh) **80f:34014** 34B05 (34C25)
- Wang, Xing Hua** Error estimates for some numerical root-finding methods. (Chinese) *Acta Math. Sinica* **22** (1979), no. 5, 638–642. (Ky Fan) **80g:65056** 65H05
- An iteration method with second-order convergence for finding zeros of derivatives. (Chinese) *Kexue Tongbao* **24** (1979), no. 4, 151–152. **80g:65054** 65H05
- Wang, Y. H.** Dependent random variables with independent subsets. *Amer. Math. Monthly* **86** (1979), no. 4, 290–292. (From the introduction) **80e:60002** 60A05
- Wang, Y. T.** (with Desoer, C. A.) The robust non-linear servomechanism problem. *Internat. J. Control* **29** (1979), no. 5, 803–828. (Edward J. Davison) **80g:93067** 93D15
- Wang, Ya Nan** (with Su, Ding Qiang; Zhou, Bi Fang; Lu, Sheng Dong) An algorithm for finding the extreme values of a function of many variables and its application in the automatic design of astronomical optical systems. (Chinese) *Astronom. J.* **4** (1980), no. 1, 84–89. (Authors' summary) **80k:78033** 78A55 (85A99)
- Wang, Yuan** (with Hua, Luo Geng) Uniform distribution and numerical analysis. I. Number-theoretic methods. (Chinese) *Kexue Tongbao* **18** (1973), no. 3, 112–114. (Ming-Chit Liu) **80i:10044a** 10F40 (10K05)
- (with Hua, Luo Geng) Uniform distribution and numerical analysis. II. Number-theoretic method. (Chinese) *Kexue Tongbao* **18** (1973), no. 4, 165–166. (Ming-Chit Liu) **80i:10044b** 10F40 (10K05)
- (with Yu, Kun Rui; Zhu, Yao Chen) A transfer theorem for linear forms. (Chinese) *Acta Math. Sinica* **22** (1979), no. 2, 237–240. (Jau-Shyong Shue) **80k:10027** 10F10
- (with Schmidt, Wolfgang M.) A note on a transference theorem of linear forms. *Sci. Sinica* **22** (1979), no. 3, 276–280. (Thomas W. Cusick) **80e:10028** 10F10
- Wang, Zhao Lin** An instability theorem for unisolated systems with gyroscopic terms. (Chinese) *Acta Mech. Sinica (Peking)* **1978**, no. 3, 171–176. (Yi-Yuan Yu) **80d:70014** 70E15 (93D99)
- Wani, Jagannath K.** Measuring diversity in biological populations with logarithmic abundance distributions. (French summary) *Canad. J. Statist.* **6** (1978), no. 2, 219–228. (J. K. Ord) **80m:62018** 62E15 (62P10, 92A15)
- Wanlurski, Josef** (with Szyml, Jan) Some problems for linearly invariant families. (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska Sect. A* **30** (1976), 91–102 (1978). (Authors' summary) **80c:30017** 30C55
- Wanka, Johanna** Eigenschaften des parabolischen Potentials der Einfachschicht mit summierbarer Dichte. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* **21** (1979), no. 1, 31–41. (Jan Prüss) **80i:35009** 35K10
- Wanke-Jakubowska, M. B.** (with Wanke-Jerie, M. E.) On orders of skew elements in finite  $n$ -groups. *Demonstratio Math.* **12** (1979), no. 1, 247–253. (G. Čupona) **80b:20111** 20N15
- Wanke-Jerie, M. E.** (with Wanke-Jakubowska, M. B.) On orders of skew elements in finite  $n$ -groups. *Demonstratio Math.* **12** (1979), no. 1, 247–253. (G. Čupona) **80b:20111** 20N15
- Wanner, G.** (with Hairer, E.; Norsett, Syvert P.) When  $I$ -stability implies  $A$ -stability. *BIT* **18** (1978), no. 4, 503. (R. Leonard Brown) **80b:65106** 65L05

- Wansbeek, Tom J. (with Kapteyn, Arie) The separation of individual variation and systematic change in the analysis of panel data. (French and Spanish summaries) Colloque International du CNRS sur l'Économétrie des Données Individuelles Temporelles (Paris, 1977). *Ann. I.N.S.E.E.* No. 30-31 (1978), 659-680, 733, 747. (Jerry A. Hausman) **80b:62118** 62P20
- Wansink, Joh. H. The rule of three, according to Bartjens; a didactic fossil. (Dutch) *Euclides (Groningen)* **54** (1978/79), no. 1, 2-7. (P. Bockstaele) **80b:01008** 01A45 (01A55)
- Some aspects of the development of the Dutch mathematical schoolbook market from 1800 to 1940. *Nieuw Arch. Wisk.* (3) **26** (1978), no. 1, 206-230. (H. Freudenthal) **80c:01017** 01A55 (01A60)
- Warburton, G. B. The influence of the finite element method on developments in structural dynamics. *Energy methods in finite element analysis*, pp. 59-80, Wiley, Chichester, 1979. (H. J. Weinitschke) **80b:73046** 73K25 (65N30)
- Ward, A. J. Proof of a theorem of A. P. and W. Robertson on completeness under the Hausdorff uniformity. *J. London Math. Soc.* (2) **18** (1978), no. 2, 349-352. (S. A. Peregrudov) **80c:54025** 54E15
- Ward, B. F. L. Strongly coupled fields. II. Interactions of the Yukawa type. (Italian and Russian summaries) *Nuovo Cimento A* (11) **45** (1978), no. 1, 28-49. (N. Nakanishi) **80b:81080** 81E10 (46N05)
- The theory of asymptotic behavior. (Italian and Russian summaries) *Nuovo Cimento A* (11) **46** (1978), no. 1, 121-186. (A. S. Wightman) **80b:81061** 81E15 (81E99)
- Decoupling of fermions from bosons in the strong-coupling limit of gauge theories. (Italian and Russian summaries) *Nuovo Cimento A* (11) **49** (1979), no. 3, 289-306. (Authors' summary) **80c:81117** 81G05
- Quarks, quaternions and weakly coupled gauge fields. (Italian and Russian summaries) *Nuovo Cimento A* (11) **51** (1979), no. 2, 209-218. (A. O. Barut) **80i:81065** 81G20
- Ward, Harold N. (with MacWilliams, F. Jessie; Odlyzko, Andrew M.; Sloane, Neil J. A.) Self-dual codes over GF(4). *J. Combin. Theory Ser. A* **25** (1978), no. 3, 288-318. (Raymond Hill) **80i:94016** 94B05 (05B05)
- Combinatorial polarization. *Discrete Math.* **26** (1979), no. 2, 185-197. (J.-M. Goethals) **80a:05012** 05A99
- Ward, J. C. General relativity, the Dirac equation, and higher symmetries. *Proc. Nat. Acad. Sci. U.S.A.* **75** (1978), no. 6, 2568. (Nicholas M. J. Woodhouse) **80b:83038** 83C99
- Ward, J. P. Interpretation of global integrability conditions for stationary Einstein-Maxwell equations. *Gen. Relativity Gravitation* **10** (1979), no. 9, 743-749. (Brian O. J. Tupper) **80j:83030** 83E05 (58A15, 83C50)
- Ward, James R., Jr. The implicit function theorem and a random integral equation. *Stability of dynamical systems, theory and applications (Proc. Regional Conf., Mississippi State Univ., Mississippi State, Miss., 1975)*, pp. 201-206, *Lecture Notes in Pure and Appl. Math.*, 28, Dekker, New York, 1977. (From the text) **80a:45003** 45D05 (60H20)
- Periodic solutions of perturbed conservative systems. *Proc. Amer. Math. Soc.* **72** (1978), no. 2, 281-285. (Charles C. Conley) **80b:34045** 34C25 (47H15)
- Boundary value problems for differential equations in Banach space. *J. Math. Anal. Appl.* **70** (1979), no. 2, 589-598. (J. E. Lagnese) **80i:34110** 34G20
- The existence of periodic solutions for nonlinearly perturbed conservative systems. *Nonlinear Anal.* **3** (1979), no. 5, 697-705. (James A. Murdock) **80b:34053** 34C25 (47H10)
- Ward, Joseph D. (with Mach, Jaroslav) Approximation by compact operators on certain Banach spaces. *J. Approx. Theory* **23** (1978), no. 3, 274-286. (G. Mühlbach) **80j:47054** 47D15 (41A65)
- (with Allen, G. D.) Hermitian liftings in  $B(L)$ . *J. Operator Theory* **1** (1979), no. 1, 27-36. (J. J. Buoni) **80b:47040** 47B37 (47A10)
- (with Smith, R. R.)  $M$ -ideals in  $B(L)$ . *Pacific J. Math.* **81** (1979), no. 1, 227-237. (Hermann König) **80j:47058** 47D30 (47B05)
- (with Smith, R. R.) Applications of convexity and  $M$ -ideal theory to quotient Banach algebras. *Quart. J. Math. Oxford Ser. (2)* **30** (1979), no. 119, 365-384. (F. F. Bonsall) **80b:46071** 46H05
- (with Allen, G. D.) A simultaneous lifting theorem for block diagonal operators. *Trans. Amer. Math. Soc.* **250** (1979), 385-397. (J. J. Buoni) **80i:47002** 47A10 (47A12, 47A55)
- See also Smith, R. R., **80j:46087**
- Ward, L. E., Jr. A cyclic connectivity theorem for hyperspaces. *General Topology Appl.* **10** (1979), no. 3, 291-295. (A. I. Balkirov) **80i:54010** 54B20 (54D05)
- Ward, R. C. (with Gray, L. J.) Eigensystem computation for skew-symmetric matrices and a class of symmetric matrices. *ACM Trans. Math. Software* **4** (1978), no. 3, 278-285. (From the summary) **80a:65082** 65F15
- Ward, Richard A. Numerical calculation of the limiting properties of Coulomb excitation functions. *J. Comput. Phys.* **29** (1978), no. 1, 49-66. (Gisèle Hadinger) **80a:81120** 81G99 (00A89)
- Wardrop, M. J. (with ter Haar, D.) The stability of three-dimensional planar Langmuir solitons. Special issue on solitons in physics. *Phys. Scripta* **20** (1979), no. 3-4, 493-501. (V. Z. Enol'skii) **80b:82056** 82A45 (35Q20)
- embry-Wardrop, Mary See Embry-Wardrop, Mary
- Wardrop, Robert L. (with Shapiro, C. P.) The Bayes sequential procedure for estimating the arrival rate of a Poisson process. *J. Amer. Statist. Assoc.* **73** (1978), no. 363, 597-601. (Shelemyahu Zacks) **80g:62062** 62L15 (62F15, 62N05)
- Ware, Roger. Quadratic forms and profinite 2-groups. *J. Algebra* **58** (1979), no. 1, 227-237. (Craig Cordes) **80i:10025** 10C05 (12D15)
- (with Prestel, Alexander) Almost isotropic quadratic forms. *J. London Math. Soc.* (2) **19** (1979), no. 2, 241-244. (Ron Brown) **80b:12024** 12D15 (10C05, 15A63)
- Warren, Allan D. (with Lasdon, Leon S.) The status of nonlinear programming software. *Oper. Res.* **27** (1979), no. 3, 431-456. (Authors' summary) **80b:90122** 90C30 (90-04)
- Warfield, Robert B., Jr. Stable equivalence of matrices and resolutions. *Comm. Algebra* **6** (1978), no. 17, 1811-1828. (J. C. Robson) **80c:16021** 16A54 (15A33)
- Stable generation of modules. *Module theory (Proc. Special Session, Amer. Math. Soc., Univ. Washington, Seattle, Wash., 1977)*, pp. 16-33, *Lecture Notes in Math.*, 700, Springer, Berlin, 1979. (Kazuo Kishimoto) **80b:16036** 16A54
- Modules over fully bounded Noetherian rings. *Ring theory (Proc. Conf., Univ. Waterloo, Waterloo, 1978)*, pp. 339-352, *Lecture Notes in Math.*, 734, Springer, Berlin, 1979. (G. Krause) **80m:16017** 16A54 (16A33)
- (with Huber, Martin) On the torsion subgroup of  $\text{Ext}(A, G)$ . *Arch. Math. (Basel)* **32** (1979), no. 1, 5-9. (E. A. Walker) **80b:20077** 20K35 (20K40)
- (with Goodearl, K. R.) Simple modules over hereditary Noetherian prime rings. *J. Algebra* **57** (1979), no. 1, 82-100. (J. C. Robson) **80g:16005** 16A14
- Warga, J. Controllability and a multiplier rule for nondifferentiable optimization problems. *SIAM J. Control Optim.* **16** (1978), no. 5, 803-812. (Thomas S. Angell) **80g:49031** 49B34 (93B05)
- Controllability of nondifferentiable hereditary processes. *SIAM J. Control Optim.* **16** (1978), no. 5, 813-831. (Thomas S. Angell) **80b:49014** 49B34 (93B05)
- A hybrid relaxed-Lagrangian second-order condition for minimum. *Differential games and control theory (Proc. Third Kingston Conf., Part A, Univ. Rhode Island, Kingston, R.I., 1978)*, pp. 77-94, *Lecture Notes in Pure and Appl. Math.*, 44, Dekker, New York, 1979. (L. D. Berkovitz) **80j:49019** 49B10
- Wargowke, B. (with Toutenburg, Helge) On restricted 2-stage-least-squares (2SLS) in a system of structural equations. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* **9** (1978), no. 2, 167-177. (C. R. Rao) **80b:62082** 62J05 (90A19)
- Warlimont, Richard. Eine Bemerkung über quadratfreie Zahlen  $\equiv 1 \pmod{k}$ . (English summary) *Monatsh. Math.* **86** (1978/79), no. 4, 333-336. (O. H. Körner) **80d:10079** 10H25 (10A22)
- Warning, R. F. (with Beam, Richard M.) An extension of  $A$ -stability to alternating direction implicit methods. *BIT* **19** (1979), no. 3, 395-417. (Authors' summary) **80b:65072** 65M10
- Warmuth, Walter. Kritische räumlich homogene Verzweigungsprozesse mit abzählbarer Typenmenge. *Math. Nachr.* **84** (1978), 25-85. (F. Papangelou) **80b:60097** 60J80 (60G55)
- (with Matthes, Klaus; Mecke, Joseph) Bemerkungen zu einer Arbeit: "Integral and differential characterizations of the Gibbs process" [Math. Nachr. **88** (1979), 105-115; MR **80i:60081a**] von Nguyen Xuan Xanh und Hans Zessin. *Math. Nachr.* **88** (1979), 117-127. (Olav Kallenberg) **80i:60081b** 60G55 (60K35)
- Warne, R. J. Natural regular semigroups. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 685-720, *Colloq. Math. Soc. János Bolyai*, 20, North-Holland, Amsterdam, 1979. (G. J. Lallement) **80j:20070** 20M10
- Warner, M. (with Edwards, S. F.) The effect of disorder on the spectrum of a Hermitian matrix. *J. Phys. A* **13** (1980), no. 2, 381-396. (Authors' summary) **80k:82021** 82A15 (82A42)
- Warner, N. P. (with Buchdahl, H. A.) On the world function of the Schwarzschild field. *Gen. Relativity Gravitation* **10** (1979), no. 11, 911-923. (Alan L. Macdonald) **80k:83014** 83C25 (51B20)
- (with Buchdahl, H. A.) On the world function of the Gödel metric. *J. Phys. A* **13** (1980), no. 2, 509-516. (Authors' summary) **80k:83049** 83D05
- Warnock, Robert Lee. A nonlinear integral equation from the Ball-Zachariasen model of diffractive scattering: numerical solution near a singularity of the Fréchet derivative. *J. Comput. Phys.* **33** (1979), no. 1, 45-69. (Authors' summary) **80b:65109** 65R20
- Warrack, B. (with Willard, S.) Domains of first countability. (Serbo-Croatian summary) *Glas. Mat. Ser. III* **14** (34) (1979), no. 1, 129-136. (R. Engelking) **80g:54014** 54C10 (54B15, 54E65)
- Warren, F. W. Hermitian forms and eigenvalue bounds. *Stud. Appl. Math.* **59** (1978), no. 1, 249-281. (B. Vujanović) **80d:76036** 76E05
- Warschawski, Stefan E. (with Rodin, Burton) Estimates for conformal maps of strip domains without boundary regularity. *Proc. London Math. Soc.* (3) **39** (1979), no. 2, 356-384. (G. Opfer) **80k:30013** 30C20 (30E15)
- Warschawski, W. I. ★ Kollektives Verhalten von Automaten. Übersetzt aus dem Russischen von Gerhard Paulin. Elektronisches Rechnen und Regeln, Sonderband, 24 Akademie-Verlag, Berlin, 1978. xvii + 288 pp. (Albert Jugel) **80m:93005** 93A10 (68A05, 68D99)
- Warth, Wolfgang (with Kirsch, Andreas; Werner, Jochen) ★ Notwendige Optimalitätsbedingungen und ihre Anwendung. *Lecture Notes in Economics and Mathematical Systems*, 152, Springer-Verlag, Berlin-New York, 1978. iv + 157 pp. ISBN 3-540-08537-8 (Jochem Zowe) **80a:65140** 65K10 (90C30)
- Bemerkungen zur superlinearen Konvergenz von Abstiegsverfahren. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* **9** (1978), no. 4, 559-567. (D. J. van Wyk) **80i:65080** 65K10 (90C30)
- Wasan, Siri Krishan. Burst distribution of a coset of a linear code. *Inform. and Control* **44** (1980), no. 1, 73-76. (Authors' summary) **80m:94054** 94B05
- Washburn, Don. A bound on the boundary input map for parabolic equations with application to time optimal control. *SIAM J. Control Optim.* **17** (1979), no. 5, 652-671. (Authors' summary) **80j:49021** 49B22
- Washburn, H. D. (with Mendel, J. M.) Multistage estimation of bias states in linear systems. *Internat. J. Control* **28** (1978), no. 4, 511-524. (S. G. Tzafestas) **80i:93073** 93E10
- Washington, Lawrence C. The non-p-part of the class number in a cyclotomic  $\mathbb{Z}_p$ -extension. *Invent. Math.* **49** (1978), no. 1, 87-97. (T. Metsänkylä) **80c:12005** 12A35 (12A50)
- Kummer's calculation of  $L_p(1, \chi)$ . *J. Reine Angew. Math.* **305** (1979), 1-8. (T. Metsänkylä) **80c:12017** 12A70 (12B30)
- Washiyama, Ryo (with Tsukada, Eisuo)  $S^1$ -actions on cohomology complex projective spaces with three components of the fixed point sets. *Hiroshima Math. J.* **9** (1979), no. 1, 41-46. (Steven H. Weintraub) **80j:57043** 57S25
- Washizu, K. (with Nakamichi, J.) A direct approach using the finite element method for the solution of the linear optimal control problem with a quadratic criterion. *J. Franklin Inst.* **306** (1978), no. 4, 309-319. (Jiří V. Outrata) **80a:93101** 93C55 (65K05)
- Wasiko, Maria (with Moszner, Zenon) Sur les solutions d'une équation fonctionnelle. III. *Aequationes Math.* **19** (1979), no. 1, 79-88. (I. M. Sheffer) **80g:39004** 39B10 (39B40, 39B70)
- (with Moszner, Zenon) L'équation de translation sur le produit simple des groupes



- avec zéro. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* No. 20 (1979), 101-109. (Józef Tabor) **80i:39009** 39B40 (39B50)
- Wason, James R. Position of compact hypersurfaces of the  $n$ -sphere. *Proc. Amer. Math. Soc.* **68** (1978), no. 1, 90-91. (Carlos E. Harle) **80b:53039** 53C40
- Curvature of product 3-manifolds. *Proc. Amer. Math. Soc.* **72** (1978), no. 1, 150-154. (J. Vilms) **80b:53033** 53C20
- Wawon, Wolfgang The magnitude of an adiabatic invariant of quantum mechanics. *Resulante Math.* **1** (1978), no. 1, 88-107. (K. J. Le Couteur) **80b:81015** 81C05 (34E20, 35P99)
- Wasserman, Howard C. A second-order axiomatic theory of strings. *Notre Dame J. Formal Logic* **19** (1978), no. 4, 629-633. (Max I. Kanovič) **80d:03038** 03D05 (68D01, 68F05)
- Wasserman, Stanley S. Models for binary directed graphs and their applications. *Adv. in Appl. Probab.* **10** (1978), no. 4, 803-818. (Author's summary) **80a:92001** 92-02 (05-02)
- Wassermann, Simon A pathology in the ideal space of  $L(H) \otimes L(H)$ . *Indiana Univ. Math. J.* **27** (1978), no. 6, 1011-1020. (Man-Duen Choi) **80d:46113** 46L05
- Waszak, Aleksander (with Kotkowski, Bogdan; Magdziarz, Janusz) Some remarks on Minkowski functional. *Funct. Approx. Comment. Math.* **6** (1978), 109-110. (V. K. Balakrishnan) **80m:46002** 46A15 (52A05)
- Watabe, Mutsuo On class numbers of some cyclotomic fields. *J. Reine Angew. Math.* **301** (1978), 212-215. (T. Lepistö) **80h:12005** 12A50 (12A35)
- An arithmetical application of elliptic functions to the theory of biquadratic residues. *Abh. Math. Sem. Univ. Hamburg* **49** (1979), 118-125. (K. Shiratani) **80k:12018** 12A65 (10A15)
- Watabe, Tsuyoshi (with Uchida, Fuichi) A note on compact connected transformation groups on spheres with codimension two principal orbit. *Sci. Rep. Niigata Univ. Ser. A* No. 16 (1979), 1-13. (M.-C. Ku) **80f:57017** 57S15
- Watanabe, Atsuo On Fong's reductions. *Kumamoto J. Sci. (Math.)* **13** (1978/79), no. 2, 48-54. (Michael Klemm) **80g:20013** 20C15
- (with Iizuka, Kenzo) A remark on the representations of finite groups. *V. Mem. Fac. Gen. Ed. Kumamoto Univ. Natur. Sci.* **1979**, no. 14, part 1, 1-8. (Authors' summary) **80g:20015** 20C20
- Watanabe, Chikara (with Nakada, Kiyoto) A note on a polynomial mapping on  $C^*$ . *Ann. Sci. Kanazawa Univ.* **15** (1978), 19-22 (1979). (B. Wong) **80h:32048** 32H99 (32B15)
- Watanabe, Hideaki (with Noguchi, Akira; Sakai, Kiyoshi) Solitons of the nonlinear self-dual network with saturable property. *J. Phys. Soc. Japan* **45** (1978), no. 6, 2009-2013. (Authors' summary) **80a:35106** 35Q20 (34A99, 78A40)
- Watanabe, Hisako A potential operator with respect to a resolvent and ergodic properties. *Natur. Sci. Rep. Ochanomizu Univ.* **29** (1978), no. 1, 43-53. (Michael Lin) **80b:47010** 47A35 (47B99)
- Watanabe, Kimio (with Higuchi, Teiichi) On nowhere vanishing holomorphic forms of certain rational double points. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 24* (1977), 7-10. (H. B. Laufer) **80g:32016** 32C40
- (with Higuchi, Teiichi; Ohyanagi, Shigeki) On purely elliptic singularities. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 25* (1978), 33-35. (H. B. Laufer) **80g:32017** 32C40 (14B05)
- (with Yoshinaga, Etsuo) On the geometric genus and the inner modality of quasihomogeneous isolated singularities. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 25* (1978), 45-53. (H. B. Laufer) **80g:14032** 14J17
- Watanabe, Kinji Sur l'unicité dans le problème de Cauchy pour les opérateurs différentiels à caractéristiques de multiplicité constante. *Tôhoku Math. J. (2)* **31** (1979), no. 2, 151-164. (Maria Cinquini-Cibrario) **80g:35005** 35A05
- Watanabe, Kiyoshi A domain in a weakly 1-complete manifold. *Math. Sem. Notes Kobe Univ.* **6** (1978), no. 2, 201-216. (Claudio Rea) **80g:32030** 32E10 (32F10)
- Watanabe, Mitsuki Convergence and approximation of integral solutions of nonlinear evolution equations. *Proc. Japan Acad. Ser. A Math. Sci.* **54** (1978), no. 9, 269-273. (K. Goebel) **80d:47096** 47H15 (34G20)
- Watanabe, N. (with Matsubara, Masakazu) An infeasible method of large-system optimization by direct coordination of subsystem inputs. *J. Optim. Theory Appl.* **24** (1978), no. 3, 437-448. (D. E. Catlin) **80a:65142** 65K10
- Watanabe, Osamu On the existence of behavior spaces of harmonic differentials. (Japanese) *Sûgaku* **30** (1978), no. 1, 68-70. (Tatsuo Fujiie) **80e:30022** 30F30
- Watanabe, Satoshi On the linear combinations of trigonometric polynomial operators in the theory of approximation. *Bull. Yamagata Univ. Natur. Sci.* **9** (1978), no. 3, 337-340. (Manfred v. Golitschek) **80f:42003** 42A10
- On the linear combinations of the generalized Dirichlet kernels in the theory of approximation. *Bull. Yamagata Univ. Natur. Sci.* **9** (1979), no. 4, 505-513. (Tamotsu Tsuchikura) **80k:41010** 41A40 (41A10, 42A10)
- Watanabe, Satoshi MOSS—a subspace representation of classes in pattern recognition. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974), Vol. B*, pp. 547-558, Academia, Prague, 1978. (Josef Kittler) **80b:68111** 68G10
- A generalized fuzzy-set theory. *IEEE Trans. Systems Man Cybernet.* **8** (1978), no. 10, 756-760. (Siegfried Gottwald) **80b:03008** 03E72 (94D05)
- Watanabe, Shimuke (with Miyakawa, Makoto; Yajima, Nobuo) Method of conservation laws for solving nonlinear Schrödinger equation. *J. Phys. Soc. Japan* **46** (1979), no. 5, 1653-1659. (Authors' summary) **80c:35092** 35Q20 (81C05)
- Watanabe, Shinzo Point processes and martingales. *Stochastic analysis (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1978)*, pp. 315-326, Academic Press, New York, 1978. (A. D. Wentzell (Ventcel')) **80i:60071** 60G55
- Watanabe, Tadashi (with Ôtsu, Tôzaburô) Generating functions of two-time Green functions for some simple systems. *Phys. Rep. Kumamoto Univ.* **3** (1977/78), no. 2, 103-112. (Martin Costabel) **80b:81035** 81C99 (35C05)
- On spaces which have the shape of compact metric spaces. *Fund. Math.* **104** (1979), no. 1, 1-11. (Jerzy Dydak) **80i:54018** 54C56 (54F43, 55P55)
- Watanabe, Takashi The homology of the loop space of the exceptional group  $F_4$ . *Osaka J. Math.* **15** (1978), no. 3, 463-474. (J. F. Adams) **80g:55014** 55P35 (57T10)
- Cohomology operations in the loop space of the compact exceptional group  $F_4$ . *Osaka J. Math.* **16** (1979), no. 2, 471-478. (J. F. Adams) **80k:56028** 55P35 (57T15)
- Watanabe, Toshihiro On the spectral representation of holomorphic functions on some domain. *Publ. Res. Inst. Math. Sci.* **14** (1978), no. 3, 575-587. (S. G. Gindikin) **80k:32002** 32A07 (32M10, 46F20)
- Watanabe, Yasuo Extensions of the inner automorphism groups of a von Neumann algebra. *Math. Japon.* **23** (1978/79), no. 2, 205-210. (Richard I. Loeb) **80g:46054** 46L10
- (with Enomoto, Masatoshi) A Perron-Frobenius type theorem for positive linear maps on  $C^*$ -algebras. *Math. Japon.* **24** (1979/80), no. 1, 53-63. (E. Størmer) **80f:46058** 46L05
- Kernels, potentials and complete positivity. *Math. Japon.* **24** (1979/80), no. 1, 93-96. (S. Strătilă) **80j:46099** 46L05 (31C99)
- Waterhouse, William C. Gauss on infinity. (Latin and French summaries) *Historia Math.* **6** (1979), no. 4, 430-436. (B. Rozenfeld) **80k:01040** 01A55 (01A50)
- Waterman, Daniel Multiple Fourier series of functions of generalized bounded variation. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 1*, pp. 171-174, Proc. Pure Math., XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (R. L. Cooke) **80i:42011** 42B05
- (with Perlman, S.) Some remarks on functions of  $A$ -bounded variation. *Proc. Amer. Math. Soc.* **74** (1979), no. 1, 113-118. (A. Precupanu) **80e:26007** 26A45
- Fourier series of functions of  $A$ -bounded variation. *Proc. Amer. Math. Soc.* **74** (1979), no. 1, 119-123. (A. Precupanu) **80j:42010** 42A16 (42A20)
- Waterman, Michael S. Secondary structure of single-stranded nucleic acids. *Studies in foundations and combinatorics*, pp. 167-212, *Advances in Math., Suppl. Studies*, 1, Academic Press, New York, 1978. (J. Myron Hood) **80d:92012** 92A09
- (with Stein, P. R.) On some new sequences generalizing the Catalan and Motzkin numbers. *Discrete Math.* **26** (1979), no. 3, 261-272. (Edward A. Bender) **80j:05014** 05A99 (10A35, 10A40)
- (with Beyer, W. A.) Moments of absorption time for a conditioned random walk. *Stud. Appl. Math.* **60** (1979), no. 1, 83-90. (Frederick Stern) **80c:60005** 60J15 (60J80, 92A10)
- Combinatorics of RNA hairpins and cloverleaves. *Stud. Appl. Math.* **60** (1979), no. 2, 91-96. (Author's summary) **80c:92021** 92A10
- Wägen, Dietmar Categorical theory of the simulation of automata and of their transition monoids. (German, Russian and French summaries) *Elektron. Informatsionerarb. Kibernet.* **14** (1978), no. 5, 233-249. (Jifi Adámek) **80a:68063** 68D30 (18B20, 18D15)
- Watkins, Mark E. On the Cayley index of a group. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 101-105, *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (Author's summary) **80c:20036** 20F32 (05C25)
- Watkins, T. A. (with Yu, P. M. V.; Bouillon, T. L.) The use of prior information in linear regression. *Comm. Statist. A—Theory Methods* **7** (1978), no. 1, 81-95. (R. Zmylony) **80d:62053** 62J05
- On estimating a function of the mean of a multivariate normal distribution. *Comm. Statist. A—Theory Methods* **8** (1979), no. 3, 245-256. (Maxwell W. Layard) **80k:62075** 62H12
- Watkins, William (with Pierce, Stephen) Invariants of linear maps on matrix algebras. *Linear and Multilinear Algebra* **6** (1978/79), no. 3, 185-200. (W. S. Martindale, III) **80f:15016** 15A27
- (with Pierce, Stephen) Isometries of  $E_2$ . *J. Reine Angew. Math.* **305** (1979), 60-64. (Marvin Marcus) **80b:15019** 15A69
- Watson, Bill (with Vanhecke, Lieven)  $K$ -curvatures and almost Hermitian submersions. (Italian summary) *Rend. Sem. Mat. Univ. Politec. Torino* **36** (1977/78), 205-224 (1979). (A. Gray) **80c:53038** 53C15 (53C40, 53C55)
- (with Vanhecke, Lieven) The structure equation of an almost semi-Kähler submersion. *Houston J. Math.* **5** (1979), no. 2, 295-305. (Yoshio Matsuyama) **80a:53060** 53C42 (53C15)
- Watson, D. K. (with Lucchese, Robert R.; McKoy, Vincent; Rescigno, T. N.) Schwinger variational principle for electron-molecule scattering: application to electron-hydrogen scattering. *Phys. Rev. A* (3) **21** (1980), no. 3, 738-744. (Authors' summary) **80m:81001** 81F20
- Watson, F. R. (with Bazandall, P. R.; Brown, W. S.; Rose, G. St. C.) ★Proof in mathematics ("if", "then" and "perhaps"). A collection of material illustrating the nature and variety of the idea of proof in mathematics. *University of Keele, Institute of Education, Keele, 1978*. v + 130 pp. (B. Artmann) **80g:00001** 00-01 (00A25)
- Watson, G. A. On a class of methods for nonlinear approximation problems. *Multivariate approximation (Sympos., Univ. Durham, Durham, 1977)*, pp. 219-227, Academic Press, London, 1978. (Hans-Jürgen Albrand) **80j:65011** 65D15
- Dual methods for nonlinear best approximation problems. *J. Approx. Theory* **26** (1979), no. 2, 142-150. (B. O. Björnstål) **80i:41018** 41A50 (41A63)
- The minimax solution of an overdetermined system of non-linear equations. *J. Inst. Math. Appl.* **23** (1979), no. 2, 167-180. (Author's summary) **80d:65060** 65H10
- Watson, G. S. Estimating the intensity of a Poisson process. *Applied time series analysis (Proc. First Sympos., Tulsa, Okla., 1976)*, 325-345, Academic Press, New York, 1978. (Jan Grandell) **80d:62000** 62M09
- Characteristic statistical problems of stochastic geometry. *Geometrical probability and biological structure: Buffon's 200th anniversary (Proc. Buffon Bicentenary Sympos., Paris, 1977)*, pp. 215-234, *Lecture Notes in Biomath.*, 23, Springer, Berlin, 1978. (Franz Streit) **80c:60022** 60D05 (53C65, 62F10, 62M15)
- Watson, Kenneth M. (with Meiss, James D.) Discussion of some weakly nonlinear systems in continuum mechanics. *Topics in nonlinear dynamics (Proc. Workshop, La Jolla Inst., La Jolla, Calif., 1977)*, pp. 296-323, *AIP Conf. Proc.*, 46, Amer. Inst. Physics, New York, 1978. (J. W. Miles) **80d:73051** 73D35 (34A34, 73A05, 76D10)
- (with Meiss, James D.; Pomphrey, Neil) Numerical analysis of weakly nonlinear wave turbulence. *Proc. Nat. Acad. Sci. U.S.A.* **76** (1979), no. 5, 2109-2113. (Authors' summary) **80d:82067** 82A70 (76C99)
- Watson, Kym S. Linear fractional maps and Jordan algebras. *Proc. Amer. Math. Soc.* **74** (1979), no. 1, 35-38. (Paul van Praag) **80c:17008** 17C99
- Watson, Layne T. (with Stickney, Alan) Digraph models of Bard-type algorithms for the linear complementarity problem. *Math. Oper. Res.* **3** (1978), no. 4, 322-333. (Rainer Burkard) **80j:90108** 90C33
- (with Wang, Chang Yi) Squeezing of a viscous fluid between elliptic plates. *Appl.*

- Sci. Res.* 35 (1979), no. 2-3, 195-207. (Authors' summary) **80j:76030** 76D99  
Fixed points of  $C^2$  maps. *J. Comput. Appl. Math.* 5 (1979), no. 2, 131-139. (Author's summary) **80c:55002** 55M25 (58C30, 65H05)  
(with Kelly, L. M.)  $Q$ -matrices and spherical geometry. *Linear Algebra Appl.* 25 (1979), 175-189. (K. G. Murty) **80b:90128** 90C33  
Solving the nonlinear complementarity problem by a homotopy method. *SIAM J. Control Optim.* 17 (1979), no. 1, 36-46. (Kurt Georg) **80b:65035** 65H10 (55M20, 58C30)
- Watson, N. A.** The rate of spatial decay of non-negative solutions of linear parabolic equations. *Arch. Rational Mech. Anal.* 68 (1978), no. 2, 121-124. (V. Djurković) **80b:35023** 35B40 (35K10)  
Thermal capacity. *Proc. London Math. Soc.* (3) 37 (1978), no. 2, 342-362. (Gottfried Anger) **80b:31005** 31B15 (35K05)  
Positive thermic majorization of temperatures on infinite strips. *J. Math. Anal. Appl.* 68 (1979), no. 2, 477-487. (Mario Primicerio) **80b:35031** 35C15 (35K05)
- Wattel, E.** (with van Mill, Jan) An external characterization of spaces which admit binary normal subbases. *Amer. J. Math.* 100 (1978), no. 5, 987-994. (Douglass L. Grant) **80a:54029** 54D15 (54C25)  
Normally supercompact spaces and convexity preserving maps. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 386-394, *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (S. A. Peregrudov) **80i:54028** 54D35 (18B30, 54C10)
- Wattenberg, Frank** Nonstandard analysis and the theory of shape. *Fund. Math.* 98 (1978), no. 1, 41-60. (Robert A. Herrmann) **80c:54057** 54J05 (03H05, 54C56, 55P55)  
Nonstandard measure theory: avoiding pathological sets. *Trans. Amer. Math. Soc.* 259 (1979), 357-368. (C. Ward Henson) **80b:03095** 03H05 (26E35, 28A12, 28A75)
- Watters, J. F.** (with Nicholson, W. K.) Normal radicals and normal classes of rings. *J. Algebra* 59 (1979), no. 1, 5-15. (C. Tsai) **80b:16007** 16A21
- Watterson, G. A.** Estimating and testing selection: the two-alleles, genetic selection diffusion model. *Adv. in Appl. Probab.* 11 (1979), no. 1, 14-30. (J. Gani) **80d:92019** 92A10
- Wauer, J.** Eigenwertaufgaben hybrider Schwingungssysteme mit elastisch angekoppelten Starrkörpern. *Z. Angew. Math. Mech.* 59 (1979), no. 5, T162-T164. (From the text) **80b:73031** 73D99 (70E15)
- Wawrik, John J.** Analytic equations and singularities of plane curves. *Trans. Amer. Math. Soc.* 245 (1978/79), 409-417. (D. M. Popescu) **80a:14004** 14D15
- Wawrzyńczyk, Antoni** Cyclicity and generalized cyclicity of representations of topological algebras with approximate unit. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 4, 305-310. (S. Sankaran) **80j:46088** 46K10 (22D35)
- Wax, Nelson** (with Ponzo, Peter J.) Note on a model of a biochemical reaction. *J. Math. Anal. Appl.* 66 (1978), no. 2, 354-357. (Juan Lin) **80b:80012** 80A30 (34C99, 92A09)
- Wayles, P. C.** Green's functions in the early universe. *Proc. Roy. Soc. London Ser. A* 362 (1978), no. 1709, 233-244. (Colin B. G. McIntosh) **80c:83021a** 83C35  
Gravitational waves in an expanding universe. *Proc. Roy. Soc. London Ser. A* 362 (1978), no. 1709, 245-250. (Colin B. G. McIntosh) **80c:83021b** 83C35
- Weaver, D. L.** Some exact results for one-dimensional diffusion with absorption. *Phys. Rev. B* (3) 20 (1979), no. 6, 2558-2561. (Author's summary) **80f:82059** 82A70
- Weaver, George** Compactness theorems for finitely-many-valued sentential logics. *Studia Logica* 37 (1978), no. 4, 413-416 (1979). (L. L. Maksimova) **80b:03037** 03B50
- Webb, Cary** Tensor products of separable reduced primary modules. *Proc. Edinburgh Math. Soc.* (2) 22 (1979), no. 1, 23-26. (J. Mašek) **80j:13005** 13C13
- Webb, G. F.** Volterra integral equations and nonlinear semigroups. *Nonlinear Anal.* 1 (1976/77), no. 4, 415-427. (R. K. Miller) **80b:45005** 45D05  
(with Redden, G. W.) Numerical approximation of nonlinear functional differential equations with  $L^2$  initial functions. *SIAM J. Math. Anal.* 9 (1978), no. 6, 1151-1171. (G. S. Tabidze) **80c:65156** 65L05 (34K99, 47H20)  
Abstract Volterra integro-differential equations and a class of reaction-diffusion equations. *Volterra equations (Proc. Helsinki Sympos. Integral Equations, Otaniemi, 1978)*, pp. 295-303, *Lecture Notes in Math.*, 737, Springer, Berlin, 1979. (J. A. Goldstein) **80j:45018** 45K05 (35G20, 47H15)  
Compactness of bounded trajectories of dynamical systems in infinite-dimensional spaces. *Proc. Roy. Soc. Edinburgh Sect. A* 84 (1979), no. 1-2, 19-33. (N. P. Bhatia) **80j:34084** 34G20 (58F10)  
(with Travis, C. C.) An abstract second-order semilinear Volterra integro-differential equation. *SIAM J. Math. Anal.* 10 (1979), no. 2, 412-424. (A. Ramm) **80c:45018** 45N05 (34Gxx)
- Webb, J. R. L.** Strongly nonlinear elliptic equations. *Journées d'Analyse Non Linéaire (Proc. Conf., Besançon, 1977)*, pp. 242-256, *Lecture Notes in Math.*, 665, Springer, Berlin, 1978. (D. E. Edmunds) **80b:35065** 35J65
- Webb, M. C.** The endomorphism ring of homogeneously decomposable separable groups. *Arch. Math. (Basel)* 31 (1978/79), no. 3, 235-243. (Luigi Salce) **80f:20059** 20K30 (20K20)  
The endomorphism ring of pointed separable torsion-free abelian groups. *J. Algebra* 55 (1978), no. 2, 446-454. (John D. O'Neill) **80a:20064** 20K30 (20K15, 20K20)  
(with Stratton, A. E.) Type sets and nilpotent multiplications. *Acta Sci. Math. (Szeged)* 41 (1979), no. 1-2, 209-213. (Roger H. Hunter) **80b:20073** 20K15 (16A22)  
Nilpotent torsion-free rings and triangles of types. *Acta Sci. Math. (Szeged)* 41 (1979), no. 1-2, 253-257. (L. Fuchs) **80b:20075** 20K20
- Weber, Claude** (with Kervaire, Michel) A survey of multidimensional knots. *Knot theory (Proc. Sem., Plans-sur-Bex, 1977)*, pp. 61-134, *Lecture Notes in Math.*, 685, Springer, Berlin, 1978. (Louis H. Kauffman) **80f:57009** 57Q45 (32C40)  
Torsion dans les modules d'Alexander. *Knot theory (Proc. Sem., Plans-sur-Bex, 1977)*, pp. 300-308, *Lecture Notes in Math.*, 685, Springer, Berlin, 1978. (Oscar Burlet) **80b:57029** 57Q45 (13D30)  
See also Levine, Jerome. **80j:57021**
- Weber, Hans** Charakterisierung der lokalbeschränkten Ringtopologien auf globalen Körpern. *Math. Ann.* 239 (1979), no. 3, 193-205. (Witold Węśław) **80j:12020** 12J20 (12J99, 54H13)
- Topologische Charakterisierung globaler Körper und algebraischer Funktionkörper in einer Variablen. *Math. Z.* 169 (1979), no. 2, 167-177. (Witold Węśław) **80i:12037** 12J20 (12J99)
- Weber, Helmut** Numerische Behandlung von Verzweigungsproblemen bei gewöhnlichen Differentialgleichungen. (English summary) *Numer. Math.* 32 (1979), no. 1, 17-29. (G. H. Meyer) **80i:65086** 65L05 (34C99)
- Weber, Martin** (with Makarov, B. M.) Einige Untersuchungen des Raumes der maximalen Ideale eines Vektorverbandes mit Hilfe finiter Elemente. I. Topologische Charakterisierung der finiten Elemente. *Math. Nachr.* 79 (1977), 115-130. (Rosalind Reichard) **80j:46016a** 46A40 (46E05)  
(with Makarov, B. M.) Einige Untersuchungen des Raumes der maximalen Ideale eines Vektorverbandes mit Hilfe finiter Elemente. II. Einige Eigenschaften des Raumes der (ml)-Ideale eines Vektorverbandes vom Typ (2). *Math. Nachr.* 80 (1977), 115-125. (Rosalind Reichard) **80j:46016b** 46A40 (46E05)
- Weber, Michel** Tests intégraux pour certaines classes de processus gaussiens stationnaires à trajectoires continues. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 14, A969-A971. (Author's summary) **80c:60056** 60G15
- Weber, R. E.** Derivations and the trace-class operators. *Proc. Amer. Math. Soc.* 73 (1979), no. 1, 79-82. (J. P. Williams) **80c:47033** 47B47
- Weber, Richard R.** (with Nash, Peter) An optimal strategy in multi-server stochastic scheduling. *J. Roy. Statist. Soc. Ser. B* 40 (1978), no. 3, 322-327. (Tadashi Kurino) **80a:90082** 90B35  
The interchangeability of  $M/M/1$  queues in series. *J. Appl. Probab.* 16 (1979), no. 1, 690-695. (D. C. McNickle) **80b:60118** 60K25 (90Bxx)
- Weber, Robert James** Attainable sets of quasiconcave markets. II. Convexifiable sets. *Math. Oper. Res.* 3 (1978), no. 3, 257-264. (Author's summary) **80b:90178** 90D04 (90A16)  
(with Billera, Louis J.) Dense families of low-complexity attainable sets of markets. *J. Math. Econom.* 6 (1979), no. 1, 67-73. (Authors' summary) **80b:90035** 90A16
- Weber, Sh.** (with Ichiishi, T.) Some theorems on the core of a non-sidepayment game with a measure space of players. *Internat. J. Game Theory* 7 (1978), no. 2, 95-112. (J. F. Mertens) **80a:90166** 90D12
- Weber, Siegfried** Mathematical foundations of measurement in empirical sciences. (Spanish) *Bol. Mat.* 12 (1978), no. 4-6, 234-241. (Editors) **80c:92015** 92A27 (62A99)
- Weber, T.** (with Ghirardi, G. C.) On some recent suggestions of superluminal communication through the collapse of the wave function. *Lett. Nuovo Cimento* 2 (1979), no. 18, 599-603. (From the text) **80i:81011** 81B99
- Webster, S. M.** Pseudo-Hermitian structures on a real hypersurface. *J. Differential Geom.* 13 (1978), no. 1, 25-41. (Steven Shnider) **80c:32015** 32F25 (53B35, 58H05)  
On the Moser normal form at a non-umbilic point. *Math. Ann.* 233 (1978), no. 2, 97-102. (Claudio Rea) **80b:32088** 32C05 (53B35)  
The rigidity of C-R hypersurfaces in a sphere. *Indiana Univ. Math. J.* 28 (1979), no. 3, 405-416. (Bang-yen Chen) **80c:32022** 32F25 (53B35, 58H05)
- Wechler, Wolfgang** ★ The concept of fuzziness in automata and language theory. With an appendix by V. Dimitrov. Studien zur Algebra und Ihre Anwendungen, 5. Akademie-Verlag, Berlin, 1978. vii+141 pp. (László T. Koczay) **80b:68105** 68F10 (03B52, 03D05, 03E72, 16A78, 93A99, 94D05)  
Bemerkungen zur Fixpunkt-Semantik. *Vorträge aus dem Problemseminar: Algebraische Methoden der Automaten-theorie (Altenberg, 1978)*, pp. 89-106, *Weiterbildungszentrum Math. Kybernet. Rechenrech. Informationsverarbeitung*, 35, Tech. Univ. Dresden, Dresden, 1978. (Author's summary) **80f:68090** 68F05 (03D05)  
On the behaviour of the serial connection of automata. *Found. Control Engng.* 3 (1978), no. 3, 143-150. (István Babcsányi) **80a:68099** 68F10  
A note on closure properties of  $R$ -fuzzy events. *Found. Control Engng.* 3 (1978), no. 4, 191-202 (1979). (Masaharu Mizumoto) **80b:68098** 68F05 (03E72)
- Wechsung, Gerd** (with Brandstädt, Andreas) A relation between space, return and dual return complexities. *Theoret. Comput. Sci.* 9 (1979), no. 1, 127-140. (Authors' summary) **80c:68138** 68C40
- Weck, Norbert** (with Schmidt, E. J. P. Georg) On the boundary behavior of solutions to elliptic and parabolic equations—with applications to boundary control for parabolic equations. *SIAM J. Control Optim.* 16 (1978), no. 4, 593-598. (T. I. Seidman) **80d:35065** 35J67 (35K20, 93C20)  
See also Free and mixed boundary value problems. **80m:35001**
- Wecker, William E.** A note on the time series which is the product of two stationary time series. *Stochastic Process. Appl.* 8 (1978), no. 2, 153-157. (Roch Roy) **80d:62088** 62M10
- Weddepol, Claus** An equilibrium model with fixed labor time. *Econometrica* 47 (1979), no. 4, 921-938. (Andrew Postlewaite) **80f:90031** 90A14
- Weeder, R. A.** The unified approach to spectral analysis. *Comm. Math. Phys.* 60 (1978), no. 3, 291-299. (Nadine Bessis) **80b:35101** 35P05  
Scattering theory for the Klein-Gordon equation. *J. Funct. Anal.* 27 (1978), no. 1, 100-117. (M. M. Skriganov) **80a:35099** 35P25 (35Q20)  
Instantons and renormalization. *Phys. Lett. B* 85 (1979), no. 2-3, 249-252. (T. F. Morris) **80i:81039** 81E10 (58E99)  
The unified approach to spectral analysis. II. *Proc. Amer. Math. Soc.* 75 (1979), no. 1, 81-84. (Nadine Bessis) **80b:35102** 35P05 (47F05)
- Wedig, Walter** On the integration of sequences of moments' equations in the stability theory of stochastic systems. *Measure theory applications to stochastic analysis (Proc. Conf., Res. Inst. Math., Oberwolfach, 1977)*, pp. 229-238, *Lecture Notes in Math.*, 665, Springer, Berlin, 1978. (Author's introduction) **80c:93152** 93E20 (93D05)  
Moments and probability densities of parametrically excited systems and continuous systems. *VII. Internationale Konferenz über nichtlineare Schwingungen (Berlin, 1975), Band II*, 2, pp. 469-492, *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977, 6, Akademie-Verlag, Berlin, 1978. (Kimio Kanai) **80c:93112** 93E10 (49A60)
- van Weert, Ch. G.** (with de Boer, W. P. H.) A note on Keldysh's perturbation formalism. *Phys. A* 98 (1979), no. 3, 579-586. (M. Dutta) **80i:81122** 81E99 (47D45)
- Weese, Martin** Ein neuer Beweis für die Entscheidbarkeit der Theorie der Booleschen Algebren. (Russian, English and French summaries) *Wiss. Z. Humboldt-Univ. Berlin Math.-Natur. Reihe* 26 (1977), no. 5, 663-667. (Editors) **80c:03017** 03B25



- Wefelmeyer, W. (with Pfanzagl, J.) A third-order optimum property of the maximum likelihood estimator. *J. Multivariate Anal.* 8 (1978), no. 1, 1-29. (R. Ponnappalli) 80c:62037 62F10 (62F12)
- Wegener, Ingo A counterexample to a conjecture of Schnorr referring to monotone networks. *Theoret. Comput. Sci.* 9 (1979), no. 1, 147-150. (Claus-Peter Schnorr) 80c:94057 94C10
- Wegener, Ursula Eine Lösung der "wahrscheinlichkeitstheoretischen Antinomie der Quantenmechanik". *Z. Allgemeine Wissenschaftstheorie* 9 (1978), no. 1, 149-156. (Author's summary) 80m:81010 81B05 (03G12)
- Weger, Ronald C. (with Ballew, David W.) Pythagorean triples and triangular numbers. *Fibonacci Quart.* 17 (1979), no. 2, 168-172. (L. C. Egan) 80j:10021 10B05
- Wegge, Leon L. Constrained indirect least squares estimators. *Econometrica* 46 (1978), no. 2, 435-449. (Author's summary) 80c:62120 62P20
- Weglarz, Jan (with Błażewicz, Jacek) Deterministic task scheduling problem on processors of computer systems with allowance for additional resources. (Polish. Russian and English summaries) *Arch. Automat. Telechem.* 23 (1978), no. 4, 485-509. (From the summary) 80b:68046 68C15 (68B20)
- (with Błażewicz, Jacek) Scheduling to meet deadlines with resource constraints—complexity results. *Tamulanyok—MTA Számítástech. Automat. Kutató Int. Budapest No. 87* (1978), 5-19. (A. Massarotti) 80c:68082 68C15
- Weglarz, Bogdan Invariant ideals and fields of subsets of abstract algebras. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 389-393. Heyn, Klagenfurt, 1979. (A. Yaqub) 80c:08004 08A30
- Extensions of filters to Ulam filters. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 1, 11-14. (Stan Wagon) 80m:04004 04A20
- Wegman, Edward J. (with Davies, H. I.) Remarks on some recursive estimators of a probability density. *Ann. Statist.* 7 (1979), no. 2, 316-327. (Paul Deheuvels) 80b:62034 62G05
- Wegman, Mark N. (with Carter, Larry; Floyd, Robert; Gill, John; Markowsky, George) Exact and approximate membership testers. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 59-65. ACM, New York, 1978. (Donald B. Johnson) 80b:68037 68C25 (68B15)
- (with Markowsky, George; Carter, J. Lawrence) Analysis of a universal class of hash functions. *Mathematical foundations of computer science, 1978 (Proc. Seventh Sympos., Zakopane, 1978)*, pp. 345-354. *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (K. H. V. Booth) 80d:68131 68H05 (68B15)
- (with Carter, J. Lawrence) Universal classes of hash functions. *J. Comput. System Sci.* 18 (1979), no. 2, 143-154. (Editors) 80f:68110 68H05 (68C25)
- See also Sarwate, Dilip V., 80f:68110b
- Wegmann, R. Ein Iterationsverfahren zur konformen Abbildung. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* 59 (1979), no. 3, T85-T86. (Editors) 80c:30005 30C35 (65E05)
- Wegner, Bernd Verallgemeinerte Zinderkurven in euklidischen Räumen. *Math. Balkanica* 6 (1976), 298-306 (1978). (J. Hoschek) 80m:53062 53A04
- Ein globales Ergebnis für Bifurkationsaufgaben mit schwach differenzierbaren Operatoren. *Math. Nachr.* 87 (1979), 7-14. (A. Vanderbauwhede) 80b:58020 58E07 (47H15)
- Węgrzynowska, A. (with Akbar-Zadeh, Hassan) Sur la géométrie du fibré tangent à une variété finalienne. *Ann. Polon. Math.* 36 (1979), no. 3, 231-244. (Makoto Matsumoto) 80b:53072 53C60
- Wehausen, J. V. See *Annual review of fluid mechanics*, 80d:76001
- Wehrans, M. (with Butzer, P. L.; Stens, R. L.) Saturation classes of the Cesàro and Abel-Poisson means of Fourier-Legendre series. Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 1-2, 19-35. (Manfred v. Golitschek) 80b:41012 41A40 (42A10, 42C05)
- Wehrhitz, B. A. F. Hypercircular unipotent subgroups of linear groups. *Bull. London Math. Soc.* 10 (1978), no. 3, 310-313. (Klaus Pommerening) 80c:20065 20H20 (20F14, 20G15)
- On the Lie-Kolchin-Mal'cev theorem. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 3, 270-276. (Klaus Pommerening) 80c:20070 20H20 (20F16)
- ★Lectures around complete local rings. *Queen Mary College Mathematics Notes. Queen Mary College, Department of Pure Mathematics, London, 1979. ii + 89 pp.* (D. Kirby) 80k:13014 13J10
- Nilpotence in groups of semilinear maps. III. *J. Pure Appl. Algebra* 15 (1979), no. 1, 93-107. (Daniel Segal) 80b:20015 20C07 (20G99)
- Wehrhahn, K. (with Seberry, Jennifer) A class of codes generated by circulant weighing matrices. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 282-289. *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (D. W. Erbach) 80d:94023 94B25 (05B15)
- (with Ogawa, J.) On the use of the *t*-statistic in preliminary testing procedures for the Behrens-Fisher problem. *J. Statist. Plann. Inference* 2 (1978), no. 1, 15-25. (Chien-Pai Han) 80a:62032 62F04
- Wehrhahn, R. Erich A new approach in the computation of poles and zeros in large networks. *IEEE Trans. Circuits and Systems* 26 (1979), no. 9, 700-707. (Author's summary) 80b:94050 94C05
- Wehrly, Thomas E. (with Johnson, Richard A.) Some angular-linear distributions and related regression models. *J. Amer. Statist. Assoc.* 73 (1978), no. 363, 602-606. (R. P. Gupta) 80c:62070 62H10 (62B10, 62J02)
- Wehrung, Donald Multidimensional line search using a binary preference relation. *Oper. Res.* 27 (1979), no. 2, 356-363. (Lawrence D. Stone) 80g:90068 90B40 (90A06)
- Wei, C. Z. (with Lai, Tee Leung; Robbins, Herbert) Strong consistency of least squares estimates in multiple regression. II. *J. Multivariate Anal.* 9 (1979), no. 3, 343-361. (C. W. Chen) 80j:62063 62J05 (62H12)
- Wei, Duan (with Taylor, Robert L.) Laws of large numbers for tight random elements in normed linear spaces. *Ann. Probab.* 7 (1979), no. 1, 150-155. (W. A. Woyczyński) 80c:60018 60B12
- Wei, K. C. (with Pearson, A. E.) On minimum energy control of commutative bilinear systems. *IEEE Trans. Automat. Control* 23 (1978), no. 6, 1020-1023. (Authors' summary) 80c:93092 93C99
- Wei, L. J. On the random allocation design for the control of selection bias in sequential experiments. *Biometrika* 65 (1978), no. 1, 79-84. (Shelemyahu Zacks) 80c:62124 62L05 (62P10)
- An application of an urn model to the design of sequential controlled clinical trials. *J. Amer. Statist. Assoc.* 73 (1978), no. 363, 559-563. (Author's summary) 80f:62078 62L05
- (with Padgett, W. J.) Estimation for the three-parameter inverse Gaussian distribution. *Comm. Statist. A—Theory Methods* 8 (1979), no. 2, 129-137. (V. Seshadri) 80c:62020 62F10
- Wei, Y. J. (with Shieh, Leang S.; Navarro, J. M.) An algebraic method to determine the common divisor, poles and transmission zeros of matrix transfer functions. *Internat. J. Systems Sci.* 9 (1978), no. 9, 949-964. (Joel Winthrop) 80a:93053 93B25
- (with Shieh, Leang S.) Synthesis of optimal block controllers for multivariable control systems and its inverse optimal-control problem. *Proc. Inst. Electr. Engrs.* 126 (1979), no. 5, 449-456. (A. Barraud) 80f:93054 93C99
- Weibel, Charles A. The homotopy exact sequence in algebraic *K*-theory. *Comm. Algebra* 6 (1978), no. 16, 1635-1646. (Philippe Revoy) 80i:18019 18F25 (13D15)
- Weibull, Jürgen W. (with Konnai, János) The normal state of the market in a shortage economy: a model of queuing. (Hungarian. English and Russian summaries) *Szigma—Mat.-Közgazdasági Folyóirat* 11 (1978), no. 1-2, 1-32. 80a:90038 90A16
- Weichert, Dieter (with Rafalski, Paweł) On minimum principles for elastic-plastic plates. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 26 (1978), no. 11, 945-950. (R. D. Bhargava) 80f:73025 73E99
- Weidemann, Hermann William of Ockham on particular negative propositions. *Mind* 88 (1979), no. 350, 270-275. (Stanley H. Stahl) 80m:03006 03-03 (01A35)
- van der Weiden, A. J. J. (with Bosgra, O. H.) The determination of structural properties of a linear multivariable system by operations of system similarity. I. Strictly proper systems. *Internat. J. Control* 29 (1979), no. 5, 835-860. (Authors' summary) 80f:93013 93A10
- Weidlich, Wolfgang (with Grabert, Hermann) Renormalized transport equations for the bistable potential model. *Z. Phys. B* 36 (1980), no. 3, 283-293. (Authors' summary) 80a:82082 82A70
- Weidmann, Joachim (with Tafel, Werner; Voigt, Jürgen) The singular sequence problem. *Acta Sci. Math. (Szeged)* 40 (1978), no. 3-4, 383-388. (Hans Heuser) 80a:47068 47A10 (47B15)
- Weidner, Hans G. Gewinnkoalitionen gewichteter Majoritätsspiele. VIII. *Oberwolfach-Tagung über Operations Research* (1976), pp. 222-232. *Operations Research Verfahren, XXIII*, Hain, Königstein, 1977. (H. Frick) 80d:90095 90D12
- Weier, Joseph Über Beziehungen zwischen der Broglie Relation und Messgenauigkeit. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 1, 99-106. (From the text) 80g:81094 81B05
- Weierstrass, Karl See Hawkins, Thomas, 80m:01027
- Weigand, Peter Verallgemeinerte Splines und lineare Mehrschrittformeln zur numerischen Lösung gewöhnlicher Differentialgleichungen. *Wiss. Z. Tech. Hochsch.* *Karl-Marx-Stadt* 20 (1978), no. 6, 727-733. (Author's summary) 80c:65087 65L05
- Weigel, Dominique (with Berar, Jean François) Définition algébrique des groupes de symétrie (d'isométries) des cristaux et autres objets parfaits de l'espace à *n* dimensions. (English summary) *Acta Cryst. Sect. A* 34 (1978), no. 3, 432-441. (E. Vinberg) 80a:20057 20H15 (22E15)
- Weihrauch, K. (with Verbeek, R.) Data representation and computational complexity. *Theoret. Comput. Sci.* 7 (1978), no. 1, 99-116. (Forbes D. Lewis) 80c:68035 68C25 (03D15)
- Wei, André ★Number theory for beginners. With the collaboration of Maxwell Rosenlicht. *Springer-Verlag, New York-Heidelberg*, 1979. vii + 70 pp. ISBN 0-387-90381-X (J. B. Roberts) 80c:10004 10-01 (12-01)
- ★Oeuvres scientifiques. Collected papers. Vol. I (1926-1951). *Springer-Verlag, New York-Heidelberg*, 1979. xviii + 574 pp. (1 plate). ISBN 0-387-90330-5 (Neal Koblitz) 80k:01067a 01A75 (10-03, 14-03, 22-03, 46-03, 53-03, 57-03, 58-03)
- ★Oeuvres scientifiques. Collected papers. Vol. II (1951-1964). *Springer-Verlag, New York-Heidelberg*, 1979. xii + 561 pp. (1 plate). ISBN 0-387-90330-5 (Neal Koblitz) 80k:01067b 01A75
- ★Oeuvres scientifiques. Collected papers. Vol. III (1964-1978). *Springer-Verlag, New York-Heidelberg*, 1979. xii + 465 pp. ISBN 0-387-90330-5 (Neal Koblitz) 80k:01067c 01A75
- Wei, D. (with de Ritis, R.; Finkelstein, David; Pisello, Daniel M.) Local conserved currents in unified field theory. (Italian summary) *Nuovo Cimento A* (11) 48 (1978), no. 2, 184-188. (Authors' summary) 80a:83052 83C99 (58D30)
- Wei, M. See *Séminaire: Probabilités*, 80d:60007 and *Séminaire: Probabilités*, 80f:60003
- Weil, Wolfgang Centrally symmetric convex bodies and distributions. II. *Israel J. Math.* 32 (1979), no. 2-3, 173-182. (P. R. Goodey) 80g:52003 52A20
- Berührungswahrscheinlichkeiten für konvexe Körper. *Z. Wahrsch. Verw. Gebiete* 48 (1979), no. 3, 327-338. (L. A. Santaló) 80c:60016 60D05 (52A22)
- Weiland, C. Calculation of three-dimensional stationary supersonic flow fields by applying the "prognoka" process to a conservative formulation of the governing equations. *J. Comput. Phys.* 29 (1978), no. 2, 173-198. (Joseph Oliver) 80a:76041 76J99 (65P05)
- Weimer, Alan W. (with Clough, David E.) A critical evaluation of the semimiplicit Runge-Kutta methods for stiff systems. *AIChE J.* 25 (1979), no. 4, 730-732. (From the text) 80d:65094 65L05
- Wein, O. (with Mitschka, P.) Ähnlichkeitslösung des Rayleighschen Problems für ein total-anisotropes Modell des viskoelastischen Verhaltens. (English summary) *Acta Mech.* 34 (1979), no. 1-2, 99-113. (F. P. Pohle) 80m:73042 73F15 (65N99)
- Weinberg, Bernard C. (with Ciment, Melvyn; Leventhal, Stephen H.) The operator compact implicit method for parabolic equations. *J. Comput. Phys.* 28 (1978), no. 2, 135-166. (C. Bardos) 80a:65212a 65N20
- (with Ciment, Melvyn; Leventhal, Stephen H.) Erratum: "The operator compact implicit method for parabolic equations" (*J. Comput. Phys.* 28 (1978), no. 2, 135-166). *J. Comput. Phys.* 29 (1978), no. 1, 145. (C. Bardos) 80a:65212b 65N20
- Weinberg, Erick J. (with Christ, Norman H.; Stanton, Nancy K.) General self-dual Yang-Mills solutions. *Phys. Rev. D* (3) 18 (1978), no. 6, 2013-2025. (L. O'Riordan) 80i:81033 81E10 (53C05, 58E20)

- Weinberg, Louis** (with Prigozy, Stephen) The realizability boundary and the realization of nonsingular fourth-order conductance matrices by 6-terminal networks. *IEEE Trans. Circuits and Systems* 26 (1979), no. 8, 642-656. (Authors' summary) **80n:94046** 94C05
- Weinberg, Steven** Gauge hierarchies. *Phys. Lett. B* 82 (1979), no. 3-4, 387-391. (Author's summary) **80n:81060** 81D20
- Weinberger, D. B.** (with Trotter, L. E., Jr.) Symmetric blocking and anti-blocking relations for generalized circulations. *Polyhedral combinatorics. Math. Programming Stud. No. 8* (1978), 141-158. (K. V. Sahbazian) **80n:90144** 90C33
- Weinberger, H. F.** (with Serrin, James) Optimal shapes for brittle beams under torsion. (Russian summary) *Complex analysis and its applications (Russian)*, pp. 88-91, 665, "Nauka", Moscow, 1978. (Vadim Komkov) **80d:73106** 73K99 (49F99)
- Some remarks on good, simple, and optimal quadrature formulas. *Recent advances in numerical analysis (Proc. Sympos., Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1978)*, pp. 207-229, *Publ. Math. Res. Center Univ. Wisconsin*, 41, Academic Press, New York, 1978. (G. A. Evans) **80n:65033** 65D32
- (with Aronson, D. G.) Multidimensional nonlinear diffusion arising in population genetics. *Adv. in Math.* 30 (1978), no. 1, 33-76. (C. V. Pao) **80n:35013** 35B40 (35K99, 92A15)
- (with Gilbarg, D.) Asymptotic properties of steady plane solutions of the Navier-Stokes equations with bounded Dirichlet integral. *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* 5 (1978), no. 2, 381-404. (Marjorie McCracken) **80n:35079** 35Q10
- Wielandt, Wilfried** Untersuchungen zur Konvergenzgeschwindigkeit bei Differenzenverfahren. *Wiss. Z. Tech. Hochschule, Karl-Marx-Stadt* 20 (1978), no. 6, 763-769. (V. Thomé) **80n:65210** 65N15
- (with Helmert, Gunter) Iterative Lösung spezieller nichtlinearer Differenzenschemata. *Beiträge Numer. Math.* 7 (1979), 139-158. (Sándor Frivaldszky) **80n:65115** 65L10 (65N05)
- Weiner, C.** (with Kenefic, R.; Nuttall, A.) A Volterra functional expansion for the logarithm of the likelihood ratio for detection of a memoryless nonlinear functional of a random process in Gaussian white noise. *J. Acoust. Soc. Amer.* 65 (1979), no. 6, 1488-1490. (Authors' summary) **80n:94003** 94A05 (60G35)
- Weiner, D. D.** (with Rudko, M.) Optimum non-linear Wiener filters. *J. Franklin Inst.* 308 (1979), no. 1, 57-68. (Authors' summary) **80d:93074** 93E11
- Weiner, Howard J.** Sequential random packing in the plane. *J. Appl. Probab.* 15 (1978), no. 4, 803-814. (Adrian Baddeley) **80n:60015** 60D05
- The extinction probability in a critical branching process. *Sankhyā Ser. A* 40 (1978), no. 1, 52-60. (Dean H. Fearn) **80n:60105** 60J80
- Joint distributions for total progeny in a critical branching process. *Scand. Actuar. J.* 1978, no. 4, 211-224. (Anthony G. Pakes) **80n:60116** 60J80 (60F99, 60J80)
- Limit probabilities for critical age-dependent branching processes with immigration. *Nonlinear Anal.* 3 (1979), no. 2, 229-238. (Dean H. Fearn) **80n:60100** 60J80
- Weinert, H. J.** (with Griepentrog, R. D.) Embedding semirings into semirings with identity. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 225-245, *Colloq. Math. Soc. János Bolyai*, 20, North-Holland, Amsterdam, 1979. (S. M. Yusuf) **80n:16045** 16A78
- Weinert, Howard L.** Statistical methods in optimal curve fitting. Optimization in statistics. *Comm. Statist. B—Simulation Comput.* 7 (1978), no. 4, 417-435. (Editors) **80n:65014** 65D10 (94A12)
- (with Sidhu, Gursharan S.) Dynamical recursive algorithms for  $L_g$ -spline interpolation of EHB data. *Appl. Math. Comput.* 5 (1979), no. 2, 157-185. (Christian Coattmelec) **80n:65016** 65D07
- (with Desai, U. B.; Sidhu, Gursharan S.) ARMA splines, system inverses, and least-squares estimates. *SIAM J. Control Optim.* 17 (1979), no. 4, 525-536. (Authors' summary) **80n:65012** 65D07 (65D10)
- Weinert, U.** (with Mason, E. A.) Generalized Nernst-Einstein relations for nonlinear transport coefficients. *Phys. Rev. A* (3) 21 (1980), no. 2, 681-690. (Authors' summary) **80n:82083** 82A70 (82A35)
- Weinfeld, Tamara** (with Suszko, Roman) Filters and natural extensions of closure systems. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 8 (1979), no. 3, 130-132. (From the introduction) **80n:03063** 03B99
- Weingard, Robert** General relativity and the length of the past. *British J. Philos. Sci.* 30 (1979), no. 2, 170-172. (Lawrence Sklar) **80n:83056** 83F05 (03A05)
- Some philosophical aspects of black holes. *Synthese* 42 (1979), no. 1, 191-219. (Nicholas M. J. Woodhouse) **80n:83039** 83C99 (83E05)
- Weingartner, Paul** Are there negative facts or properties? With discussion. *Ontologie und Logik / Ontology and logic (Proc. Internat. Colloq., Salzburg, 1976)*, pp. 267-280, *Duncker & Humblot*, Berlin, 1979. (David W. Miller) **80n:03022** 03A05
- See also *Ontologie und Logik / Ontology and logic*, **80f:03007**
- Weinhold, F.** (with Moiseyev, N.; Certain, P. R.) Resonance properties of complex-rotated Hamiltonians. *Molecular Phys.* 36 (1978), no. 6, 1613-1630. (Ernest R. Davidson) **80n:81030** 81C10
- de Bivar-Weinhold, Antônio** See **de Bivar-Weinhold, Antônio**
- Weinman, David** (with Kurtz, Larry) Eigenvalue estimates for a Sturm-Liouville problem. *Indust. Math.* 28 (1978), no. 2, 65-75. (Authors' summary) **80n:65175** 65L15
- Weinstein, Alan D.** A universal phase space for particles in Yang-Mills fields. *Lett. Math. Phys.* 2 (1977/78), no. 5, 417-420. (Steven Shnider) **80n:58023** 58F05 (70H99)
- Simple periodic orbits. *Topics in nonlinear dynamics (Proc. Workshop, La Jolla Inst., La Jolla, Calif., 1977)*, pp. 260-263, *AIP Conf. Proc.* 46, Amer. Inst. Physics, New York, 1978. (James A. Murdock) **80d:70044** 70K30 (34C25, 34C29, 58F05)
- Periodic orbits for convex Hamiltonian systems. *Ann. of Math. (2)* 108 (1978), no. 3, 507-518. (J. Moser) **80n:58034** 58F05
- Weinstein, Alexander** On intermediate eigenvalue problems, maximum-minimum theory and Kolmogorov-Karlovitz  $n$ -widths. (Russian summary) *Complex analysis and its applications (Russian)*, pp. 92-101, 665, "Nauka", Moscow, 1978. (Vadim Komkov) **80d:49033** 49G15
- Weinstein, Lenard** The zeros of the Artin  $L$ -series of a cubic field on the critical line. *J. Number Theory* 11 (1979), no. 2, 279-284. (J. C. Lagarias) **80n:12011** 12A70
- Weinstein, Milton C.** (with Pliskin, Joseph S.; Shepard, Donald S.) Utility functions for life years and health status. *Oper. Res.* 28 (1980), no. 1, 206-224. (Authors' summary) **80n:92004** 92A07 (90A10)
- Weinstein, Scott** Some applications of Kripke models to formal systems of intuitionistic analysis. *Ann. Math. Logic* 16 (1979), no. 1, 1-32. (Dirk van Dalen) **80n:03088** 03F35 (03F55)
- Weinstock, Barnett M.** Zero-sets of continuous holomorphic functions on the boundary of a strongly pseudoconvex domain. *J. London Math. Soc. (2)* 18 (1978), no. 3, 484-481. (Anne-Marie Chollet) **80n:32010** 32E30
- Weinstock, Robert** Oscillations of a particle attached to a heavy spring: an application of the Stieltjes integral. *Amer. J. Phys.* 47 (1979), no. 6, 508-514. (Author's summary) **80b:70006** 70D05 (35Q99)
- Weintraub, Steven H.** (with Neumann, Walter D.) Four-manifolds constructed via plumbing. *Math. Ann.* 238 (1978), no. 1, 71-78. (Alan H. Durfee) **80g:57047** 57B40 (57Q60, 57R65)
- Weir, B. S.** (with Choy, S. C.) Exact inbreeding coefficients in populations with overlapping generations. *Genetics* 89 (1978), no. 3, 591-614. (From the summary) **80n:92024** 92A15
- Weisberger, William I.** Integral representation for vacuum polarization by fermions in uniform nonabelian gauge potentials. *Nuclear Phys. B* 161 (1979), no. 1, 61-77. (Author's summary) **80n:81056** 81E10
- Weisfeller, B.** On the structure of the minimal ideal of some graded Lie algebras in characteristic  $p > 0$ . *J. Algebra* 53 (1978), no. 2, 344-361. (H. de Vries) **80n:17011** 17B70 (17B50)
- On abstract monomorphisms of  $k$ -forms of  $\text{PGL}(2)$ . *J. Algebra* 57 (1979), no. 2, 522-543. (David Birkes) **80n:14019** 14L15 (20G15)
- On abstract homomorphisms of anisotropic algebraic groups over real-closed fields. *J. Algebra* 60 (1979), no. 2, 485-519. (Ju. I. Merzljakov) **80n:20045** 20G20
- Weispfenning, Volker** A note on  $\mathcal{R}_0$ -categorical model-companions. *Arch. Math. Logik Grundlag.* 19 (1978/79), no. 1-2, 23-29. (A. M. W. Glass) **80g:03032** 03C35 (03C10, 03C50, 03C60)
- Weiss, Alan** (with Mitra, Debasis) Digital adaptive filters: conditions for convergence, rates of convergence, effects of noise and errors arising from the implementation. *IEEE Trans. Inform. Theory* 25 (1979), no. 6, 637-652. (Authors' summary) **80j:93121** 93E11
- Weiss, Benjamin** (with Furstenberg, Hillel) The finite multipliers of infinite ergodic transformations. *The structure of attractors in dynamical systems (Proc. Conf., North Dakota State Univ., Fargo, N.D., 1977)*, pp. 127-132, *Lecture Notes in Math.*, 668, Springer, Berlin, 1978. (N. F. G. Martin) **80n:28023** 28D05
- (with Furstenberg, Harry) Topological dynamics and combinatorial number theory. *J. Analyse Math.* 34 (1978), 61-85 (1979). (N. Hindman) **80g:05009** 05A17 (10A45, 54H20)
- (with Ornstein, Donald S.) Ergodic theory of amenable group actions. I. The Rohlin lemma. *Bull. Amer. Math. Soc. (N.S.)* 2 (1980), no. 1, 161-164. (Douglas Lind) **80n:28031** 28D20 (49A50)
- Weiss, Gary** The Fuglede commutativity theorem modulo the Hilbert-Schmidt class and generating functions for matrix operators. *Hilbert space operators (Proc. Conf., Calif. State Univ., Long Beach, Calif., 1977)*, pp. 175-184, *Lecture Notes in Math.*, 693, Springer, Berlin, 1978. (Robert L. Moore) **80n:47023** 47B20 (46M20)
- (with Blass, Andreas) A characterization and sum decomposition for operator ideals. *Trans. Amer. Math. Soc.* 246 (1978), 407-417. (Hermann König) **80n:47071** 47D25 (03E50)
- Weiss, George H.** (with Dishon, Menachem) Numerical inversion of Mellin and two-sided Laplace transforms. *J. Comput. Phys.* 28 (1978), no. 1, 129-132. (Robert Piessens) **80n:65038** 65D20
- (with Gail, Mitchell H.; Mantel, N.; O'Brien, S. J.) A solution to the generalized birthday problem with application to allozyme screening for cell culture contamination. *J. Appl. Probab.* 16 (1979), no. 2, 242-251. (Authors' summary) **80d:92011** 92A09
- Weiss, Gideon** (with Pinedo, Michael) Scheduling of stochastic tasks on two parallel processors. *Naval Res. Logist. Quart.* 26 (1979), no. 3, 527-535. (Andrew Yao) **80n:90089** 90B35 (68C05)
- Weiss, Guido** Some problems in the theory of Hardy spaces. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part I, pp. 189-200. (Proc. Sympos. Pure Math., XXXV, Part I, Amer. Math. Soc., Providence, R.I., 1979. (R. H. Cox) **80j:30051** 30D55 (46E15)
- (with Ricci, Fulvio) A characterization of  $H^p(\Sigma_{n-1})$ . *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part I, pp. 289-294. (Proc. Sympos. Pure Math., XXXV, Part I, Amer. Math. Soc., Providence, R.I., 1979. (Charles Horowitz) **80m:30043** 30D55
- See also *Harmonic analysis in Euclidean spaces*, **80f:42001a** and *Harmonic analysis in Euclidean spaces*, **80f:42001b**
- Weiss, Gunter** Zur euklidischen Liniengeometrie. I. *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber.* 11 187 (1978), no. 8-10, 417-436. (J. Hoeshek) **80n:51012** 51M30 (53A25)
- Weiss, Haim** (with Bitmead, Robert R.) On the solution of the discrete-time Lyapunov matrix equation in controllable canonical form. *IEEE Trans. Automat. Control* 24 (1979), no. 3, 481-482. (P. C. Parks) **80n:93094** 93D05
- (with Moore, John B.) Recursive prediction error methods for adaptive estimation. *IEEE Trans. Systems Man Cybernet.* 9 (1979), no. 4, 197-205. (Arie Feuer) **80n:93065** 93E12
- Weiss, I. M.** (with Nahi, N. E.) Bounding filter: a simple solution to lack of exact a priori statistics. *Inform. and Control* 39 (1978), no. 2, 212-224. (A. F. Gualtierotti) **80n:93167** 93E11
- Weiss, Jürgen** (with Niemann, Heinrich) A fast-converging algorithm for nonlinear mapping of high-dimensional data to a plane. *IEEE Trans. Comput.* 28 (1978), no. 2, 142-147. (Sidney Berkowitz) **80n:62045** 62H30 (68G10)
- Weiss, Lionel** (with Turnbull, Bruce W.) A likelihood ratio statistic for testing goodness of fit with randomly censored data. (French summary) *Biometrics* 34 (1978), no. 3, 367-375. (G. S. Lingappaiah) **80n:62063** 62G10 (62N05)
- Some tests of whether several samples are from identical populations. *Comm. Statist. A—Theory Methods* 7 (1978), no. 12, 1099-1127. (Hira L. Koul) **80n:62061** 62G10
- The error in the normal approximation to the multinomial with an increasing



- number of classes. *Naval Res. Logist. Quart.* 25 (1978), no. 2, 257-261. (G. I. Ivčenko) 80c:60040 60F05 (62E20)
- The asymptotic distribution of order statistics. *Naval Res. Logist. Quart.* 26 (1979), no. 3, 437-445. (K. C. Chanda) 80m:62044 62G30 (60F05)
- Weiss, M. C. Décomposition hiérarchique du Khi-deux associé à un tableau de contingence à plusieurs entrées. *Rev. Statist. Appl.* 26 (1978), no. 1, 23-33. (Tomáš Havránek) 80a:52079 62H17
- Tarnopolska-Weiss, Marysia See Tarnopolska-Weiss, Marysia
- Weiss, Max L. (with Kelly, Paul J.) ★Geometry and convexity. A study in mathematical methods. Pure and Applied Mathematics. A Wiley-Interscience publication. John Wiley & Sons, New York-Chichester-Brisbane, 1979. x+261 pp. ISBN 0-471-04637-X (V. P. Soltan) 80m:52001 52-01
- Weiss, N. A. (with McDonald, J. N.) An infinite particle system with continual input and random death. *Adv. in Appl. Probab.* 10 (1978), no. 4, 764-787. (S. C. Port) 80c:60119 60K35 (60F05)
- (with Cranwell, R. M.) A central limit process theorem for mixing stationary point processes. *Stochastic Process. Appl.* 8 (1978), no. 2, 229-242. (B. S. Nahapetian) 80g:60019 60F05 (60G55, 60K35)
- (with Cranwell, R. M.) A strong law of large numbers for stationary point processes. *Z. Wahrsch. Verw. Gebiete* 46 (1978/79), no. 2, 159-164. (Toshio Mori) 80b:60072 60G55 (60F15)
- Weiss, N. J. (with Beraha, Sami; Kahane, Joseph) Limits of zeros of recursively defined families of polynomials. *Studies in foundations and combinatorics*, pp. 213-232, *Advances in Math., Suppl. Studies*, 1, Academic Press, New York, 1978. (Hiroshi Haruki) 80c:30005 30C15
- Weiss, Nathan (with Sikivie, P.) Static sources in classical Yang-Mills theory. *Phys. Rev. D* (3) 20 (1979), no. 2, 487-490. (Authors' summary) 80k:81137 81E99 (53C05)
- (with Chang, Shau Jin) Instability of constant Yang-Mills fields. *Phys. Rev. D* (3) 20 (1979), no. 4, 869-876. (P. K. Smer) 80k:81084 81E10 (53C05)
- Weiss, Philip (with MacCamy, Richard C.) Numerical solution of Volterra integral equations. *Nonlinear Anal.* 3 (1979), no. 5, 677-695. (E. N. Houstis) 80j:65041 65R20
- Weiss, Richard See Weiss, Richard M.
- Weiss, Richard (with de Hoog, Frank R.) The numerical solution of boundary value problems with an essential singularity. *SIAM J. Numer. Anal.* 16 (1979), no. 4, 637-669. (G. H. Meyer) 80m:65057 65L10
- Weiss, Richard M.  $s$ -transitive graphs. 10. Steiermärkisches Mathematisches Symposium (Stift Rein, Graz, 1978). *Ber. Math.-Statist. Sect. Forsch. Graz* No. 100-105 (1978), *Ber. No.* 105, 26 pp. (W. T. Tutte) 80m:05055 05C25
- Symmetrische Graphen mit auflösbaren Stabilisatoren. *J. Algebra* 53 (1978), no. 2, 412-415. (C. Y. Chao) 80a:05114 05C25 (20D10)
- Symmetric graphs with projective subconstituents. *Proc. Amer. Math. Soc.* 72 (1978), no. 1, 213-217. (C. S. Horstmann) 80b:05031 05C25 (20B25, 20C40)
- Elatons of graphs. *Acta Math. Acad. Sci. Hungar.* 34 (1979), no. 1-2, 101-103. (E. Mendelson) 80k:05067 05C25 (20F32)
- Permutation groups with projective unitary subconstituents. *Proc. Amer. Math. Soc.* 78 (1980), no. 2, 157-161. (Peter Rowlinson) 80j:20002 20B15 (05C25)
- Weiss, William (with Juhász, I.) On a problem of Sikorski. *Fund. Math.* 100 (1978), no. 3, 223-227. (E. Michael) 80g:54006 54A35 (03E35, 54A25, 54D20)
- (with Juhász, I.) Martin's axiom and normality. *General Topology Appl.* 9 (1978), no. 3, 263-274. (Robert Warren Button) 80a:54028 54D15 (03E50)
- (with Juhász, I.; Nagy, Zs.) On countably compact, locally countable spaces. *Period. Math. Hungar.* 10 (1979), no. 2-3, 193-206. (V. I. Malyhin) 80a:54025 54D10 (54A25)
- Weiskopf, V. The development of the concept of an elementary particle. *Proceedings of the Symposium on the Foundations of Modern Physics (Loma-Koli, 1977)*, pp. 193-223, *Publ. Univ. Joensuu, Ser. B*, 14, Univ. Joensuu, Joensuu, 1978. (Author's summary) 80m:81003 81-03 (01A65, 81G25)
- Weisler, Fred B. Logarithmic Sobolev inequalities for the heat-diffusion semigroup. *Trans. Amer. Math. Soc.* 237 (1978), 255-269. (R. E. Showalter) 80b:47057 47D05 (46E35)
- Two-point inequalities, the Hermite semigroup, and the Gauss-Weierstrass semigroup. *J. Funct. Anal.* 32 (1979), no. 1, 102-121. (J. R. Dorroh) 80c:47037 47D05 (47B38, 81E05)
- Semilinear evolution equations in Banach spaces. *J. Funct. Anal.* 32 (1979), no. 3, 277-296. (R. Kannan) 80c:47091 47H99 (34G20)
- Weissman, Ishay Estimation of parameters and large quantiles based on the  $k$  largest observations. *J. Amer. Statist. Assoc.* 73 (1978), no. 364, 812-815. (J. Tiago de Oliveira) 80j:62036 62F12 (62G30)
- (with Rubinstein, Y.) The Monte Carlo method for global optimization. *Cahiers Centre Études Rech. Opér.* 21 (1979), no. 2, 143-147. (Istvan Deak) 80i:65005 65C05
- Weissmann, George Particle order: a new fundamental concept in hadron physics. I, II. *Internat. J. Theoret. Phys.* 17 (1978), no. 10-11, 747-852, 853-929. (J. G. Taylor) 80k:81159 81G05 (81F99)
- Weisz, P. (with Berg, B.) Exact  $S$ -matrix of the adjoint  $SU(N)$  representation. *Comm. Math. Phys.* 67 (1979), no. 3, 241-250. (Authors' summary) 80b:81025 81C40 (22E70)
- Weitzman, Martin L. Optimal search for the best alternative. *Econometrica* 47 (1979), no. 3, 641-654. (Norbert Schmitz) 80c:62055 62L05 (90B40)
- Weissacker, Heinrich Strong measurability, liftings and the Choquet-Edgar theorem. *Vector space measures and applications (Proc. Conf., Univ. Dublin, Dublin, 1977)*, II, pp. 209-218, *Lecture Notes in Math.*, 645, Springer, Berlin, 1978. (S. Foglio) 80f:46046 46G15 (28C15, 46A55)
- (with Winkler, Gerhard) Integral representation in the set of solutions of a generalized moment problem. *Math. Ann.* 246 (1979/80), no. 1, 23-32. (John E. Jayne) 80m:46012 46A55
- Wick, Lloyd R. (with Scholtz, Robert A.) Group characters: sequences with good correlation properties. *IEEE Trans. Inform. Theory* 24 (1978), no. 5, 537-545. (Michele Elia) 80g:94066 94B50
- (with Scholtz, Robert A.) Continued fractions and Berlekamp's algorithm. *IEEE Trans. Inform. Theory* 25 (1979), no. 1, 19-27. (Robert P. Kurshan) 80i:94016 94B15
- Welch, R. L. W. (with Tsokos, Chris P.) Multivariate non-Gaussian Bayes discriminant analysis. (French and Italian summaries) *Statistica (Bologna)* 39 (1979), no. 1, 13-24. (Authors' summary) 80k:62086 62H30 (62C10)
- Welch, U. Stabile Zeitschichtverfahren für parabolische Differentialgleichungen. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T449-T451. 80b:65144 65N99
- Weldon, H. Arthur (with Bais, F. Alexander) Exact  $SU(n)$  instantons with cylindrical symmetry. *Phys. Lett. B* 79 (1978), no. 3, 297-300. (Authors' summary) 80a:81123 81G25
- (with Goffin, Vincent; Segrè, Gino) Explicit one-loop corrections to the strong CP-violating phase in  $SU(2)_L \times U(1)$ . *Phys. Rev. D* (3) 21 (1980), no. 5, 1410-1423. (Authors' summary) 80m:81097 81G15
- Weller, Paul Consistent intertemporal decision-making under uncertainty. *Rev. Econom. Stud.* 45 (1978), no. 2, 263-266. (Author's introduction) 80i:90018 90A10 (90A05)
- Wellner, Jon A. Permutation tests for directional data. *Ann. Statist.* 7 (1979), no. 5, 929-943. (J. S. Rao) 80b:62036 62G10
- (with Hall, W. J.) The rate of convergence in law of the maximum of an exponential sample. *Statist. Neerlandica* 33 (1979), no. 3, 151-154. (J. Galambos) 80c:60029 60F05 (62G30)
- Wells, G. S. A geometric splitting and the  $C^\infty$  stability of maps from semianalytic sets. *Proceedings of the Second Symposium on Categorical Topology (Univ. Cape Town, Cape Town, 1976)*. *Questiones Math.* 2 (1977/78), no. 1-3, 383-399. (Author's summary) 80c:58004 58C25 (58C27)
- Immersiones of semianalytic spaces. *Proc. Amer. Math. Soc.* 72 (1978), no. 3, 556-560. (M. L. Gromov) 80b:57029 57R40 (58D10)
- Wells, R. O., Jr. Exemples de variations de structures complexes dans les domaines strictement pseudoconvexes. *Fonctions de plusieurs variables complexes, III (Sém. François Norguet, 1975-1977)*, pp. 382-387, *Lecture Notes in Math.*, 670, Springer, Berlin, 1978. (H. Kerner) 80b:32040 32G05 (32F15, 32G07)
- (with Polking, John C.) Boundary values of Dolbeault cohomology classes and a generalized Bochner-Hartogs theorem. Special issue dedicated to the seventieth birthday of Erich Kähler. *Abh. Math. Sem. Univ. Hamburg* 47 (1978), 3-24. (B. M. Weinstock) 80b:32016 32A40
- Complex manifolds and mathematical physics. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 2, 296-336. (M. F. Atiyah) 80c:32001 32-02 (32C10, 32L10, 83D05)
- See also History of analysis, 80a:01001
- Wells, Robert Necessary and sufficient conditions for the geometric realizability of a simple incidence graph. *Geom. Dedicata* 7 (1978), no. 2, 245-258. (Ethan D. Bolker) 80g:52009 52A25 (05C25)
- Welsh, Ludwik (with Piwowarski, Marek) Finding a complete word for a finite set. (Polish, English and Russian summaries) *Podstawy Sterowania* 8 (1978), no. 4, 375-387. (Authors' summary) 80c:68049 68B15
- Welsh, D. J. A. (with Oxley, James G.) On some percolation results of J. M. Hammersley. *J. Appl. Probab.* 16 (1979), no. 3, 526-540. (John C. Wierman) 80b:60120 60K35 (82A42)
- Wen, Chen Yi See Wen, Zhen Yi
- Wen, Guo Chun A generalization of entire functions with real negative zeros. (Chinese. English summary) *Beijing Daxue Xuebao* No. 4 (1963), 327-342. (Author's summary) 80c:30027 30D20
- Wen, Shih Liang (with Chi, L. K.) Solutions to higher-order boundary-layer equations for flow over a semi-infinite plate. *AIAA J.* 17 (1979), no. 8, 915-917. (Rishi Ram) 80b:76029 76N05
- Wen, Zhen Yi A unitary group method for strong crystal fields with eightfold symmetry. (Chinese. English summary) *Acta Phys. Sinica* 28 (1979), no. 1, 88-103. (Author's summary) 80b:81114 81G40 (22E70)
- Wendel, J. G. Hitting spheres with Brownian motion. *Ann. Probab.* 8 (1980), no. 1, 164-169. (N. H. Bingham) 80b:60085 60J65
- Wendel, Norbert The inconsistency of Bernini's very strong intuitionistic theory. *Studia Logica* 37 (1978), no. 4, 341-347 (1979). (Michael Beeson) 80m:03096 03F55 (03B15)
- Wendland, Wolfgang On a class of semilinear boundary value problems for certain elliptic systems in the plane. (Russian summary) *Complex analysis and its applications (Russian)*, pp. 108-119, 665, "Nauka", Moscow, 1978. (V. A. Kondrat'ev) 80c:35035 35J55
- On the imbedding method for semilinear first-order elliptic systems and related finite element methods. *Continuation methods (Proc. Sympos., Johannes Kepler Univ., Linz, 1977)*, pp. 277-336, Academic Press, New York, 1978. (V. Thomée) 80d:65124 65N30
- ★Elliptic systems in the plane. Monographs and Studies in Mathematics, 3. Pitman Publishing, Ltd., London-San Francisco, Calif., 1979. xi+404 pp. ISBN 0-273-01013-1 (G. W. Hedstrom) 80b:35053 35J55 (30-01, 65N20)
- Wendroff, Burton (with Dendy, Joel E., Jr.; Swartz, Blair) Computing travelling wave solutions of a nonlinear heat equation. *Topics in numerical analysis, III (Proc. Roy. Irish Acad. Conf., Trinity Coll., Dublin, 1976)*, pp. 447-463, Academic Press, London, 1977. (S. L. Kalla) 80a:80001 80-04 (65P05)
- Wendt, Helge Die Mathematisierung als notwendige Voraussetzung der Existenz und Entwicklung der Technikwissenschaften. *Wiss. Z. Tech. Univ. Dresden* 28 (1979), no. 4, 986-991. (D. J. Struik) 80m:00010 00A69
- Weng, Zu Yin (with Li, Wei Xuan) Finding all solutions for an optimal block search. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 1, 45-53. (Stephen H. Y. Hung) 80j:05051 05B99
- Wenger, Ronald H. Finite commutative semigroups having Frobenius semigroup algebras. *Semigroup Forum* 16 (1978), no. 4, 427-442. (Franco Migliorini) 80d:20060 20M25 (20M11)
- Wenston, Paul R. A sufficient condition for the local solvability of a linear partial differential operator with double characteristics. *J. Differential Equations* 29 (1978), no. 3, 374-387. (H. Kumano-go) 80b:35004 35A07
- Wente, Henry C. (with Steffen, Klaus) The nonexistence of branch points in solutions to certain classes of Plateau type variational problems. *Math. Z.* 163 (1978), no. 3, 211-238. (A. J. Tromba) 80k:58043 58E12 (49F10, 53A10, 53C40)
- Wenzel, H. J. (with Veselić, Krešimir) A quadratically convergent Jacobi-like method for

- real matrices with complex eigenvalues. *Numer. Math.* **33** (1979), no. 4, 425-435. (Authors' summary) **80m:65034** 65F15
- Werbowski, Jaroslav Note on the asymptotic behavior of the solutions of differential equations with deviating arguments. (Russian summary) *Math. Slovaca* **28** (1978), no. 2, 181-188. (István Györi) **80g:34002** 34K15
- Werden, Gregory J. (with Rothschild, Michael) Returns to scale from random factor services: existence and scope. *Bell J. Econom.* **10** (1979), no. 1, 329-335. (Ronald W. Shephard) **80c:90010** 90A11
- van der Werff, Terry J. (with Wilhelm, Horst E.) Steady state bifurcation analysis of reaction-diffusion equations—a critique. *Bull. Math. Biol.* **40** (1978), no. 6, 865-872. (Authors' summary) **80b:92052** 92A40 (35K99)
- Wergeland, H. (with ter Haar, D.) How far can radiation from atoms be represented by classical models? *Norske Vid. Selsk. Skr. (Trondheim)* **1978**, no. 4, 5 pp. (Magdi M. Shoucri) **80c:81015** 81B99
- Werle, M. J. (with Srivastava, B. N.; Davis, R. T.) A finite difference technique involving discontinuous derivatives. *Comput. & Fluids* **7** (1979), no. 1, 69-74. (F. Milinazzo) **80c:65092** 65N05 (76N15)
- Wermer, John (with Aupetit, Bernard) Capacity and uniform algebras. *J. Funct. Anal.* **28** (1978), no. 3, 386-400. (Alano Ancona) **80a:31001** 31A15 (46J10)
- Wermer, B. See Numerical mathematics, **80m:65003**
- Werner, Helmut ★Discriminator-algebras. Algebraic representation and model theoretic properties. Studien zur Algebra und Ihre Anwendungen, 6. Akademie-Verlag, Berlin, 1978. ii+92 pp. (S. Comer) **80f:00009** 00C10 (03C60)
- ★Einführung in die allgemeine Algebra. B.I. Hochschultaschenbücher, 120. Bibliographisches Institut, Mannheim, 1978. iii+146 pp. ISBN 3-411-00120-8 (D. Pumplun) **80h:00001** 00-01
- A generalization of Comer's sheaf-representation theorem. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 395-397. Heyn, Klagenfurt, 1979. (Klaus Keimel) **80g:08005** 08A30
- (with Davey, Brian A.) Injectivity and Boolean powers. *Math. Z.* **166** (1979), no. 3, 205-223. (Evelyn Nelson) **80h:00004** 08B30 (08Axx)
- Werner, Helmut (with Wuytack, L.) Nonlinear quadrature rules in the presence of a singularity. *Comput. Math. Appl.* **4** (1978), no. 3, 237-245. (Authors' summary) **80c:65054** 65D30
- (with Schaback, Robert) ★Praktische Mathematik. II. Methoden der Analysis. Based on lectures at the Universities of Münster and Göttingen. Edited by J. Ebert. Second, revised and enlarged edition. Hochschultext. Springer-Verlag, Berlin-New York, 1979. viii+388 pp. ISBN 3-540-09193-9 (Editors) **80a:65008** 65-01
- An introduction to nonlinear splines. *Polynomial and spline approximation (Proc. NATO Adv. Study Inst., Univ. Calgary, Calgary, Alta., 1978)*, pp. 247-306. NATO Adv. Study Inst. Ser., Ser. C: Math. and Phys. Sci., 49. Reidel, Dordrecht, 1979. (Gheorghe Micula) **80j:41021** 41A15
- See also Numerische Methoden der Approximationstheorie, **80a:65015**
- Werner, Jochen (with Kirsch, Andreas; Warth, Wolfgang) ★Notwendige Optimalitätsbedingungen und ihre Anwendung. Lecture Notes in Economics and Mathematical Systems, 152. Springer-Verlag, Berlin-New York, 1978. iv+157 pp. ISBN 3-540-08537-8 (Jochen Zowe) **80a:65140** 65K10 (90C30)
- Über die globale Konvergenz von Variabel-Metrik-Verfahren mit nicht-exakter Schrittweitenbestimmung. (English summary) *Numer. Math.* **31** (1978/79), no. 3, 321-334. (D. J. van Wyk) **80c:65131** 65K05 (90C30)
- Werner, P. Selfadjoint extensions of the Laplace operator with respect to electric and magnetic boundary conditions. *J. Math. Anal. Appl.* **70** (1979), no. 1, 131-160. (N. D. Kopachevskii) **80i:78006** 78A25 (35P05)
- Werner, W. Über ein iteratives Verfahren der Ordnung  $1 + \sqrt{2}$  zur Nullstellenbestimmung. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* **59** (1979), no. 3, T86-T87. (W. M. Kincaid) **80k:65048** 65H10
- Wernstedt, J. Zur experimentellen Bildung dynamischer Modelle für die automatische Steuerung von Systemen—eine Übersicht. *Math. Operationsforsch. Statist. Ser. Statist.* **9** (1978), no. 2, 293-325. (Akira Ichikawa) **80a:93162** 93E10
- Weron, Aleksander (with Nguyen Van Thu) Examples of non-stationary Banach space valued stochastic processes of second order. *Probability theory on vector spaces (Proc. Conf., Trzebieżowice, 1977)*, pp. 171-181. *Lecture Notes in Math.*, 656. Springer, Berlin, 1978. (Franz Schmidt) **80c:60042** 60G12 (60J65)
- See also Probability theory on vector spaces, **80c:60008**
- de Werra, D. Partial compactness in edge-chromatic scheduling. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 2, pp. 207-219. *Operations Research Verfahren*, 32. Hain, Meisenheim, 1979. (T. A. Tulkina) **80i:90061** 90B35 (05C15)
- Werschulz, Arthur G. Maximal order and order of information for numerical quadrature. *J. Assoc. Comput. Mach.* **26** (1979), no. 3, 527-537. (P. Keast) **80f:65032** 65D32
- Optimal order for approximation of derivatives. *J. Comput. System Sci.* **18** (1979), no. 3, 213-217. (J. G. Herriot) **80m:65014** 65D25 (68C25)
- Werth, J.-E. (with Doeblner, H. D.) Global properties of systems quantized via bundles. *J. Math. Phys.* **20** (1979), no. 6, 1011-1014. (A. O. Barut) **80d:58032** 58F06 (81E10)
- Group actions on quantum bundles. *Rep. Math. Phys.* **15** (1979), no. 2, 277-286. (J. Śniatycki) **80m:58021** 58F06 (81C40)
- Wertz, Wolfgang ★Statistical density estimation: a survey. With German and French summaries. *Angewandte Statistik und Ökonometrie*, 13. Vandenhoeck & Ruprecht, Göttingen, 1978. 108 pp. ISBN 3-525-11244-0 (Paul Deheuvels) **80c:62022** 62G05
- van Wesp, Robert See Van Wesp, Robert
- Wesley, Eugene (with Pazner, Elisha A.) Cheatproofness properties of the plurality rule in large societies. *Rev. Econom. Stud.* **45** (1978), no. 1, 85-91. (From the introduction) **80i:90014** 90A08
- Wesley, Walter G. The accuracy of Tycho Brahe's instruments. *J. Hist. Astronom.* **9** (1978), no. 1, 42-53. (N. Sverdlow) **80a:01010** 01A40
- Tycho Brahe's solar observations. *J. Hist. Astronom.* **10** (1979), no. 2, 96-101. (N. Sverdlow) **80j:01008** 01A40 (85-03)
- Wesolowski, Z. Strong discontinuity wave in initially strained elastic medium. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* **30** (1978), no. 3, 309-322. (R. L. Richardson) **80d:73056** 73D99 (73D35)
- Wesolowski, G. O. (with Drezner, Z.) A trajectory method for the optimization of the multi-facility location problem with  $l_p$  distances. *Management Sci.* **24** (1977/78), no. 14, 1507-1514. (Authors' summary) **80a:90155** 90C50
- (with Drezner, Z.) A new method for the multifacility minimax location problem. *J. Oper. Res. Soc.* **29** (1978), no. 11, 1095-1101. (Authors' summary) **80a:90039** 90B05 (90C30)
- Wess, J. Supersymmetry-supergravity. *Topics in quantum field theory and gauge theory (Proc. VIII Internat. GIFT Sem. Theoret. Phys., Salamanca, 1977)*, pp. 81-125. *Lecture Notes in Phys.*, 77. Springer, Berlin, 1978. (Ju. M. Lomsadze) **80a:81136** 81M05 (53C10)
- (with Grimm, R.; Zumino, B.) A complete solution of the Bianchi identities in superspace with supergravity constraints. *Nuclear Phys. B* **152** (1979), no. 2, 255-261. (Authors' summary) **80c:83037** 83C99 (53B30, 81M05)
- Wessel, W. A second family of edge-critical wheels. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 1123-1145. *Colloq. Math. Soc. János Bolyai*, 11. North-Holland, Amsterdam, 1978. (V. Krishnamoorthy) **80c:05094** 05C99
- Wesselkamper, T. C. The algebraic representation of partial functions. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979)*, pp. 290-293. *IEEE, Long Beach, Calif.*, 1979. (J. C. Muzio) **80m:12020** 12C05
- The algebraic representation of partial functions. *Discrete Appl. Math.* **1** (1979), no. 1-2, 137-142. (Tatsuo Higuchi) **80m:94106** 94C10 (03B50)
- Wessels, J. (with van Hee, K. M.) Markov decision processes and strongly excessive functions. *Stochastic Process. Appl.* **8** (1978/79), no. 1, 59-76. (L. C. Thomas) **80c:90119** 90C40
- Wessely, E. Ch. Partition of genetic variance for sub-populations. *Biometrical J.* **20** (1978), no. 2, 161-168. (Susan Wilson) **80b:92043** 92A15 (62P10)
- Wesson, Paul S. (with Lermann, A.) The configuration of a thin, rotating self-similar disk in general relativity. *Astrophys. and Space Sci.* **57** (1978), no. 1, 203-217. (Kenneth Dunn) **80a:83009** 83C05 (35Q99)
- Wesson, Robert L. (with Gangi, Anthony F.) P-wave to Rayleigh-wave conversion coefficients for wedge corners: model experiments. *J. Comput. Phys.* **29** (1978), no. 1, 370-388. (Authors' summary) **80c:73020** 73D15
- West, Alan (with Carter, Sheila) Totally focal embeddings. *J. Differential Geom.* **13** (1978), no. 2, 251-261. (J. R. Vanstone) **80i:53024** 53C40 (57R70)
- West, B. J. (with Bulsara, A. R.; Lakatos-Lindenberg, Katja; Seshadri, Venkita; Shuler, K. E.) Stochastic processes with nonadditive fluctuations. I. Itô and Stratonovich calculus and the effects of correlations. *Phys. A* **97** (1979), no. 2, 211-233. (Authors' summary) **80c:82015a** 82A05
- (with Bulsara, A. R.; Lakatos-Lindenberg, Katja; Seshadri, Venkita; Shuler, K. E.) Stochastic processes with nonadditive fluctuations. II. Some applications of Itô and Stratonovich calculus. *Phys. A* **97** (1979), no. 2, 234-243. (Authors' summary) **80c:82015b** 82A05
- West, Douglas B. Pairs of adjacent Hamiltonian circuits with small intersection. *Stud. Appl. Math.* **59** (1978), no. 3, 245-248. (K. G. Murty) **80a:05141** 05C45 (52A25, 90B10)
- (with Kleitman, Daniel J.) Skew chain orders and sets of rectangles. *Discrete Math.* **27** (1979), no. 1, 99-102. (J. R. Griggs) **80i:05006** 05A05 (06A10)
- (with Daykin, David E.; Kleitman, Daniel J.) The number of meets between two subsets of a lattice. *J. Combin. Theory Ser. A* **26** (1979), no. 2, 135-156. (Joel Bernas) **80c:06006** 06D05
- West, J. E. (with Berstein, Israel) Based free compact Lie group actions on Hilbert cubes. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976)*, Part I, pp. 373-391. *Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I.*, 1978. (Paul F. Duval) **80k:57025** 57N20 (57S10, 58B05)
- West, John C. The linear filtering of separable processes. *Internat. J. Control* **28** (1978), no. 5, 753-770. (M. P. Mokjačuk) **80c:93126** 93E11
- West, M. R. (with Dew, P. M.) Estimating and controlling the global error in Ger's method. *BIT* **19** (1979), no. 1, 135-137. (Authors' introduction) **80g:65081** 65L05
- West, P. C. (with Stelle, K. S.) de Sitter gauge invariance and the geometry of the Einstein-Cartan theory. *J. Phys. A* **12** (1979), no. 8, L205-L210. (B. N. Frolov) **80i:83036** 83D05 (22E46, 58A05)
- (with Stelle, K. S.) Algebraic derivation of  $N=2$  supergravity constraints. *Phys. Lett. B* **90** (1980), no. 4, 393-397. (Authors' summary) **80m:83046** 83E99
- West, Sandra A. Upper and lower probability inferences for the logistic function. *Am. Statist.* **7** (1979), no. 2, 400-413. (R. J. Buehler) **80c:62042** 62F10
- Westcott, Mark (with Gates, D. J.) Zone of influence models for competition in plantations. *Adv. in Appl. Probab.* **10** (1978), no. 3, 499-537. (P. Holgate) **80a:60134a** 60K99 (60D05, 62P10, 92A05)
- (with Gates, D. J.) Spatial competition in plantations. *Spatial patterns and processes (Proc. Conf., Canberra, 1977)*. *Adv. in Appl. Probab.*, suppl., 98-103. (P. Holgate) **80a:60134b** 60K99 (60D05, 62P10, 92A05)
- On the tail behaviour of record-time distributions in a random record process. *Am. Probab.* **7** (1979), no. 5, 868-873. (Sidney I. Resnick) **80j:60037** 60F05 (60K05)
- (with Gates, D. J.; O'Connor, A. J.) Partitioning the union of disks in plant competition models. *Proc. Roy. Soc. London Ser. A* **367** (1979), no. 1728, 59-79. (John Cantwell) **80i:52013** 52A45 (92A17)
- v. Westenholz, Cornelius Loix de conservation de Noether et courants topologiques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 18, A885-A888. (Author's summary) **80c:81052** 81D15 (58A25)
- Topology of vortices. *Ann. Inst. H. Poincaré Sér. A (N.S.)* **29** (1978), no. 3, 285-303. (From the summary) **80i:81032** 81E05 (58A10, 81M05)
- Scale symmetry and virial theorem. *Ann. Inst. H. Poincaré Sér. A (N.S.)* **29** (1978), no. 4, 415-422. (1979). (Demeter Krupka) **80d:58030** 58F05 (70H05)
- Wester, Michael Eine Kennzeichnung einiger einfacher Gruppen vom Charakteristik 2-Typ. *Recl. Sem. Mat. Univ. Padova* **57** (1977), 107-147 (1978). (Bert Beisiegel) **80c:20035** 20D99
- Endliche Gruppen, die eine Involution  $z$  besitzen, so daß  $F^*(C(z))$  das direkte Produkt einer extraspeziellen 2-Gruppe von kleiner Weite mit einer elementar-abelschen 2-Gruppe ist. *J. Algebra* **60** (1979), no. 2, 321-336. (W. J. Wong) **80k:20015** 20D05 (20D08)



- Westmeier, Siegfried (with Brandl, Harald) Untersuchung des mathematischen Verhaltens der Frost-Kalkwurf-Dampfdruckgleichung. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* 20 (1978), no. 1, 45-55. (Authors' introduction) **80a:32039** 82A30
- Weston, Vaughan H. Electromagnetic inverse problem. *Electromagnetic scattering*, pp. 289-313, Academic Press, New York, 1978. (Harry E. Moses) **80g:78016** 78A45 (35R30)
- On the asymptotic solution of a partial differential equation with an exponential nonlinearity. *SIAM J. Math. Anal.* 9 (1978), no. 6, 1030-1053. (V. Lakshmikantham) **80a:35022** 35C20 (65P05)
- Nonlinear approach to inverse scattering. *J. Math. Phys.* 20 (1979), no. 1, 53-59. (Charles I. Goldstein) **80b:78010** 78A45 (35J05, 35R30)
- Westwick, David (with Podolak, E.) Systems of first order differential equations with global periodic solutions. *Indiana Univ. Math. J.* 28 (1979), no. 6, 869-882. (J. R. Ockendon) **80b:34059** 34C25 (58F14, 58F22)
- (with Cahlon, Baruch) Numerical methods for discontinuous linear two-point boundary value problems. *J. Comput. Appl. Math.* 5 (1979), no. 2, 111-115. (Robert D. Russell) **80m:65061** 65L10
- (with Varol, Yaakov L.) Applications of Galerkin's method to bifurcation and two-point boundary value problems. *J. Math. Anal. Appl.* 70 (1979), no. 2, 399-422. (A. A. Foaarev) **80b:65038** 65J15
- (with Varol, Yaakov L.) Numerical bifurcation at simple eigenvalues. *SIAM J. Numer. Anal.* 16 (1979), no. 3, 538-546. (B. V. Logvinov) **80b:47072** 47H15 (58E07)
- Westwick, R. Irreducible lengths of triectors of rank seven and eight. *Pacific J. Math.* 80 (1979), no. 2, 575-579. (G. B. Gurevich) **80b:15021** 15A75
- Wet, T. (with Venter, J. H.; van Wyk, J. W. J.) The null distributions of some test criteria of multivariate normality. *South African Statist. J.* 13 (1979), no. 2, 153-176. (Authors' summary) **80b:62047** 62H10
- Wetherill, G. Barrie. Sequential methods in statistics. Second edition. Monographs on Applied Probability and Statistics. Chapman and Hall, London; John Wiley & Sons, Inc., New York, 1979. x + 232 pp. ISBN 0-412-21810-0 (Editors) **80b:62076** 62Lxx
- Wets, Roger J.-B. (with Salinetti, Gabriella) Erratum: "On the relations between two types of convergence for convex functions" (*J. Math. Anal. Appl.* 60 (1977), no. 1, 211-226). *J. Math. Anal. Appl.* 66 (1978), no. 3, 689. (Editors) **80a:90114** 90C25 (46G99)
- (with Salinetti, Gabriella) On the convergence of sequences of convex sets in finite dimensions. *SIAM Rev.* 21 (1979), no. 1, 18-33. (Hans-Jürgen Albrand) **80b:52007** 52A20 (90C25)
- Westerling, W. See Numerische Methoden bei graphentheoretischen und kombinatorischen Problemen. **80m:05003**
- Wetzel, John E. On the division of the plane by lines. *Amer. Math. Monthly* 85 (1978), no. 8, 647-656. (C. Ballester Pereyra) **80b:51014** 51M20 (05A19)
- Dissections of a simply-connected plane domain. *Amer. Math. Monthly* 85 (1978), no. 8, 660-661. (Donald E. Bennett) **80d:54042** 54F20 (51M99)
- (with Alexanderson, Gerald L.) Simple partitions of space. *Math. Mag.* 51 (1978), no. 4, 220-225. (C. Ballester Pereyra) **80b:51013** 51M20 (05A17)
- (with Kerr, Jeanne W.) Platonic divisions of space. *Math. Mag.* 51 (1978), no. 4, 229-234. (A. Altschuler) **80b:51013** 51M99 (05A99)
- (with Simmons, Gustavus J.) A two-coloring inequality for Euclidean two-arrangements. *Proc. Amer. Math. Soc.* 77 (1979), no. 1, 124-127. (G. L. Alexanderson) **80b:51009** 51M20 (05C15)
- Weverberg, M. (with Naert, Philippe) Cost uncertainty in competitive bidding models. *J. Oper. Res. Soc.* 29 (1978), no. 4, 361-372. (John Roberts) **80b:90007** 90A05 (90A12)
- Wexler, D. Frequency domain stability for a class of equations arising in reactor dynamics. *SIAM J. Math. Anal.* 10 (1979), no. 1, 118-138. (J. A. Nohel) **80b:45007** 45D05 (34G20, 45M10, 82A99)
- Weyer, Jürgen Über maximale Monotonie von Operatoren des Typs  $L^* \Phi + L$ . (English summary) *Manuscripta Math.* 28 (1979), no. 4, 305-316. (P. S. Kenderov) **80m:47050** 47H05
- Regulärität in der nichtlinearen Spektraltheorie. (English summary) *Proc. Roy. Soc. Edinburgh Sect. A* 83 (1979), no. 1-2, 81-91. (J. Danes) **80f:47054** 47H12
- Weyland, Nicholas A note on the zeros of  $H^p$  functions. *Indiana Univ. Math. J.* 28 (1979), no. 3, 507-510. (Charles Horowitz) **80b:32014** 32A35 (46J15)
- Weyman, Jerzy (with Józefiak, Tadeusz) Quotients of Cohen-Macaulay rings and perfect ideals. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 6, 475-476. (D. Kirby) **80a:13026** 13H10
- Resolutions of the exterior and symmetric powers of a module. *J. Algebra* 58 (1979), no. 2, 333-341. (J. Ohm) **80b:13005** 13D25 (13C99)
- Weymark, John A. Unselfishness and prisoner's dilemmas. *Philos. Stud.* 34 (1978), no. 4, 417-425. (J. Moulen) **80c:90187** 90D99
- Weyaker, Elaine J. Modifications of the program scheme model. *J. Comput. System Sci.* 18 (1979), no. 3, 281-293. (Author's summary) **80b:68004** 68B05 (68C01)
- Whaples, G. (with Nyman, T.) Hasse's principle for simple algebras over function fields of curves. I. Algebras of index 2 and 3; curves of genus 0 and 1. *J. Reine Angew. Math.* 299/300 (1978), 396-405. (W.-D. Geyer) **80a:14013a** 14H25 (13A20)
- (with Nyman, T.) Correction to the paper: "Hasse's principle for simple algebras over function fields of curves. I" (*J. Reine Angew. Math.* 299/300 (1978), 396-405). *J. Reine Angew. Math.* 301 (1978), 211. (W.-D. Geyer) **80a:14013b** 14H25 (13A20)
- (with Nyman, T.) Simple algebras over rational function fields. *Canad. J. Math.* 31 (1979), no. 4, 831-835. (K. Kiyek) **80b:12020** 12A80 (12B35)
- Whitton, J. H. (with Whitson, J. C.; Smith, J.) Calculations involving ion beam source. *J. Comput. Phys.* 28 (1979), no. 3, 408-415. (Authors' summary) **80a:78015** 78A35 (65H10)
- Whitton, Richard L. (with Muckenhoupt, Benjamin) On the dual of weighted  $H^1$  of the half-space. *Studia Math.* 63 (1978), no. 1, 57-79. (D. Sarason) **80b:42024** 42B30
- Whitaker, John Archibald Include the observer in the wave function? *Quantum mechanics, a half century later (Colloq. Univ. Louis Pasteur, Strasbourg, 1974)*, pp. 1-18, Episteme, S. Reidel, Dordrecht, 1977. (M. Carmeli) **80b:81014** 81B05
- Whitaker, L. On optimum profiles for the minimization of elastic stress concentration. *Z. Angew. Math. Mech.* 58 (1978), no. 6, 235-236. (From the introduction) **80b:73039** 73C99 (49H05)
- Whitaker, Robert L. (with Miller, Richard K.) Well-posedness and stability of linear Volterra integro-differential equations in abstract spaces. *Funkcial. Ekvac.* 21 (1978), no. 3, 279-305. (J. M. Cushing) **80b:45017** 45J05
- Whitaker, William H. Amalgamation and elimination of quantifiers for theories of fields. *Proc. Amer. Math. Soc.* 77 (1979), no. 2, 243-250. (Paul C. Eklof) **80b:03049** 03C60 (12L99)
- The first order theory of  $N$ -colorable graphs. *Trans. Amer. Math. Soc.* 250 (1979), 289-310. (O. V. Belegadek) **80b:03035** 03C65 (03B30, 03C10, 03C35, 05C15)
- Whitson, Andrew B. (with Salas Fumas, Vicente) Flexible contracting, theory and case examples. *European J. Oper. Res.* 3 (1979), no. 5, 368-378. (Authors' summary) **80f:90010** 90A05 (90A11)
- Whitaker, D. The derivation of a measure of brand loyalty using a Markov brand switching model. *J. Oper. Res. Soc.* 29 (1978), no. 10, 959-970. (Author's summary) **80a:90043** 90A16 (90A19)
- White, Albert (with Diminnie, Charles) Some geometric remarks concerning strictly 2-convex spaces. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 2, 245-253. (J. E. Valentine) **80b:52003** 52A05 (46A99, 51F99)
- White, Arthur T. (with Goldsmith, Donald L.) On graphs with equal edge-connectivity and minimum degree. *Discrete Math.* 23 (1978), no. 1, 31-36. (Charles M. Grinstead) **80a:05134** 05C40
- (with Biggs, Norman) Permutation groups and combinatorial structures. London Mathematical Society Lecture Note Series, 33. Cambridge University Press, Cambridge-New York, 1979. 140 pp. ISBN 0-521-22287-7 (A. Schiemacher) **80b:20005** 20B25 (05Bxx, 05C25)
- White, Benjamin S. A method for the approximate solution of some stochastic equations of population biology. Conference on Deterministic Differential Equations and Stochastic Processes Models for Biological Systems (San Cristobal, N.M., 1977). *Rocky Mountain J. Math.* 9 (1979), no. 1, 175-187. (P. W. A. Dayananda) **80b:92022** 92A15
- (with Elias, Samuel) A stochastic model for neuronal spike generation. *SIAM J. Appl. Math.* 37 (1979), no. 1, 206-233. (Uwe an der Heide) **80b:92005** 92A05
- White, Chelsea C., III Optimal myopic strategies in combined decision and state estimation problems. *IEEE Trans. Systems Man Cybernet.* 8 (1978), no. 9, 702-705. (M. I. Gusev) **80b:90134** 90C40
- (with Harrington, David P.) Application of Jensen's inequality for adaptive suboptimal design. *Transactions of the Twenty-Fourth Conference of Army Mathematicians (Univ. Virginia, Charlottesville, Va., 1978)*, pp. 451-463, ARO Rep., 79-1, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Authors' summary) **80c:93069** 93C30 (93C40)
- Optimal control-limit strategies for a partially observed replacement problem. *Internat. J. Systems Sci.* 10 (1979), no. 3, 321-331. (C. Mohan) **80c:90073** 90B25
- Bounds on optimal cost for a replacement problem with partial observations. *Naval Res. Logist. Quart.* 26 (1979), no. 3, 415-422. (S. M. Pandit) **80b:90066** 90B25
- White, D. J. Finite dynamic programming. An approach to finite Markov decision processes. *Wiley-Interscience [John Wiley & Sons], Chichester-New York*, 1978. xiii + 204 pp. ISBN 0-471-99629-7 (Wayne Winston) **80a:90147** 90C40
- Elimination of nonoptimal actions in Markov decision processes. *Dynamic programming and its applications (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 131-160, Academic Press, New York, 1978. (E. I. Kistauri) **80b:90153** 90C40
- Erratum: "The optimal route problem and the method of approximation in policy space" [*J. Math. Anal. Appl.* 32 (1970), 453-455; MR 43 #5896] by D. Davidson and the author. *J. Math. Anal. Appl.* 68 (1979), no. 1, 318. (Editors) **80b:90018** 90B10 (90C39)
- White, David On computer generation of balanced arrays. *J. Statist. Plann. Inference* 2 (1978), no. 3, 253-275. (K. Vijayan) **80c:62042** 05B15
- White, H. E., Jr. Topological spaces in which Blumberg's theorem holds. II. *Illinois J. Math.* 23 (1979), no. 3, 464-468. (R. F. Dickman, Jr.) **80b:54025** 54C30
- White, James H. (with Moore, John Douglas) Normal characteristic forms: conformal invariance and duality. *Math. Z.* 164 (1978), no. 2, 125-141. (Alan West) **80b:58006** 58A10 (53C40, 57R20)
- White, John A. (with Aly, Adel A.) Probabilistic formulations of the multifacility Weber problem. *Naval Res. Logist. Quart.* 25 (1978), no. 3, 531-547. (Authors' summary) **80a:90151** 90C50 (90C15)
- White, John T. (with Jensen, Shou Lin Lee) Bounded slope variation and a generalized derivative. *Texas J. Sci.* 31 (1979), no. 3, 207-211. (Frank N. Huggins) **80b:26006** 26A42 (26A45)
- White, Kenneth J. (with Savin, N. E.) Estimation and testing for functional form and autocorrelation. A simultaneous approach. *J. Econometrics* 8 (1978), no. 1, 1-12. (Authors' summary) **80m:62092** 62M10
- White, L. R. (with Hughes, B. D.) "Soft" contact problems in linear elasticity. *Quart. J. Mech. Appl. Math.* 32 (1979), no. 4, 445-471. (Authors' summary) **80b:73072** 73T05
- White, Lee J. (with Natarajan, K. S.) Optimum domination in weighted trees. *Inform. Process. Lett.* 7 (1978), no. 6, 261-265. (From the introduction) **80b:68072** 68E10 (68C05, 94C15)
- White, Luther W. Control problems governed by a pseudo-parabolic partial differential equation. *Trans. Amer. Math. Soc.* 250 (1979), 235-246. (J. E. Rubio) **80b:49019** 49B22 (49A22)
- White, P. C. (with Petschek, A. G.; Williamson, R. E.; Krauser, W. J.) Monte Carlo functional expansion calculation of free molecular flows. *Math. Comp.* 33 (1979), no. 146, 765-777. (Authors' summary) **80b:82071** 82A70 (65C05)
- White, R. B. An interactive code for solving differential equations using phase integral methods. *J. Comput. Phys.* 31 (1979), no. 3, 409-424. (Author's summary) **80b:65181** 65L99 (65-04)
- White, R. E. Weak solution of  $(r(x, u(x)) u'(x))' = (Fu)(x)$  with  $r(0, u(0))u'(0) = ku(0)$ ,  $r(L, u(L))u'(L) = hu(L)$  and  $r, h$  are suitable elements of  $[0, \infty]$ . *J. Math. Anal. Appl.* 68 (1979), no. 1, 157-170. (T. J. Mahar) **80b:34021** 34B15
- A semilinear boundary value problem. *J. Math. Anal. Appl.* 70 (1979), no. 2, 563-578. (J. Smoller) **80b:35057** 35J60
- Weak solutions of  $(p(x)u'(x))' + g(x)u'(x) + q(x)u(x) = f$  with  $q, f \in H_{\text{loc}}[a, b]$ ,  $0 < p(x) \in L_{\text{loc}}[a, b]$ ,  $g(x) \in L_{\text{loc}}[a, b]$  and  $u \in H_{\text{loc}}[a, b]$ . *SIAM J. Math. Anal.* 10 (1979), no. 6, 1313-1325. (Angelo Favini) **80b:34022** 34B05 (34B15)

- Whitehead, Earl Glen, Jr.** Autocorrelation of  $(+1, -1)$  sequences. *Combinatorial mathematics* (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977), pp. 329–336. *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (Richard J. Taryn) **80c:05027** 05A99 (05A10)  
(with Chao, Chong Yun) Chromatically unique graphs. *Discrete Math.* 27 (1979), no. 2, 171–177. (O. V. Borodin) **80m:05036** 05C15
- Whitehead, George W.**  $\star$  Elements of homotopy theory. *Graduate Texts in Mathematics*, 61. Springer-Verlag, New York-Heidelberg, 1978. xxi + 744 pp. ISBN 0-387-90336-4 (Brayton Gray) **80b:55001** 55-02
- Whitehead, John** (with Jones, David) Sequential forms of the log rank and modified Wilcoxon tests for censored data. *Biometrika* 66 (1979), no. 1, 105–113. (Authors' summary) **80c:62069** 62L10 (62G10, 62N05)  
(with Robbins, Herbert) Sequential rank and the Pólya urn. *J. Appl. Probab.* 16 (1979), no. 1, 213–219. (G. I. Ivčenko) **80d:62066** 62L05
- Whiteley, Walter** Projective geometry and rigid buildings. *Appl. Math. Notes* 4 (1979), no. 1, 7–26. (From the text) **80c:51018** 51N15 (70B15, 73K99)  
Logic and invariant theory. IV. Invariants and syzygies in combinatorial geometry. *J. Combin. Theory Ser. B* 26 (1979), no. 2, 251–267. (G. Cherlin) **80g:05023** 05B25 (03C65, 14N10, 18B99)
- Whiteman, John Robert** (with Gregory, John A.; Fishelov, D.; Schiff, B.) Local mesh refinement with finite elements for elliptic problems. *J. Comput. Phys.* 29 (1978), no. 1, 133–140. (Authors' summary) **80c:65205** 65N30  
(with Janovský, Vladimír) Error analysis of finite element methods for mildly nonlinear variational inequalities. *Numer. Funct. Anal. Optim.* 1 (1979), no. 3, 223–232. (A. Barraud) **80f:49006** 49A29  
See also *Mathematics of finite elements and applications*, **80k:65005**
- Whiten, W. J.** Multiple linear curve fitting. *J. Inst. Math. Appl.* 23 (1979), no. 1, 61–71. (Author's summary) **80c:65036** 65D10
- Whitfield, Sue H.** (with Hutchinson, Joan P.) A note on a generalized regularity condition. *Theory and applications of graphs* (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976), pp. 304–308. *Lecture Notes in Math.*, 642, Springer, Berlin, 1978. (Michael O. Albertson) **80b:05047** 05C99
- Whitham, G. B.** (with Fornberg, B.) A numerical and theoretical study of certain nonlinear wave phenomena. *Philos. Trans. Roy. Soc. London Ser. A* 289 (1978), no. 1361, 373–404. (P. A. Mišakovskii) **80i:35156** 35Q20 (65P05)
- Whitley, William Glean** Manifolds. *Proceedings of the Tenth Brazilian Colloquium (Poços de Caldas, 1975)*, Vol. II (Portuguese), pp. 495–512. *Cons. Nac. Desenvolvimento Ci. Tec., Inst. Mat. Pura Apl., Rio de Janeiro, 1978*, (Editors) **80c:57001** 57-01
- Whitlock, P. A.** (with Kalos, M. H.) Monte Carlo calculation of the radial distribution function of quantum hard spheres at finite temperatures. *J. Comput. Phys.* 30 (1979), no. 3, 361–388. (Artenio De Matteis) **80c:82016** 82A05 (65C05)
- Whitman, A. B.** (with Cohen, H.) Waves and instability in simple orthotropic elastic rods. *Acta Mech.* 34 (1979), no. 3–4, 257–262. (From the text) **80m:73032** 73D99 (73H99)
- Whitman, Andrew P.** (with Schweitzer, Paul A.) Pontryagin polynomial residues of isolated foliation singularities. *Differential topology, foliations and Gelfand-Fuks cohomology* (Proc. Sympos., Pontificia Univ. Católica, Rio de Janeiro, 1976), pp. 95–103. *Lecture Notes in Math.*, 652, Springer, Berlin, 1978. (Connor Lazarov) **80a:57015** 57R30
- Whitman, P. N.** Skew-products with simple approximations. *Proc. Amer. Math. Soc.* 72 (1978), no. 3, 521–526. (W. Parry) **80d:28039** 28D05
- Whitney, Stephen** (with Hatcher, William S.)  $\star$  Absolute algebra. With German, French and Russian summaries. *B. G. Teubner Verlagsgesellschaft, Leipzig, 1978*. x + 126 pp. (Jaroslav Ježek) **80a:08001** 08-02 (08A05, 18C05, 18C10)
- Whitrow, G. J.** Historical reflections on the principle of relativity of uniform motion. Papers presented at the Symposium on the History of Applied Mathematics (Hatfield Polytechnic, Hatfield, 1976). *Bull. Inst. Math. Appl.* 13 (1977), no. 9–10, 234–238. (Editors) **80a:01024** 01A55 (01A60)
- Whitson, J. C.** (with Smith, J.; Wheaton, J. H.) Calculations involving ion beam source. *J. Comput. Phys.* 28 (1978), no. 3, 408–415. (Authors' summary) **80m:78015** 78A35 (65H10)
- Whitt, Ward** A note on the influence of the sample on the posterior distribution. *J. Amer. Statist. Assoc.* 74 (1979), no. 366, part 1, 424–426. (J. M. Bernardo) **80b:62027** 62F15 (62A15)
- Whittemore, Alice S.** Collapsibility of multidimensional contingency tables. *J. Roy. Statist. Soc. Ser. B* 40 (1978), no. 3, 328–340. (Graham J. G. Upton) **80c:62052** 62H17  
(with Keller, Joseph B.) Quantitative theories of carcinogenesis. *SIAM Rev.* 20 (1978), no. 1, 1–30. (Howard B. Stauffer) **80a:92024** 92A07
- Whitton, Wilbur** (with Feustel, C. D.) Groups and complements of knots. *Canad. J. Math.* 30 (1978), no. 6, 1284–1295. (L. Neuwirth) **80b:57004** 57M25
- Whittle, P.** A simple condition for regularity in negative programming. *J. Appl. Probab.* 16 (1979), no. 2, 305–318. (E. I. Kistauri) **80f:90144** 90C40  
Polymerisation processes with intrapolymer bonding. I. One type of unit. *Adv. in Appl. Probab.* 12 (1980), no. 1, 94–115. (Author's summary) **80m:82025a** 82A25  
Polymerisation processes with intrapolymer bonding. II. Stratified processes. *Adv. in Appl. Probab.* 12 (1980), no. 1, 116–134. (Author's summary) **80m:82025b** 82A25  
Polymerisation processes with intrapolymer bonding. III. Several types of unit. *Adv. in Appl. Probab.* 12 (1980), no. 1, 135–153. (Author's summary) **80m:82025c** 82A25
- Whitton, W. N.** The analytic continuation of a group of eigenvalues. *Molecular Phys.* 36 (1978), no. 4, 941–972. (Author's summary) **80m:81025** 81C10 (35P99, 81C12)
- Whyburn, Gordon** (with Duda, Edwin)  $\star$  Dynamic topology. With a foreword by John L. Kelley. Undergraduate Texts in Mathematics. Springer-Verlag, New York-Heidelberg, 1979. xi + 152 pp. ISBN 0-387-90358-5 (Timuoye M. Adeniran) **80c:54001** 54-01
- Whyburn, Lucille** Letters from the R. L. Moore papers. Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977). *I. Topology Proc.* 2 (1977), no. 1, 323–338 (1978). (F. Burton Jones) **80c:01059** 01A70 (54-03)  
R. L. Moore's first doctoral student at Texas. *Algebraic and geometric topology* (Proc. Sympos., Univ. California, Santa Barbara, Calif., 1977), pp. 33–37. *Lecture Notes in Math.*, 664, Springer, Berlin, 1978. (Arthur M. Hobbs) **80c:01050** 01A65 (01A70)
- Wilber, E. A.** (with Howe, R. B.; Gilbert, J. D.) Explicit solutions to the reverse order law  $(AB)^* = B^-A^-$ . *Linear Algebra Appl.* 25 (1979), 107–114. (James R. Wall) **80f:15009** 15A09 (65F05)
- Willebrand, Dieter** See Müller-Wichards, Dieter
- Wichura, Michael J.** On the probability of a symmetric stable process crossing a bottom outer boundary. *Z. Wahrsch. Verw. Gebiete* 47 (1979), no. 2, 195–203. (S. J. Taylor) **80b:60096** 60J30
- Wicke, Howard H.** (with Worrell, J. M., Jr.) Spaces which are scattered with respect to collections of sets. Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977). *I. Topology Proc.* 2 (1977), no. 1, 281–307 (1978). (G. Gruenhage) **80c:54052** 54E30 (54D99)  
A functional characterization of primitive base. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 355–361. (Marco Bernardi) **80b:54037** 54E99 (54A99)  
Using  $\theta$ -space concepts in base of countable order theory. Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978). *I. Topology Proc.* 3 (1978), no. 1, 267–285 (1979). (H. R. Bennett) **80c:54053** 54E35
- Wickes, Gene H.** (with Campbell, Douglas M.) The spherical derivative and normal functions. II. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 3 (1977), no. 2, 373–375. (D. A. Brannan) **80g:30021b** 30D45  
(with Campbell, Douglas M.) The Bloch-Nevanlinna conjecture revisited. *Bull. Austral. Math. Soc.* 18 (1978), no. 3, 447–453. (Lowell Hansen) **80b:30028** 30D50 (30B10)  
(with Campbell, Douglas M.) Characterizations of normal meromorphic functions. *Complex analysis Joensuu 1978* (Proc. Colloq., Univ. Joensuu, Joensuu, 1978), pp. 55–72. *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (P. Lappan) **80c:30031** 30D45
- Wickert, K.** On the Poisson disorder problem. *Internat. J. Systems Sci.* 10 (1979), no. 3, 275–283. (Robert F. Anderson) **80f:93103** 93E20  
The expected first-passage time for a sufficient statistic arising in the Poisson disorder problem. *J. Appl. Probab.* 16 (1979), no. 2, 274–286. (Harry I. Cohn) **80g:62074** 62M99 (60G55)  
Optimal immunization rules for an epidemic with recovery. *J. Optim. Theory Appl.* 27 (1979), no. 4, 549–570. (Andris Abakus) **80c:92036** 92A15
- Widder, D. V.** (with Boas, Ralph P.; Pollard, H.) The asymptotic behavior of derivatives. *Amer. Math. Monthly* 85 (1978), no. 9, 749–750. (James Foran) **80b:26004** 26A24  
The Airy transform. *Amer. Math. Monthly* 86 (1979), no. 4, 271–277. (A. Ramm) **80b:44003** 44A15
- Widder, F.** (with Mitter, H.) Classical solutions of a nonlinear field equation. *J. Phys. A* 12 (1979), no. 11, 1981–1990. (Gheorghe Nenciu) **80c:81101** 81M05 (35Q20)
- Widiger, Alfred** Lattices of radicals for hereditarily Artinian rings. *Math. Nachr.* 84 (1978), 301–309. (W. G. Leavitt) **80c:16015** 16A21  
(with Dinh Van Huynh) Über Ringe mit eingeschränkter Minimalbedingung höherer Stufe für Rechtsideale. III. *Math. Nachr.* 86 (1978), 309–331. (Z. Papp) **80b:16015b** 16A35  
Die Ringe, deren sämtliche Unterringe Hauptrechtsidealringe sind. *Publ. Math. Debrecen* 25 (1978), no. 3–4, 195–201. (E.-A. Behrens) **80a:16002** 16A04  
(with Dinh Van Huynh) Über Ringe mit eingeschränkter Minimalbedingung höherer Stufe für Unterringe. Beiträge zur Algebra und Geometrie, 7. *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M* 11 (1978), 7–12. (A. V. Jagžev) **80f:16005** 16A08 (16A45)
- Widlund, Olof** (with O'Leary, Dianne P.) Capacitance matrix methods for the Helmholtz equation on general three-dimensional regions. *Math. Comp.* 33 (1979), no. 147, 849–879. (Steven M. Serbin) **80c:65125** 65N99 (65F10)
- Widman, K.-O.** (with Fabes, E. B.; Sroka, S.) Littlewood-Paley a priori estimates for parabolic equations with sub-Dini continuous coefficients. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) 6 (1979), no. 2, 305–334. (Todor G. Genčev) **80b:35072** 35K30 (35B45)
- Widom, Harold** Spectral asymptotics of hypersurfaces. *Integral Equations Operator Theory* 1 (1978), no. 3, 415–443. (A. S. Dynin) **80d:47080** 47G05 (35P20, 58G15)  
The Laplace operator with potential on the 2-sphere. *Adv. in Math.* 31 (1979), no. 1, 63–66. (Harold Donnelly) **80d:58071** 58G25 (35P15)  
Eigenvalue distribution theorems for certain homogeneous spaces. *J. Funct. Anal.* 32 (1979), no. 2, 139–147. (Rolf Sulanke) **80b:58054** 58G25 (35P20, 43A85)
- Wiend, H. S.** (with Sinha, Bimal Kumar) Admissibility and inadmissibility of the MLE when the parameter space is restricted to integers. *Calcutta Statist. Assoc. Bull.* 26 (1977), no. 101–104, 113–116 (1978). (Glen Meeden) **80f:62011** 62C15  
(with Sinha, Bimal Kumar) Bounds on the efficiencies of four commonly used nonparametric tests of location. *Sankhyā Ser. B* 39 (1977), no. 2, 121–129. (Author's summary) **80c:62060** 62G20
- Wiebe, Hartmut** (with Schafmeister, Otto)  $\star$  Grundzüge der Algebra. Mathematik für das Lehramt an Gymnasien. B. G. Teubner, Stuttgart, 1978. 247 pp. ISBN 3-519-02754-2 (B. Artmann) **80f:00004** 00A05
- Wieczorek, Andrzej** Ordering probabilities on an ordered measurable space. *Fund. Math.* 101 (1978), no. 1, 53–78. (Beloslav Riečan) **80c:28002** 28A12  
(with Greenberg, Joseph; Shitovitz, Benyamim) Existence of equilibria in atomless production economies with price dependent preferences. *J. Math. Econom.* 6 (1979), no. 1, 31–41. (Karl Shell) **80j:90031** 90A14
- Wieczorek, E.** (with Geyer, B.; Robaschik, D.) Theory of deep inelastic lepton-hadron scattering. *Fortschr. Phys.* 27 (1979), no. 2–3, 75–166. (F. R. Halpern) **80g:81074** 81G20 (47F05)
- Wiegand, Roger** (with Vasconcelos, Wolmer V.) Bounding the number of generators of a module. *Math. Z.* 164 (1978), no. 1, 1–7. (Pushpa Gupta) **80b:13028** 13H15 (13D99)
- Wiegand, Sylvia** See Module theory, **80b:16001**
- Wiegandt, Richard** (with van Leeuwen, L. C. A.) Constructions and compositions of radical and semisimple classes. *Ann. Univ. Sci. Budapest. Eötvös Sect. Math.* 21 (1978), 65–75 (1979). (Robert L. Snider) **80f:16014** 16A21  
(with Pham Ngoc Anh) Linearly compact semisimple rings and regular modules. *Math. Japon.* 23 (1978/79), no. 4, 335–338. (V. I. Arnautov) **80d:16026** 16A80  
(with Chelata, C. G.) Radical theory for fully ordered groups. *Mathematica (Cluj)* 20(43) (1978), no. 2, 143–157. (S. Wolfenstein) **80g:06020** 06F15  
Correctior and remark to my paper: "Characterizations of the Baer radical class by almost nilpotent rings" [Publ. Math. Debrecen 23 (1976), no. 1–2, 15–17; MR 54 #2715]. *Publ. Math. Debrecen* 25 (1978), no. 3–4, 327–328. (L. C. A. van Leeuwen) **80k:16014** 16A21 (16A22, 16A48)  
(with Fried, Ervin) Abstract relational structures and their torsion theory.



- Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978), pp. 97-111, Heyn, Klagenfurt, 1979. (From the introduction) 80c:18006 18E40 (18D99)*  
(with Leavitt, W. G.) Torsion theory for not necessarily associative rings. *Rocky Mountain J. Math.* 9 (1979), no. 2, 259-271. (V. A. Artamonov) 80d:17005 17A99 (18E40)
- Wielg, F. W. Markovian nature of the two-dimensional self-avoiding random walk problem. *Phys. A* 98 (1979), no. 1-2, 345-351. (Author's summary) 80f:82053 82A67 (60K35)
- Wiegold, James (with Wilson, John S.) Growth sequences of finitely generated groups. *Arch. Math. (Basel)* 30 (1978), no. 4, 337-343. (Benjamin Fine) 80c:20038 20F05  
(with Buckley, Joseph) On the number of outer automorphisms of an infinite nilpotent  $p$ -group. *Arch. Math. (Basel)* 31 (1978/79), no. 4, 321-328. (Thaddeus C. Hurley) 80c:20033 20E36  
Growth sequences of finite groups. III. *J. Austral. Math. Soc. Ser. A* 25 (1978), no. 2, 142-144. (F. Levin) 80c:20028 20D30  
See also Adjan, S. I., 80d:20035
- Wielhagen, Rolf Characterization problems in the theory of inductive inference. *Automata, languages and programming (Fifth Internat. Colloq., Udine, 1978), pp. 494-508, Lecture Notes in Comput. Sci.* 62, Springer, Berlin, 1978. (M. I. Dehtjar) 80c:03044 03D20 (03D15, 03D45, 68C25)
- van de Wiele, Jean-Paul See Van de Wiele, Jean-Paul
- Wienberg, Norbert The structure of certain subgroups of the Picard group. *Math. Proc. Cambridge Philos. Soc.* 84 (1978), no. 3, 427-436. (Troels Jørgensen) 80b:57010 57N10 (20H10, 30F35)
- Wiener, Klaus Lösungen von Anfangswertproblemen bei Differentialgleichungen von nichtganzzahliger Ordnung. *Beiträge Anal. No. 12* (1978), 77-90. (I. Fenyő) 80d:34005 34A10 (26A33)
- Wienke, B. R. Induced scattering and the linear transport kernel. *Bull. Calcutta Math. Soc.* 69 (1977), no. 6, 373-378. (Vladimir Šipš) 80m:82056 82A70
- Wierman, John C. (with Smythe, R. T.) ★First-passage percolation on the square lattice. *Lecture Notes in Mathematics*, 671. Springer-Verlag, Berlin-New York, 1978.  
viii + 196 pp. ISBN 3-540-08928-4 (G. R. Grimmett) 80a:60135 60K99  
The front velocity of the simple epidemic. *J. Appl. Probab.* 16 (1979), no. 2, 409-415. (Author's summary) 80d:92037 92A15
- Wierzbicki, Andrzej P. On the use of penalty functions in multiobjective optimization. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978), Section I, pp. 719-735, Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (Author's summary) 80c:90105 90C30 (90D10)
- Wierzbowski, Mirosław A. On the spectral properties of the operator  $Lu = q_0(x)u^{(m)} + \dots + q_{m-1}(x)u + q_m(x)$  with periodic  $q_n$  in the Besicovitch space  $B^p(\mathbb{R})$ . (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astron.* 26 (1978), no. 11, 879-886 (1979). (R. R. D. Kemp) 80c:34021 34B25 (47E05)
- Wiese, Bernd See Hughes, G. E.; et al., 80f:03001 and Cresswell, Max J., 80c:03022
- Wiesel, W. Orbital and solar resonance in the Jovian moon system. *Celestial Mech.* 21 (1980), no. 3, 265-279. (Author's summary) 80m:70017 70F15
- Wiesbauer, J. Interpolation on modules. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978), pp. 399-404, Heyn, Klagenfurt, 1979. (Dietmar Dorninger) 80m:16016 16A53*
- Wiglaw, Witold Locally bounded topologies on Euclidean rings. *Arch. Math. (Basel)* 31 (1978/79), no. 1, 33-37. (Jean Guérindon) 80a:13027 13J99  
A characterization of locally compact fields. III. *Colloq. Math.* 39 (1978), no. 2, 313-317. (M. E. Shanks) 80f:12026 12J99  
(with Borevici, Z. I.; Dobrowski, E.; Rodionov, V. I.) The number of labeled topologies on nine points. (Russian) *Rings and linear groups. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 75 (1978), 35-42, 195. (V. Evstigneev (RZMat 78:8 V474)) 80c:05012 05A15  
Locally bounded topologies on some Dedekind rings. *Arch. Math. (Basel)* 33 (1979/80), no. 1, 41-44. (M. E. Shanks) 80c:12038 12J99
- Wismeth, Hans (with Reif, Nicolaus) Pareto ordering of distributions. *J. Math. Econom.* 5 (1978), no. 2, 185-204. (Hildegard Dierker) 80c:90037 90A16 (90A06)  
Regular competitive equilibria in disequilibrium economics. *J. Math. Econom.* 6 (1979), no. 1, 23-29. (Su-shing Chen) 80d:90022 90A14
- Engelbrecht-Wiggans, Richard See Engelbrecht-Wiggans, Richard
- Wiggins, Kenneth L. (with Henry, M. S.) Applications of approximation theory to differential equations with deviating arguments. *Pacific J. Math.* 76 (1978), no. 2, 431-441. (Syvert P. Nersett) 80a:34090 34K05  
(with Schmidt, Darrell) Minimax approximate solutions of linear boundary value problems. *Math. Comp.* 33 (1979), no. 145, 139-148. (I. P. Gavriljuk) 80b:65111 65L10
- Wightman, Arthur S. How to parametrize the solutions of Lagrangian field theories: symmetry breaking, and dimensional interpolation and renormalization in the  $(\varphi)^n$  model. *New developments in quantum field theory and statistical mechanics (Proc. Cargèse Summer Inst., Cargèse, 1976), pp. 67-77, NATO Adv. Study Inst. Ser., Ser. B: Physics*, 26, Plenum, New York, 1977. (Jean-Pierre Eckmann) 80f:81074 81E10  
See also Israel, Robert B., 80i:82002
- Wigner, David (with Raymond, Frank) Constructions of aspherical manifolds. *Geometric applications of homology theory (Proc. Conf., Evanston, Ill., 1977), I, pp. 408-422, Lecture Notes in Math.*, 657, Springer, Berlin, 1978. (Herbert Abels) 80d:57003 57M05 (55P40, 57S30)  
(with Duflo, Michel) Sur la résolubilité des équations différentielles invariées sur un groupe de Lie. *Séminaire Goulaouic-Schwartz (1977/1978), Exp. No. 9, 7 pp., École Polytech., Palaiseau, 1978. (Editors) 80a:22012 22E30*  
(with Guichardet, A.) Sur la cohomologie réelle des groupes de Lie simples réels. (English summary) *Ann. Sci. École Norm. Sup. (4)* 11 (1978), no. 2, 277-292. (W. T. van Est) 80c:22023a 22E99  
(with Duflo, Michel) Convexité pour les opérateurs différentiels invariants sur les groupes de Lie. *Math. Z.* 167 (1979), no. 1, 61-80. (S. G. Gindikin) 80c:22015 22E30  
See also Dupont, J. L.; et al., 80g:22023b
- Wintz, V. (with Arnold, Ludwig) On the stability and growth of real noise parameter-excited linear systems. *Measure theory applications to stochastic analysis (Proc. Conf., Res. Inst. Math., Oberwolfach, 1977), pp. 211-227, Lecture Notes in Math.*, 695, Springer, Berlin, 1978. (N. U. Ahmed) 80b:60079 60H10 (93D05)
- Wils-Nielsen, A. Steady states and stability properties of a low-order barotropic system with forcing and dissipation. (Russian summary) *Telus* 31 (1979), no. 5, 375-386. (Erland Källén) 80c:86011 86A35
- Wilsa, Paul J. (with Lerche, I.) Self-similar solutions and their stability for the flow of relativistic fluids through channels. *Astrophys. and Space Sci.* 68 (1980), no. 2, 475-485. (Authors' summary) 80m:76009 76Y05 (83A05)
- Wijngaard, J. Existence of average optimal strategies in Markovian decision problems with strictly unbounded costs. *Dynamic programming and its applications (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977), pp. 369-386, Academic Press, New York, 1978. (É. I. Kistauri) 80i:90099 90C40*  
(with van Winkel, E. G. F.) Average costs in a continuous review  $(s, S)$  inventory system with exponentially distributed lead time. *Oper. Res.* 27 (1979), no. 2, 397-401. (Steven Nahmias) 80c:90038 90B05
- van Wijngaarden, A. Thinking on two levels. *Proceedings, Bicentennial Congress Wiskundig Genootschap (Vrije Univ., Amsterdam, 1978), Part II, pp. 417-428, Math. Centre Tracts*, 101, Math. Centrum, Amsterdam, 1979. (From the introduction) 80b:68068 68F05 (68C05)  
Thinking on two levels. 14th Dutch Mathematical Congress (Vrije Univ., Amsterdam, 1978). *Nieuw Arch. Wisk. (3)* 27 (1979), no. 1, 104-115. (Editors) 80f:68091 68F05 (68B05)
- Wijman, Robert A. (with Lai, Tze Leung) First exit time of a random walk from the bounds  $f(n) \pm cg(n)$ , with applications. *Ann. Probab.* 7 (1979), no. 4, 672-692. (M. B. Woodroffe) 80j:60066 60G40 (60J15, 62F05, 62L10)  
Constructing all smallest simultaneous confidence sets in a given class, with applications to MANOVA. *Ann. Statist.* 7 (1979), no. 5, 1003-1018. (C. R. Rao) 80c:62023 62F25 (62J15)
- Wilcox, Calvin H. Sonar echo analysis. *Analyse et contrôle de systèmes (Papers, IRIA Sem., Rocquencourt, 1977), pp. 173-207, IRIA, Rocquencourt, 1977. (Alan Jeffrey) 80d:76082 76Q05 (35P99)*  
Asymptotic wave functions and energy distributions in strongly propagative anisotropic media. *J. Math. Pures Appl. (9)* 57 (1978), no. 3, 275-321. (James S. Howland) 80j:35082 35P25 (35L40, 73D25)  
(with Guillot, Jean-Claude) Steady-state wave propagation in simple and compound acoustic waveguides. *Math. Z.* 160 (1978), no. 1, 89-102. (Charles I. Goldstein) 80c:35023 35J05 (35P25, 78A50)  
(with Guillot, Jean-Claude) Spectral analysis of the Epstein operator. *Proc. Roy. Soc. Edinburgh Sect. A* 80 (1978), no. 1-2, 85-98. (B. P. Panejah) 80i:35137 35P05  
Uniqueness theorems for displacement fields with locally finite energy in linear elastostatics. *J. Elasticity* 9 (1979), no. 3, 221-243. (Author's summary) 80m:73008 73C15
- Wilcox, Howard (with Myers, David L.) ★An introduction to Lebesgue integration and Fourier series. *Applied Mathematics Series—Mathematics for Engineering and Science. Robert E. Krieger Publishing Co., Huntington, N.Y., 1978. vii + 159 pp. ISBN 0-88275-614-1 (R. G. Bartle) 80c:28001 28-01 (42-01)*
- Wilcox, Rand R. Some comments on selecting the best of several binomial populations or the bivariate normal population having the largest correlation coefficient. *Psychometrika* 43 (1978), no. 1, 127-128. (I. D. Dhariyal) 80c:62019 62F07  
Comparing examinees to a control. *Psychometrika* 44 (1979), no. 1, 55-68. (Yung L. Tong) 80j:62027 62F07 (62P15)  
A lower bound to the probability of choosing the optimal passing score for a mastery test when there is an external criterion. *Psychometrika* 44 (1979), no. 2, 245-249. (Author's summary) 80c:62109 62P15
- Wilczyńska, Urszula Approximate continuity of functions of two variables. *Fund. Math.* 104 (1979), no. 2, 97-109. (A. M. Bruckner) 80j:26008 26B05 (26B40)
- Wilczyński, Władysław Topologies and classes of continuous real functions of a real variable. *Rend. Circ. Mat. Palermo (2)* 26 (1977), no. 1-3, 113-116 (1978). (P. C. Bhakta) 80c:26002 26A03  
(with Koszela, B.; Świątkowski, T.) Classes of continuous real functions. *Real Anal. Exchange* 4 (1978/79), no. 2, 139-157. (F. Brooks) 80g:54018 54C30 (26A15)  
(with Aversa, V.) A condition for differentiability with respect to a continuous function. (Italian. English summary) *Boll. Un. Mat. Ital. A (5)* 16 (1979), no. 3, 560-567. (B. Bongiorno) 80c:26005 26A24
- Wilde, Douglass J. ★Globally optimal design. *Wiley-Interscience (John Wiley & Sons), New York, 1978. xii + 288 pp. ISBN 0-471-03898-9 (Vadim Komkov) 80d:73002 73-01 (65K05)*  
(with Lidor, G.) Transcendental geometric programs. *J. Optim. Theory Appl.* 26 (1978), no. 1, 77-96. (Authors' summary) 80f:90106 90C25 (90C30)  
(with Mancini, Louis J.) Signomial dual Kuhn-Tucker intervals. *J. Optim. Theory Appl.* 28 (1979), no. 1, 11-27. (T. R. Jefferson) 80g:90095 90C25 (65G10)
- Wilde, Ivan F. (with Driessler, Wulf) Stochastic independence in noncommutative probability theory. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 1, 103-114. (S. Gudder) 80c:46109 46L50 (81C20)
- Wilde, Louis L. (with Schwartz, Alan) Equilibrium comparison shopping. *Rev. Econom. Stud.* 46 (1979), no. 3, 543-553. (G. Chichilnisky) 80i:90037 90A14
- Wildenhain, Günther (with Mumm, Harald) Zur Darstellung der Lösung allgemeiner elliptischer Randwertprobleme. *Rostock. Math. Kolloq. No. 8* (1978), 31-46. (G. Albus) 80b:35054 35J40  
(with Clasen, Ute) Approximation durch biharmonische Potentiale. *Rostock. Math. Kolloq. No. 8* (1978), 47-55. (S. Dümmel) 80b:31007 31B30 (35J40)
- Wilder, R. L. Evolution of the topological concept of "connected". *Amer. Math. Monthly* 85 (1978), no. 9, 720-726. (John G. Hocking) 80f:01019a 01A60 (54-03, 54D05)  
See also Jones, F. Burton, 80f:01019b; Raymond, Frank, 80b:01023 and Whyburn, Lucille, 80c:01050
- Wiles, A. (with Coates, J.) On  $p$ -adic  $L$ -functions and elliptic units. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 1, 1-25. (Lawrence Washington) 80a:12007 12A35 (12A65)
- Wilets, L. (with Kirschbaum, C. L.) Classical many-body model for atomic collisions incorporating the Heisenberg and Pauli principles. *Phys. Rev. A* (3) 21 (1980), no. 3,

- 834-841. (Authors' summary) **80m:81110** 81G45 (81H05)
- Witt, Herbert S.** (with Nijenhuis, Albert) ★Combinatorial algorithms. For computers and calculators. Second edition. Computer Science and Applied Mathematics. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1978. xv+302 pp. ISBN 0-12-519260-6 (Editors) **80m:68076** 68E99 (05-04, 05Axx)
- ★Mathematics for the physical sciences. Reprinting of the 1962 original. Dover Books in Advanced Mathematics. Dover Publications, Inc., New York, 1978. xii+284 pp. ISBN 0-486-63635-6 (F. J. Murray) **80m:80004** 00A06
- (with Greene, Curtis; Nijenhuis, Albert) A probabilistic proof of a formula for the number of Young tableaux of a given shape. *Adv. in Math.* **31** (1979), no. 1, 104-109. (J. S. Frame) **80m:05016** 05B30 (20C30)
- Wittmann, H. E.** Lagrangian and Hamiltonian formulations of compressible hydrodynamics. *Phys. Fluids* **22** (1979), no. 8, 1461-1464. (B. Vujanović) **80g:76034** 76N10 (49A10, 76B99)
- Wittmann, Horst E.** (with van der Werff, Terry J.) Steady state bifurcation analysis of reaction-diffusion equations—a critique. *Bull. Math. Biol.* **40** (1978), no. 6, 865-872. (Authors' summary) **80m:92052** 92A40 (35K99)
- Wittmann, Reinhard** (with Giegerich, Robert) Counter-one-pass features in one-pass compilation: a formalization using attribute grammars. *Inform. Process. Lett.* **7** (1978), no. 6, 279-284. (Authors' introduction) **80m:68010** 68B05
- Wittmann, Don R.** Degree two Gaussian cubatures in the plane. *J. Comput. Appl. Math.* **4** (1978), no. 3, 229-232. (Author's summary) **80c:65067** 65D32
- Wilk, S. F. J.** (with Osborn, T. A.) The form factor approach to  $N$ -body scattering theory. *Ann. Physics* **114** (1978), no. 1-2, 410-430. (P. Achuthan) **80c:81102** 81F10
- Wille, Frank** (with Oelschlägel, Dieter) Konvexitätsuntersuchungen im Zusammenhang mit einem Diskretisierungsverfahren für Probleme der optimalen Steuerung. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* **21** (1979), no. 1, 82-87. (Authors' introduction) **80m:93039** 93C55
- Wilkner, John B.** (with Butten, Lilian) Cutting exponents for polyhedral approximations to convex bodies. *Geom. Dedicata* **7** (1978), no. 4, 415-426. (Z. Nádénik) **80m:52005** 52A20 (52A10)
- Space curves that point almost everywhere. *Trans. Amer. Math. Soc.* **250** (1979), 263-274. (P. Scherk) **80m:53001** 53A04
- Wilkinson, Ralph** (with Gregory, John) New numerical methods for symmetric differential equations, quadratic extremal problems, and banded matrices; the second order problem. *Trans. Illinois State Acad. Sci.* **71** (1978), no. 2, 222-235. (Authors' summary) **80m:65069** 65L99
- Wilkes, J. M.** (with Zund, J. D.) A note on the Ruse-Lanczos identity. *Tensor (N.S.)* **32** (1978), no. 3, 355-356. (J. K. Shahin) **80m:53024** 53B20
- Wilkes, N. S.** Continuous dependence and instability in linear viscoelasticity. (French summary) *J. Mécanique* **17** (1978), no. 5, 717-726. (Author's summary) **80m:73038** 73F99 (45K05)
- Wilkinson, David** (with Bais, F. Alexander) Exact  $SU(N)$  monopole solutions with spherical symmetry. *Phys. Rev. D* (3) **19** (1979), no. 8, 2410-2415. (Authors' summary) **80f:81075** 81E10
- (with Thacker, H. B.) Inverse scattering transform as an operator method in quantum field theory. *Phys. Rev. D* (3) **19** (1979), no. 12, 3660-3665. (Brian DeFazio) **80i:81054** 81F99 (47A40)
- Wilkinson, Denys** See *Progress in particle and nuclear physics*, **80m:81107**
- Wilkinson, J. H.** Linear differential equations and Kronecker's canonical form. *Recent advances in numerical analysis (Proc. Sympos., Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1978)*, pp. 231-265. *Publ. Math. Res. Center Univ. Wisconsin, 41*, Academic Press, New York, 1978. (Eckehard Wagenführ) **80c:65077** 65L05
- (with Cline, A. K.; Moler, Cleve B.; Stewart, G. W.) An estimate for the condition number of a matrix. *SIAM J. Numer. Anal.* **16** (1979), no. 2, 368-375. (R. P. Tewarson) **80g:65048** 65F35 (65F05)
- (with Peters, G.) Inverse iteration, ill-conditioned equations and Newton's method. *SIAM Rec.* **21** (1979), no. 3, 339-360. (Authors' summary) **80f:65040** 65F10 (65F15)
- Wilks, Graham** On the evaluation of eigenvalues associated with exponential decay. *J. Math. Anal. Appl.* **71** (1979), no. 1, 263-270. (Author's introduction) **80m:65067** 65L15
- Will, Dieter** (with Gimadiev, Asgat) Untersuchungen zur instationären Gas- und Flüssigkeitsströmung durch Drosselungen. *Wiss. Z. Tech. Univ. Dresden* **28** (1979), no. 1, 187-191. (Authors' summary) **80m:76034** 76N15 (76Q05)
- Williays, D.** (with Malvache, N.) Contribution of the fuzzy set theory to man-machine system. *Advances in fuzzy set theory and applications*, pp. 481-499, North-Holland, Amsterdam, 1979. (Authors' summary) **80m:94123** 94D05 (03E72, 68A05)
- Willard, S.** (with Warrack, B.) Domains of first countability. (Serbo-Croatian summary) *Glas. Mat. Ser. III* **14**(34) (1979), no. 1, 129-136. (R. Engelking) **80g:54014** 54C10 (54B15, 54E65)
- Williamson, Yngve** Two clarifications on the likelihood surface in functional models. *J. Multivariate Anal.* **9** (1979), no. 1, 138-149. (C. A. Robertson) **80j:62033** 62F10
- Wille, Detlef** Enumeration of self-complementary structures. *J. Combin. Theory Ser. B* **25** (1978), no. 2, 143-150. (N. G. de Bruijn) **80c:05070** 05C30 (05A15)
- Wille, Rudolf** (with Mitschke, A.) Über freie modulare Verbände  $FM(\mathfrak{S}, M)$ . *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 219-233, Heyn, Klagenfurt, 1979. (Ralph Freese) **80g:06010** 06C05
- (with Rival, Ivan) Lattices freely generated by partially ordered sets: which can be "drawn"? *J. Reine Angew. Math.* **310** (1979), 56-80. (R. P. Dilworth) **80j:06005** 06A10 (06B25)
- (with Duffus, Dwight) A theorem on partially ordered sets of order-preserving mappings. *Proc. Amer. Math. Soc.* **76** (1979), no. 1, 14-16. (William T. Trotter, Jr.) **80i:06002** 06A10
- Williams, J. C.** (with Fuhrmann, Paul A.) Factorization indices at infinity for rational matrix functions. *Integral Equations Operator Theory* **2** (1979), no. 3, 287-301. (Bradley W. Dickinson) **80m:93019** 93B07 (47A53, 93C05)
- Williams, J. L.** Design of state observers for linear discrete-time systems. *Internat. J. Systems Sci.* **11** (1980), no. 2, 139-147. (Author's summary) **80m:93054** 93C55
- Williams, Wolfgang** On Brauer's induction theorem. *Proceedings of the Symposium on Modular Representations of Finite Groups (Math. Inst., Univ. Aarhus, Aarhus, 1978)*, pp. 46-47, Various Publ. Ser., 29, Mat. Inst., Aarhus Univ., Aarhus, 1978. (Toshihiko Yamada) **80j:20012a** 20C20
- Über die Existenz von Blöcken. *J. Algebra* **53** (1978), no. 2, 402-409. (J. F. Humphreys) **80c:20011** 20C15
- (with Fritz, Franz-Josef; Huppert, Bertram) ★Stochastische Matrizen. Hochschultext. Springer-Verlag, Berlin-New York, 1979. vii+192 pp. ISBN 3-540-09126-2 (E. Seneta) **80g:60066** 60J10 (15A51, 60J20)
- A note on Brauer's induction theorem. *J. Algebra* **58** (1979), no. 2, 523-526. (Toshihiko Yamada) **80j:20012b** 20C20
- William of Moerbeke** See Claggett, Marshall, **80g:01005** and Claggett, Marshall, **80g:01006**
- Williams, Bruce** Applications of unstable normal invariants. I. *Compositio Math.* **38** (1979), no. 1, 55-66. (P. J. Kahn) **80m:57044** 57R65 (57P10, 57R67)
- Nash-Williams, C. St. J. A.** See Nash-Williams, C. St. J. A.
- Williams, D. A.** Correction to: "Improved likelihood ratio tests for complete contingency tables" (Biometrika **63** (1976), no. 1, 33-37). *Biometrika* **65** (1978), no. 3, 677. (Editor) **80b:62068** 62H15
- Williams, David** The  $Q$ -matrix problem. III. The Lévy-kernel problem for chains. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 310-331, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Martin Jacobsen) **80c:60086** 60J27
- (with Foster, Dorothy) The Hawkins sieve and Brownian motion. *Compositio Math.* **37** (1978), no. 3, 277-289. (D. A. Darling) **80m:60103** 60J65 (10H30)
- ★Diffusions, Markov processes, and martingales. Vol. 1. Foundations. Probability and Mathematical Statistics. John Wiley & Sons, Ltd., Chichester, 1979. xiii+237 pp. ISBN 0-471-99705-6 (Michael Sharpe) **80i:60100** 60J25
- Williams, David N.** (with Rauch, Jeffrey) Euclidean nonlinear classical field equations with unique vacuum. *Comm. Math. Phys.* **63** (1978), no. 1, 13-29. (O. John) **80b:81053** 81C99 (35J60)
- Instability of the existence of nonabelian vector potentials. *Phys. Lett. B* **76** (1978), no. 5, 599-601. (L. O'Raifeartaigh) **80m:81053** 81E10 (22E70, 53C05, 53C10)
- (with Rauch, Jeffrey) Topics on Euclidean classical field equations with unique vacua. *Feynman path integrals (Proc. Internat. Colloq., Marseille, 1978)*, pp. 189-202, *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (Ivan F. Wilde) **80i:81134** 81E99 (35J60)
- New mathematical proof of the uncertainty relation. *Amer. J. Phys.* **47** (1979), no. 7, 606-607. (A. Terry Amos) **80d:81059** 81D99
- Williams, E. J.** A simple derivation of the distribution of the multiple correlation coefficient. *Comm. Statist. A—Theory Methods* **7** (1978), no. 15, 1413-1420. (Minoru Siotani) **80c:62041** 62H20 (62H10)
- Williams, F. A.** (with Liñán, A.) Ignition of a reactive solid exposed to a step in surface temperature. *SIAM J. Appl. Math.* **36** (1979), no. 3, 587-603. (Authors' summary) **80b:80007** 80A25
- Williams, Floyd L.** (with Fischer, Hans R.) Complex-foliated structures. I. Cohomology of the Dolbeault-Kostant complexes. *Trans. Amer. Math. Soc.* **252** (1979), 163-195. (R. O. Wells, Jr.) **80g:58006** 58A30 (32L10, 58F06, 81C40)
- Williams, Graham H.** Surfaces of prescribed mean curvature with inequalities on the boundary. *Math. Z.* **164** (1978), no. 1, 31-51. (E. Giusti) **80d:53006** 53A10 (35J99)
- The equivalence of some variational problems for surfaces of prescribed mean curvature. *Bull. Austral. Math. Soc.* **20** (1979), no. 1, 87-104. (Ettore Santi) **80j:49039** 49F10 (35J65)
- Williams, H. C.** Primality testing on a computer. *Ars Combin.* **5** (1978), 127-185. (M. C. Wunderlich) **80d:10002** 10-04 (10A25)
- Some properties of a special set of recurring sequences. *Pacific J. Math.* **77** (1978), no. 1, 273-285. (P. J. Weinberger) **80m:10011** 10A25 (10-04)
- (with Schmid, B.) Some remarks concerning the M.I.T. public-key cryptosystem. *BIT* **19** (1979), no. 4, 525-538. (Authors' summary) **80m:94072** 94B99
- (with Buhr, P. A.) Calculation of the regulator of  $Q(\sqrt{D})$  by use of the nearest integer continued fraction algorithm. *Math. Comp.* **33** (1979), no. 145, 369-381. (D. H. Lehmer) **80c:12003** 12A25 (12A45)
- (with Diaz y Diaz, Francisco; Shanks, Daniel) Quadratic fields with 3-rank equal to 4. *Math. Comp.* **33** (1979), no. 146, 836-840. (T. Metsänkylä) **80i:12004** 12A25 (12A50)
- (with Shanks, Daniel) A note on class-number one in pure cubic fields. *Math. Comp.* **33** (1979), no. 148, 1317-1320. (T. Metsänkylä) **80g:12002** 12A30 (12-04, 12A50)
- (with Seah, E.) Some primes of the form  $(a^n - 1)/(a - 1)$ . *Math. Comp.* **33** (1979), no. 148, 1337-1342. (H. J. Godwin) **80g:10014** 10A25
- See also *Proceedings: Manitoba Conference on Numerical Mathematics and Computing*, **80g:65005**
- Williams, J. P.** (with Anderson, Joel; Bunce, John W.; Deddens, James A.)  $C^*$ -algebras and derivation ranges. *Acta Sci. Math. (Szeged)* **40** (1978), no. 3-4, 211-227. (Warren R. Wogen) **80i:47047** 47B47 (46L05, 47C10)
- Williams, J. S.** See Williams, James S.
- Williams, Jack** Characterization and computation of rational Chebyshev approximations in the complex plane. *SIAM J. Numer. Anal.* **16** (1979), no. 5, 819-827. (Gerhard Mezt) **80b:65007** 65D15 (41A20)
- Williams, James C.** On the nature of unsteady three-dimensional laminar boundary-layer separation. *J. Fluid Mech.* **88** (1978), no. 2, 241-258. (From the text) **80d:76027** 76D15
- Williams, James S.** Efficient analysis of Weibull survival data from experiments on heterogeneous patient populations. (French summary) *Biometrics* **34** (1978), no. 2, 209-222. (L. J. Wei) **80j:62090** 62N05 (62L10)
- Williams, Joseph T.** (with Dothan, Uri) Valuation of assets on a Markov state space. *Econom. Lett.* **1** (1978), no. 2, 163-166. (Authors' summary) **80b:90006** 90A05
- Williams, Joyce W.** Linear integral equations with singular normal kernels of class 1. *J. Math. Anal. Appl.* **68** (1979), no. 2, 567-579. (N. K. Karapetjan) **80f:45011** 45E10
- Williams, Julian S.** Trace ideals of relation modules of finite groups. *Math. Z.* **163** (1978), no. 3, 261-274. (K. W. Gruenberg) **80b:20004** 20C05 (16A18, 20C10, 20J06)
- Williams, Kenneth S.** (with Leonard, Philip A.) Evaluation of certain Jacobsthal sums. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **15** (1978), no. 3, 717-723. (O. H. Körner) **80d:10058** 10G15



- Evaluation of character sums connected with elliptic curves. *Proc. Amer. Math. Soc.* 73 (1979), no. 3, 291-299. (R. A. Smith) **80b:10054** 10G15 (10D25)
- Williams, Lloyd K. Nonlinear differential equations and algebraic systems. *Internat. J. Math. Math. Sci.* 1 (1978), no. 3, 257-267. (A. F. Izé) **80a:34007** 34A25
- Williams, Lynn R. (with Leggett, Richard W.) Multiple positive fixed points of nonlinear operators on ordered Banach spaces. *Indiana Univ. Math. J.* 28 (1979), no. 4, 673-688. (Harald Mönch) **80i:47073** 47H07 (34B15, 47H10)
- (with Leggett, Richard W.) Multiple fixed point theorems for problems in chemical reactor theory. *J. Math. Anal. Appl.* 69 (1979), no. 1, 180-193. (N. U. Ahmed) **80i:47083** 47H10 (45G10, 80A20)
- Williams, M. E. W. Flamsteed's alleged measurement of annual parallax for the Pole Star. *J. Hist. Astronom.* 10 (1979), no. 2, 102-116. (V. E. Thoren) **80b:01008** 01A45
- Williams, M. H. Conditions for extended operator precedence parsing. *Comput. J.* 22 (1979), no. 2, 164-168. (Author's summary) **80f:68096** 68F25
- Williams, M. R. The statistical distribution of coagulating droplets. *J. Phys. A* 12 (1979), no. 7, 983-989. (Author's summary) **80c:86008** 86A35
- Williams, Michael (with Kriegsmann, Gregory A.) On the tracing of light rays through deformed glass rods with radially graded refractive indices. *SIAM J. Appl. Math.* 36 (1979), no. 2, 263-272. (Authors' summary) **80c:78003** 78A05 (53A10)
- Williams, P. K. See *Current trends in the theory of fields*, **80c:81002**
- Williams, Peter G. (with Cecchi, Tuncer; Keller, Herbert B.) Separating boundary-layer flow calculations. *J. Comput. Phys.* 31 (1979), no. 3, 363-378. (Marjorie McCracken) **80b:76028** 76N05 (65P05, 76D15)
- (with Cecchi, Tuncer; Stewartson, Keith) On the response of a stagnation boundary layer to a change in the external velocity. *SIAM J. Appl. Math.* 36 (1979), no. 2, 190-199. (R. K. Gupta) **80b:76022** 76N05
- Williams, R. E. Errata to: "A note on rings with a weak algorithm" (Bull. Amer. Math. Soc. 75 (1969), 959-961). *Bull. Amer. Math. Soc.* 84 (1978), no. 6, 1381. (Editors) **80c:16003** 16A06
- Williams, Richard K. How analytic functions preserve closeness. *Math. Mag.* 52 (1979), no. 2, 106-108. (J. D. Baum) **80b:54052** 54H20 (30C99, 30D45)
- Williams, Roger (with Karlin, Samuel; Carmeli, Dorit) Index measures for assessing the mode of inheritance of continuously distributed traits. I. Theory and justifications. *Theoret. Population Biol.* 16 (1979), no. 1, 81-106. (Authors' summary) **80g:92014** 92A10
- Wiles-Williams, Sheila See *Oates-Williams, Sheila*
- Williams, W. E. Note on a singular integral equation. *J. Inst. Math. Appl.* 22 (1978), no. 2, 211-214. (J. T. Oden) **80a:45010** 45E99
- Williams, W. O. Some simplified equations from the theory of mixtures. *Contemporary developments in continuum mechanics and partial differential equations (Proc. Internat. Sympos., Inst. Mat., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 604-612. North-Holland Math. Studies, 30, North-Holland, Amsterdam, 1978. (A. J. M. Spencer) **80k:76009** 76A99
- On stresses in mixtures. *Arch. Rational Mech. Anal.* 70 (1979), no. 3, 251-260. (Hilmi Demiryol) **80k:73011** 73B99 (80A15)
- (with Sampaio, R.) Thermodynamics of diffusing mixtures. (French summary) *J. Mécanique* 18 (1979), no. 1, 19-45. (Authors' summary) **80b:80015** 80A99 (35C99)
- Williamson, Alan On the conjugacy classes in an integral group ring. *Canad. Math. Bull.* 21 (1978), no. 4, 491-496. (Bhama Srinivasan) **80c:20005** 20C07 (16A27)
- Williamson, Darrell Nonlinear compensation of linear processes. *Automatica—J. IFAC* 15 (1979), no. 5, 601-608. (Author's summary) **80b:93049** 93D10
- Williamson, John S5 without modal axioms. *Notre Dame J. Formal Logic* 20 (1979), no. 3, 593-594. (N. C. A. da Costa) **80i:03034** 03B45
- Williamson, R. E. (with Petschek, A. G.; Krauser, W. J.; White, P. C.) Monte Carlo functional expansion calculation of free molecular flow. *Math. Comp.* 33 (1979), no. 146, 765-777. (Authors' summary) **80d:82071** 82A70 (65C05)
- Williamson, T. E., Jr. Geometric estimation of the solution to  $x + Tx = 0$  for unbounded densely defined monotone operator  $T$  in Hilbert space. *Proc. Amer. Math. Soc.* 74 (1979), no. 2, 278-284. (Author's summary) **80i:47088** 47H15 (65J15)
- Willford, W. O. (with Bingham, S. F.) Bayesian estimation of the parameters in two modified Poisson distributions. *Comm. Statist. A—Theory Methods* 8 (1979), no. 13, 1315-1326. (G. S. Lingappaiah) **80b:62037** 62F15
- Willig, Robert D. (with Klein, Roger W.; Rafsky, Lawrence C.; Sibley, David S.) Decisions with estimation uncertainty. *Econometrica* 46 (1978), no. 6, 1363-1387. (Authors' summary) **80b:90010** 90A10 (62C99, 90A05)
- Willis, J. R. (with Bedding, R. J.) The elastodynamic Green's tensor for a half-space with an embedded anisotropic layer. *Wave Motion* 2 (1980), no. 1, 51-62. (Authors' summary) **80m:73027** 73D99 (73C99, 86A15)
- Willmore, T. J. (with Vanhecke, Lieven) Umbilical hypersurfaces of Riemannian, Kähler and nearly Kähler manifolds. (Arabic summary) *J. Univ. Kuwait Sci.* 4 (1977), 1-7. (K. Yano) **80c:53069** 53C40
- (with Vanhecke, Lieven) Jacobi fields and geodesic spheres. *Proc. Roy. Soc. Edinburgh Sect. A* 82 (1978/79), no. 3-4, 233-240. (F. Brickell) **80f:53019** 53B20 (53B35)
- Willmot, Richard Countable yet nowhere first countable. *Math. Mag.* 52 (1979), no. 1, 26-27. (P. W. Harley, III) **80c:54006** 54A25 (54G20)
- Willner, B. E. (with Miranker, W. L.) Global analysis of magnetic domains. *Quart. Appl. Math.* 37 (1979/80), no. 3, 219-238. (Rainer Picard) **80m:82021** 82A25 (35B32, 78A25)
- Willoughby, R. A. (with Micchelli, Charles A.) On functions which preserve the class of Sietlijes matrices. *Linear Algebra Appl.* 23 (1979), 141-156. (Donald Kershaw) **80b:15022** 15A30
- Wills, Jörg M. Gitterzahlen und innere Volumina. *Comment. Math. Helv.* 53 (1978), no. 4, 508-524. (J. Bokowski) **80b:52010** 52A20 (10E05)
- Berandete 2-Mannigfaltigkeiten aus zwei ebenen Polygonen. *Elem. Math.* 34 (1979), no. 2, 37-39. (H. B. Griffiths) **80i:57007** 57N05
- Witky, Alan S. (with Marcus, Steven I.; Hsu, Kai) The use of harmonic analysis in suboptimal estimator design. *IEEE Trans. Automat. Control* 23 (1978), no. 5, 911-916. (W. A. Gardner) **80a:93154** 93E10
- (with Mier Muth, Alberto M.) A sequential method for spline approximation with variable knots. *Internat. J. Systems Sci.* 9 (1978), no. 9, 1055-1067. (Authors' summary) **80c:65033** 65D10 (65D07, 94A05)
- Wilson, Alan N., Jr. Computation of the periods of forced overflow oscillations in digital filters. *VII. Internationale Konferenz über nichtlineare Schwingungen (Berlin, 1975), Band II*, 2, pp. 513-527. *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1977, 6. Akademie-Verlag, Berlin, 1978. (Dimitri Kazakos) **80i:93077** 93E11
- Wilson, Stephen J. On convergence of configurations. *Discrete Math.* 23 (1978), no. 3, 279-300. (W. Wehler) **80g:60074** 68D20 (52A25)
- Wilmanski, K. Localization problem of nonlocal continuum theories. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* 31 (1979), no. 1, 77-89. (R. R. Huilgol) **80b:73006** 73B05 (06E99)
- Wilmes, G. (with Nessel, R. J.) Nikol'skii-type inequalities in connection with regular spectral measures. Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 1-2, 169-182. (Anthony Holland) **80f:41009** 41A17 (41A65)
- Wilmessier, James M. (with Wright, F. T.) The almost sure stability of quadratic forms. *Ann. Probab.* 7 (1979), no. 4, 738-743. (R. J. Tomkins) **80f:60032** 60F15
- Wilson, A. G. ★Энтропийные методы моделирования сложных систем. (Russian) [Entropy methods in modelling of complex systems] Translated from the English [Entropy in urban and regional modelling] by Ju. A. Dubov. Edited by Ju. S. Popkov. With an appendix by Š. S. Imel'baev and B. L. Šmul'jan. Теория и Методы Системного Анализа. [Series in theory and methods of systems analysis] "Nauka", Moscow, 1978. 247 pp. (Vadim Komkov) **80d:90030** 90A99 (92A20, 93A99)
- Wilson, D. A. (with Misra, R. N.) Optimal reduction of multivariable systems. *Internat. J. Control* 29 (1979), no. 2, 267-278. (Authors' summary) **80c:93017** 93A15
- Wilson, F. J. Ideal inversion formulae for the Fourier transform. *SIAM J. Math. Anal.* 10 (1979), no. 1, 80-85. (B. L. Gupta) **80c:42005** 42A38
- Wilson, F. Wesley, Jr. A reformulation of Coleman's conjecture concerning the local conjugacy of topologically hyperbolic singular points. *The structure of attractors in dynamical systems (Proc. Conf., North Dakota State Univ., Fargo, N.D., 1977)*, pp. 245-252. *Lecture Notes in Math.*, 668, Springer, Berlin, 1978. (Charles C. Conley) **80c:58034** 58F14 (34C35)
- Wilson, G. Tunncliffe A convergence theorem for spectral factorization. *J. Multivariate Anal.* 8 (1978), no. 2, 222-232. (H. Salehi) **80c:60054** 60G25
- Some efficient computational procedures for high order ARMA models. *J. Statist. Comput. Simulation* 8 (1978/79), no. 3-4, 301-309. (Author's summary) **80f:62080** 62M10
- Wilson, George Commuting flows and conservation laws for Lax equations. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 1, 131-143. (Alexander A. Pankov) **80c:58059** 58F07 (35Q20, 49C10)
- Wilson, H. L. (with Scott, W. H.; Pomraning, G. C.) Neutron transport in moving media. *SIAM J. Appl. Math.* 36 (1979), no. 2, 230-262. (A. Bellini-Morante) **80c:82052** 82A75 (45K05)
- Wilson, I. D. Foundations of hierarchical control. *Internat. J. Control* 29 (1979), no. 6, 893-933. (Marwan Simaan) **80c:93016a** 93A13 (93A15)
- Three applications of decomposition method for designing hierarchical control systems. *Internat. J. Control* 29 (1979), no. 6, 935-947. (Marwan Simaan) **80c:93016b** 93A13 (93A15)
- Wilson, J. C. A note on the leap frog schemes in any number of space variables. *J. Comput. Phys.* 28 (1978), no. 3, 433-436. **80c:65108** 65N05
- Differentials of the 2nd kind on a product surface. *Internat. J. Math. Math. Sci.* 2 (1979), no. 4, 615-626. (Peter Brückmann) **80m:14005** 14C30 (32J25)
- Wilson, James (with Askey, Richard) A set of orthogonal polynomials that generalize the Racah coefficients or 6-j symbols. *SIAM J. Math. Anal.* 10 (1979), no. 5, 1008-1016. (James M. Horner) **80k:33012** 33A65 (81C40)
- Wilson, John S. (with Wiegold, James) Growth sequences of finitely generated groups. *Arch. Math. (Basel)* 30 (1978), no. 4, 337-343. (Benjamin Fine) **80b:20038** 20F05
- (with Jeanes, Susan C.) On finitely generated groups with many profinite-closed subgroups. *Arch. Math. (Basel)* 31 (1978/79), no. 2, 120-122. (D. J. S. Robinson) **80b:20038** 20E25 (20E18)
- Locally nilpotent CZ-groups are hypercentral. *J. London Math. Soc.* (2) 19 (1979), no. 1, 62-64. (I. Gy. Maurer) **80b:20047** 20F14
- Groups with many characteristically simple subgroups. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 2, 193-197. (Seymour Bachmuth) **80c:20024** 20E07
- (with Bryant, Roger M.) On locally finite CZ-groups. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 119, 265-270. (B. A. F. Wehrfritz) **80c:20030** 20E25 (20F19)
- Wilson, Kenneth G. Quantum chromodynamics on a lattice. *New developments in quantum field theory and statistical mechanics (Proc. Cargèse Summer Inst., Cargèse, 1976)*, pp. 143-172. NATO Adv. Study Inst. Ser. B: Physics, 26, Plenum, New York, 1977. (Johan G. Belinfante) **80a:81105** 81G20 (00A89)
- Wilson, L. O. (with Neumann, B. H.) Some sequences like Fibonacci's. *Fibonacci Quart.* 17 (1979), no. 1, 80-83. (Christian Radoux) **80b:10014** 10A35
- Wilson, P. M. H. The arithmetic plurigena of surfaces. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 1, 25-31. (Werner Kleinert) **80j:14026** 14J10
- Wilson, P. R. Wave propagation in a magnetic flux sheath in the presence of a velocity field. *Astrophys. J.* 230 (1979), no. 1, part 1, 194-203. (T. Tsumi) **80m:76082** 76W05
- Wilson, Richard G. (with Meyer, Paul R.) Cardinal functions on topological spaces satisfying order conditions. *Houston J. Math.* 5 (1979), no. 1, 107-118. (Stojan Nedev) **80c:54005** 54A25 (54F05)
- Wilson, Robert Lee (with Block, Richard E.) The restricted simple Lie algebras with a two-dimensional Cartan subalgebra. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 4, 682-684. (Helmut Strade) **80c:17006** 17B20 (17B05)
- Wilson, Robin J. Graph theory and chemistry. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II*, pp. 1147-1164. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (N. Trinajstić) **80d:92041** 92A40 (05C99)
- ★Introduction to graph theory. Second edition. *Academic Press (Harcourt Brace Jovanovich, Publishers)*, New York, 1979. viii + 163 pp. ISBN 0-12-157852-8 (Editors) **80c:05028** 05Cxx (05-01)
- Wilson, S. J. (with Wan, F. S.; Sen, K. K.) On the moment method for radiative transfer

- in spherical dust shells with a core. *Astrophys. and Space Sci.* **67** (1980), no. 1, 99–103. (Authors' summary) **80m:85002** 85A05
- Wilson, S. R. Examination of regression residuals. *Austral. J. Statist.* **21** (1979), no. 1, 18–29. (From the summary) **80b:62004** 62J05
- Wilson, Steve The smallest nontoroidal chiral maps. *J. Graph Theory* **2** (1978), no. 4, 315–318. (H. S. M. Coxeter) **80b:57007** 57N05 (05C10, 51M20)
- Wilson, W. B. (with Kerr, R. P.) Singularities in the Kerr-Schild metrics. *Gen. Relativity Gravitation* **10** (1979), no. 4, 273–281. (Garry Ludwig) **80g:83034** 83D05 (53B30)
- Wilson, W. Stephen (with Latch, Dana May; Thomason, Robert W.) Simplicial sets from categories. *Math. Z.* **164** (1979), no. 3, 195–214. (John Roy Dennett) **80e:55012** 55P10 (18G30, 55U05)
- Wilson, William H. Induced representations of Lie algebras. *Topics in algebra (Proc. 18th Summer Res. Inst., Austral. Math. Soc., Austral. Nat. Univ., Canberra, 1978)*, pp. 197–204. *Lecture Notes in Math.*, **697**, Springer, Berlin, 1978. (E. J. Taft) **80d:17008** 17B10
- On induced representations of Lie algebras, groups and coalgebras. *J. Algebra* **58** (1979), no. 1, 37–50. (E. J. Taft) **80b:18001** 18A40 (17B10)
- Wimmer, H. K. Exponential solutions of systems of linear differential equations of infinite order. *J. Differential Equations* **33** (1979), no. 1, 39–44. (N. P. Bhatia) **80k:34014** 34A35 (34G10)
- A Jordan factorization theorem for polynomial matrices. *Proc. Amer. Math. Soc.* **75** (1979), no. 2, 201–206. (Peter Lancaster) **80k:15032** 15A54 (15A23)
- Wimp, Jet Computing values of a function on  $[0, 1]$  from its moments. *Proc. Roy. Soc. Edinburgh Sect. A* **82** (1978/79), no. 3–4, 273–289. (H. E. Fettis) **80i:65020** 65D15 (44A10)
- (with Colton, David) Asymptotic behaviour of the fundamental solution to the equation of heat conduction in two temperatures. *J. Math. Anal. Appl.* **69** (1979), no. 2, 411–418. (Mario Primicerio) **80h:35079** 35K70 (35C20)
- (with Colton, David) The construction of solutions to the heat equation backward in time. *Math. Methods Appl. Sci.* **1** (1979), no. 1, 32–39. (I. P. Gavriljuk) **80k:35011** 35C15 (35K05)
- Winarsky, Norman Reducibility of principal series representations of  $p$ -adic Chevalley groups. *Amer. J. Math.* **100** (1978), no. 5, 941–956. (G. I. O'Flannkij) **80i:22018** 22E50
- Windecker, Richard C. Stochastic combinatorial networks. *Inform. Sci.* **16** (1978), no. 3, 185–234. (Luigi Fratta) **80i:94024** 94C10
- Stochastic multiple-valued combinatorial networks. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979)*, pp. 222–231. *IEEE, Long Beach, Calif.*, 1979. (Author's summary) **80m:94118** 94C99 (94C10)
- Windham, Michael P. Reliability for linear differential equations with noisy coefficients. *Comput. Math. Appl.* **5** (1979), no. 2, 141–144. (Author's summary) **80d:93008** 93E99
- Windisch, Günther Ein Vergleich von parameterfreien Iterationsverfahren zur Lösung parabolischer Differenzgleichungssysteme mit  $M$ -Matrizen. *Wiss. Z. Tech. Hochschule Karl-Marx-Stadt* **20** (1978), no. 6, 743–747. (Author's summary) **80e:65242** 65Q05
- Ein Beispiel zur physikalischen Interpretation der Potenzmethode für spezielle dreidiagonale Matrizen. *Beiträge Numer. Math.* **7** (1979), 159–162. (Author's summary) **80d:80014a** 80A20 (65N05)
- Zur numerischen Lösung eindimensionaler Wärmeleitprobleme mit nichtlinearen Randbedingungen durch Differenzmethoden. *Beiträge Numer. Math.* **7** (1979), 163–176. (Author's summary) **80d:80014b** 80A20 (65N05)
- Winholt, Emma M. (with Elder, Alexander S.) A method of evaluating Laplace transforms with series of complete or incomplete beta functions. *Transactions of the Twenty-Third Conference of Army Mathematicians (Langley Res. Center, Hampton, Va., 1977)*, pp. 423–446. *ARO Rep.* **78**, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1978. (Authors' summaries) **80i:65017** 65D20
- Winfrey, W. R. (with Shaw, J. K.) Positivity properties of linear differential operators. *J. Math. Anal. Appl.* **65** (1978), no. 1, 184–200. (B. Fisel) **80b:34008** 34A25 (26E05, 34B99)
- Wingberg, Kay Die Einseinheitsgruppe von  $p$ -Erweiterungen regulärer  $p$ -adischer Zahlkörper als Galoismodul. *J. Reine Angew. Math.* **305** (1979), 206–214. (Helmut Koch) **80d:12011** 12B20
- (with Jannsen, Uwe) Die  $p$ -Vervollständigung der multiplikativen Gruppe einer  $p$ -Erweiterung eines irregulären  $p$ -adischen Zahlkörpers. *J. Reine Angew. Math.* **307/308** (1979), 399–410. (H. Yokoi) **80i:12013** 12B20
- Winiarski, T. Remarks on a paper: "The regularization of the supremum of a family of plurisubharmonic functions" [Dokl. Akad. Nauk Tadżik. SSR **17** (1974), no. 9, 14–17; MR **56** #12312] by M. Širinbekov. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* **21** (1979), 133–134. (L. I. Ronkin) **80j:32031** 32F05
- van Winkel, E. G. F. (with Wijngaard, J.) Average costs in a continuous review  $(s, S)$  inventory system with exponentially distributed lead time. *Oper. Res.* **27** (1979), no. 2, 397–401. (Steven Nahmias) **80e:90038** 90B05
- Winkelbauer, Karel Nonsmooth channels with additive random noise. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 365–381. *Reidel, Dordrecht*, 1978. (Ezio M. Biglieri) **80i:94010** 94A24
- Information channels with memoryless components. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians (Tech. Univ. Prague, Prague, 1974)*, Vol. B, pp. 559–576. *Academia, Prague*, 1978. (Author's summary) **80d:94017** 94A40
- Winkler, Gerhard (with von Weizsäcker, Heinrich) Integral representation in the set of solutions of a generalized moment problem. *Math. Ann.* **246** (1979/80), no. 1, 23–32. (John E. Jayne) **80m:46012** 46A55
- Winkler, Jörg Zur Existenz ganzer Funktionen bei vorgegebener Menge der Nullstellen und Einstellen. *Math. Z.* **168** (1979), no. 1, 77–85. (L. R. Sons) **80k:30028** 30D35
- Winkler, K.-H. (with Różycka, M.; Tschamuter, W. M.; Yorke, H. W.) Fragmentation of interstellar clouds: three-dimensional hydrodynamical calculations. *Astronom. and Astrophys.* **83** (1980), no. 1–2, 118–128. (Authors' summary) **80m:85005** 85A20 (65N05)
- Winkler, Regine Ein Existenzbeweis für gewöhnliche Differentialgleichungen mit Methoden der Nonstandard-Analysis. *Wiss. Z. Tech. Hochschule Karl-Marx-Stadt* **20** (1978), no. 4, 527–529. (P. A. Loeb) **80c:34006** 34A99 (03H05)
- Winkler, Robert L. (with Franklin, Leroy A.) Warner's randomized response model: a Bayesian approach. *J. Amer. Statist. Assoc.* **74** (1979), no. 365, 207–214. (Mankal N. Murthy) **80k:62023** 62D05
- Winkler, Stanley (with Magnus, Wilhelm) ★ Hill's equation. Corrected reprint of the 1966 edition. *Dover Publications, Inc.*, New York, 1979. viii + 129 pp. ISBN 0-486-63738-7 (Editors) **80k:34001** 34-02
- Winkler, W. Stromaufwärtslaufende Wellen in überkritisch strömendem Wasser. (English summary) *Acta Mech.* **32** (1979), no. 1–3, 101–124. (Abha Ghoshal) **80g:76010** 76B15
- Winkler, Wolfgang (with Franz, J.) Sequential estimation problems for the exponential class of processes with independent increments. *Scand. J. Statist.* **6** (1979), no. 3, 129–139. (Ryszard Magiera) **80i:62070** 62L12 (62M05)
- Winkowski, Józef (with Ehrig, Hartmut; Kreowski, Hans-Jörg; Maggiolo-Schettini, Andrea; Rosen, Barry K.) Deriving structures from structures. *Mathematical foundations of computer science*, 1978 (Proc. Seventh Sympos., Zakopane, 1978), pp. 177–190. *Lecture Notes in Comput. Sci.*, **64**, Springer, Berlin, 1978. (V. Ju. Mel'us) **80d:68036** 68C01 (18B20)
- A formalism for describing non-sequential processes. *Fund. Inform.* **(4)** **2** (1978), no. 1, 129–139. (Václav Rajlich) **80d:68037** 68C01 (68F05)
- See also *Mathematical foundations of computer science*, **80b:68004**
- Winnicki, L. A. (with Zienkiewicz, O. C.) Plastic (or viscoplastic) behaviour of axisymmetric bodies subjected to nonsymmetric loading—semi-analytical finite element solution. *Internat. J. Numer. Methods Engrg.* **14** (1979), no. 9, 1399–1412. (Petr Procházka) **80k:73033** 73E99 (65N30)
- Winnik, Mitchell A. (with Fraser, Simon J.) Variance reduction for lattice walks grown with Markov chain sampling. *J. Chem. Phys.* **70** (1979), no. 1, 575–580. (Authors' summary) **80b:82057** 82A67 (65C05)
- Winograd, S. On the multiplicative complexity of the discrete Fourier transform. *Adv. in Math.* **32** (1979), no. 2, 83–117. (Author's summary) **80b:68080** 68C05 (68C25, 94A05)
- On multiplication in algebraic extension fields. *Theoret. Comput. Sci.* **8** (1979), no. 3, 359–377. (Author's summary) **80e:68081** 68C05 (12-04, 12A20, 12E10)
- Winston, Kenneth (with Johnson, Ellis L.; Newman, Donald J.) An inequality on binomial coefficients. Algorithmic aspects of combinatorics (Conf., Vancouver Island, B.C., 1976). *Ann. Discrete Math.* **2** (1978), 155–159. (Morton Abramson) **80d:05004** 05A10 (05C20, 05C65)
- Winston, Wayne Optimal assignment of customers in a two server congestion system with no waiting room. *Management Sci.* **24** (1977/78), no. 6, 702–705. (Shaler Sudham, Jr.) **80e:60114** 60K25 (90C40)
- (with Albright, S. Christian) A probabilistic model of winners' outs versus losers' outs rules in basketball. *Oper. Res.* **26** (1978), no. 6, 1010–1019. (M. Stoica) **80a:90181** 90D40 (90B99)
- Optimality of monotonic policies for multiple-server exponential queueing systems with state-dependent arrival rates. *Oper. Res.* **26** (1978), no. 6, 1089–1094. (Micha Yadin) **80e:60115** 60K25
- (with Albright, S. Christian) A birth-death model of advertising and pricing. *Adv. in Appl. Probab.* **11** (1979), no. 1, 134–152. (Author's review (W. W.)) **80d:90084** 90C50 (60J20, 90A05)
- (with Deshmukh, Sudhakar D.) Stochastic control of competition through prices. *Oper. Res.* **27** (1979), no. 3, 583–594. (J. A. Rickard) **80g:90003** 90A05 (90A12)
- (with Albright, S. Christian) Markov models of advertising and pricing decisions. *Oper. Res.* **27** (1979), no. 4, 668–681. (Santosh Kumar) **80h:90147** 90C39 (90A05)
- Wintenberg, Jean-Pierre (with Fontaine, Jean-Marc) Le "corps des normes" de certaines extensions algébriques de corps locaux. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 6, A367–A370. (Authors' summary) **80b:12015** 12B20
- (with Fontaine, Jean-Marc) Extensions algébriques et corps des normes des extensions APF des corps locaux. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 8, A441–A444. (Authors' summary) **80b:12014** 12B20
- Extensions de Lie et groupes d'automorphismes des corps locaux de caractéristique  $p$ . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 9, A477–A479. (Author's summary) **80b:12015** 12B20
- Winter, B. B. Rate of strong uniform consistency of nonparametric density estimators. *Studia Sci. Math. Hungar.* **11** (1976), no. 3–4, 283–295 (1978). (M. Bertrand-Retali) **80k:62060** 62G05
- (with Földes, A.; Rejtő, L.) Glivenko-Cantelli theorems for the product limit estimate. (Russian summary) *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* **7** (1978), no. 3, 213–225. (Z. W. Birnbaum) **80d:62034** 62G05 (60F15, 62E20)
- Convergence rate of perturbed empirical distribution functions. *J. Appl. Probab.* **16** (1979), no. 1, 163–173. (M. M. Siddiqui) **80d:60035** 60F10 (62E20, 62G05)
- van Winter, Claisine A weighted Hilbert space for multiparticle scattering. *J. Math. Anal. Appl.* **68** (1979), no. 1, 35–67. (Lawrence E. Thomas) **80g:81069** 81F20 (47A40)
- Winter, David J. Solvable subgroups and their Lie algebras in characteristic  $p$ . *Canad. J. Math.* **31** (1979), no. 2, 308–311. (Vinay V. Deodhar) **80j:17010** 17B45 (17B50, 20G15)
- A note on the conjugacy of Cartan subalgebras. *J. Austral. Math. Soc. Ser. A* **27** (1979), no. 2, 163–166. (James F. Hurley) **80i:17009** 17B40
- Triangular subalgebras of Lie  $p$ -algebras. *Pacific J. Math.* **81** (1979), no. 1, 273–281. (Joseph C. Ferrar) **80i:17014** 17B50
- von Winterfeldt, D. (with Höpfinger, E.) A dynamic model for setting railway noise standards. *Game theory and related topics (Proc. Sem., Bonn and Hagen, 1978)*, pp. 59–69. *North-Holland, Amsterdam*, 1979. (Authors' summary) **80m:90091** 90D40
- Winternitz, P. (with Burdet, G.; Patera, J.; Perrin, M.) Sous-algèbres de Lie de l'algèbre de Schrödinger. *Ann. Sci. Math. Québec* **2** (1978), no. 1, 81–108. (F. W. Lemire) **80b:17002** 17B05
- (with Patera, J.; Sharp, R. T.) Polynomial irreducible tensors for point groups. *J. Math. Phys.* **19** (1978), no. 11, 2362–2376. (M. K. F. Wong) **80d:22018** 22E70 (81C40)



- Wingen, Peter** On the total absolute curvature of knotted spheres. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* **26** (1978), no. 3, 249–253. (Wu-Hsiung Huang) **80a:53006** 53A07 (57R70)
- On the total curvature of surfaces in  $E^4$ . *Colloq. Math.* **39** (1978), no. 2, 289–296. (K. Radziszewski) **80f:53037** 53C45 (53C42, 57Q45)
- Über von höherer Ordnung reguläre Immersionen. *Math. Nachr.* **85** (1978), 177–184. (M. L. Gromov) **80c:53070** 53C40 (58D10)
- Sur l'inégalité de Chen-Willmore. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 21, A993–A995. (T. J. Willmore) **80a:53083** 53C42
- Wintner, Ragnar** Error estimates for a Galerkin approximation of a parabolic control problem. *Ann. Mat. Pura Appl.* (4) **117** (1978), 173–206. (Rémi Vaillancourt) **80a:49067** 49D15 (35K05, 65N30)
- Initial value methods for parabolic control problems. *Math. Comp.* **34** (1980), no. 149, 115–125. (William W. Hager) **80b:65060** 65K10 (49D05, 65Mxx)
- Wintner, Beaght** Sub-elliptic estimates for the oblique derivative problem. *Math. Scand.* **43** (1978/79), no. 1, 169–176. (A. I. Atanasov) **80f:35046** 35J25 (35H05)
- (with Aronsson, Gunnar) On an elliptic boundary value problem with mixed boundary conditions, arising in suspended sediment transport theory. *SIAM J. Math. Anal.* **9** (1978), no. 1, 142–150. (Authors' summary) **80f:76042** 76T05
- The oblique derivative problem. II. *Ark. Mat.* **17** (1979), no. 1, 107–122. (Maurizio Chicco) **80j:35029** 35J25
- Wintzen, W.** (with Becker, M.; Hauger, W.) Exact stability analysis of uniform cantilevered pipes conveying fluid or gas. (Polish and Russian summaries) *Arch. Mech.* (Arch. Mech. Stas.) **30** (1978), no. 6, 757–768. (Yi-Yuan Yu) **80g:73042** 73J10
- Witkowski, K.** On the necessity of  $S_4$ . *Notre Dame J. Formal Logic* **20** (1979), no. 3, 689–694. (David Makinson) **80a:03035** 03B45
- Witkin, Armand** Sur trois variantes de la théorie de Rayleigh de la diffraction d'une onde par une surface sinusoidale. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 3, A259–A262. (Authors' summary) **80f:78009** 78A45
- Wirsing, Martin** Kleine unentscheidbare Klassen der Prädikatenlogik mit Identität und Funktionszeichen. *Arch. Math. Logik Grundlag.* **19** (1978/79), no. 1–2, 97–109. (M. R. Krom) **80a:03054a** 03D35
- (with Broy, M.; Finance, Jean-Pierre; Quéré, Alain; Rémy, Jean-Luc) Methodical solution of the problem of ascending subsequences of maximum length within a given sequence. *Inform. Process. Lett.* **8** (1979), no. 5, 224–229. (From the introduction) **80c:68013** 68B05 (68E99)
- Small universal Post systems. *Z. Math. Logik Grundlag. Math.* **25** (1979), no. 6, 559–564. (D. Simovici) **80a:03075** 03D03
- Wirth, Michael C.** Symbolic vector and dyadic analysis. *SIAM J. Comput.* **8** (1979), no. 3, 306–319. (Authors' summary) **80c:68094** 68C20 (76A99)
- Witz, Hans Jochen** On iterative solution methods for systems of partial differential equations. *Numerical treatment of differential equations in applications* (Proc. Meeting, Math. Res. Center, Oberwolfach, 1977), pp. 151–163. *Lecture Notes in Math.*, 679, Springer, Berlin, 1978. (From the introduction) **80c:65186** 65M99
- See also **Witz, Hans Jochen** **80c:65002**
- Witbauer, Robert** Separable Moduln von Algebren über Ringen. *J. Reine Angew. Math.* **303/304** (1978), 221–230. (Birge Zimmermann-Huisgen) **80a:16014** 16A16 (17A99)
- $\alpha$ -sempiperfekte und  $\alpha$ -perfekte Moduln. *Math. Z.* **162** (1978), no. 2, 131–138. (T. S. Shores) **80j:16019** 16A51
- Erbliche Moduln und nichtassoziative Ringe. *Comm. Algebra* **7** (1979), no. 1, 47–77. (Aleksel Gainov) **80e:17003** 17A60
- Wischniewski, Manfred B.** Structure functors—representation and existence theorems. *Categorical topology* (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978), pp. 395–410. *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (Marta C. Bunge) **80m:18003** 18D99 (18A40)
- (with Tholen, Walter) Semitopological functors. II. External characterizations. *J. Pure Appl. Algebra* **15** (1979), no. 1, 75–92. (M. Hušek) **80a:18012b** 18D99 (18A40, 54B30)
- Wise, Gary L.** (with Marcus, Steven I.) Stochastic stability for a class of systems with multiplicative state noise. *IEEE Trans. Automat. Control* **24** (1979), no. 2, 333–335. (S. M. Hrisanov) **80i:93061** 93E15
- (with Devroye, Luc P.) On the recovery of discrete probability densities from imperfect measurements. *J. Franklin Inst.* **307** (1979), no. 1, 1–20. (Paul Deheuvels) **80c:62029** 62G05
- Wise, M. Norton** The mutual embrace of electricity and magnetism. *Science* **203** (1979), no. 4387, 1310–1318. (M. Kline) **80b:01013** 01A55 (78–03)
- Wimmer, David A.** (with Chattergy, R.) ★Introduction to nonlinear optimization: a problem solving approach. North-Holland Series in System Science and Engineering. North-Holland Publishing Co., New York, 1978. xii + 395 pp. ISBN 0-444-00234-0 (Stefan Tijan) **80b:90004** 90–02 (49–02)
- Wisniewski, John A.** (with Hanson, Richard J.) A mathematical programming updating method using modified Givens transformations and applied to LP problems. *Comm. ACM* **22** (1979), no. 4, 245–251. (Authors' summary) **80c:90096** 90C05 (65F35)
- Wisniewski, Kazimierz** A notion of the acceptance of infinite sequences by finite automata. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979), no. 3–4, 331–332. (Editors) **80c:68033** 68D05
- Wisniewski, Richard A.** (with Morris, S. Brent; Valliere, Arthur, III) Processes for random and sequential accessing in dynamic memories. *IEEE Trans. Comput.* **28** (1979), no. 3, 225–237. (K. H. V. Booth) **80c:68009** 68A05 (68H05)
- Wise, C.** Manifolds of equivalent partial integral solutions of the Fokker-Planck equation. *Z. Phys. B* **35** (1979), no. 2, 185–191. (Koichiro Matsuno) **80k:82019** 82A05
- de Wit, Bernard** (with van Holten, J. W.) Multiplets of linearized  $SO(2)$  supergravity. *Nuclear Phys. B* **155** (1979), no. 2, 530–542. (Marcos D. Maia) **80g:83041** 83E99 (20C35, 22E70)
- Properties of  $SO(8)$  extended supergravity. *Nuclear Phys. B* **158** (1979), no. 1, 189–212. (S. G. Mamaev) **80c:83039** 83E99 (20C35)
- (with Freedman, Daniel Z.) Systematics of higher-spin gauge fields. *Phys. Rev. D* (3) **21** (1980), no. 2, 358–367. (Authors' summary) **80k:81141** 81E99
- Witczak, Jacek** ★Konstrukcja i optymalizacja analizatorów LR(k). (Polish) [Construction and optimization of LR(k) parsers] With Russian and English summaries. Dissertation, Instytut Maszyn Matematycznych, Warsaw, 1979.
- Scientific-Research Papers of the Institute of Mathematical Machines. Instytut Maszyn Matematycznych, Warsaw, 1979. 99 pp. (From the summary) **80a:68114** 68F25
- Witsch, Kristian** Numerische Quadratur bei Projektionsverfahren. (English summary) *Numer. Math.* **30** (1978), no. 2, 185–206. (J. G. Herriot) **80a:65236** 65N30 (65D30)
- Projektive Newton-Verfahren bei elliptischen Randwertaufgaben. (English summary) *Numer. Math.* **30** (1978), no. 3, 333–347. (P. Laasonen) **80a:65140** 65N30
- Projektive Newton-Verfahren und Anwendungen auf nichtlineare Randwertaufgaben. (English summary) *Numer. Math.* **31** (1978/79), no. 2, 209–230. (Author's summary) **80a:65160** 65L05 (65J05)
- Witt, M.** (with Sobczyk, Kazimierz) Dynamic response of laminated plates to random loading. *Internat. J. Solids and Structures* **16** (1980), no. 3, 231–238. (Authors' summary) **80m:73056** 73K35
- Witte, Frank** Doubly stochastic matrices and sequential data association. I. *Information linkage between applied mathematics and industry* (Proc. First Annual Workshop, Naval Postgraduate School, Monterey, Calif., 1978), pp. 641–646. Academic Press, New York, 1979. (B. Levinger) **80a:15013** 15A51 (68B15)
- de Witte, Paul** (with Higgs, Denis) On products of transpositions and their graphs. *Amer. Math. Monthly* **86** (1979), no. 5, 376–380. (Norman Biggs) **80g:05003** 05A05 (05Cxx)
- Witten, E.** Current algebra theorems for the U(1) "Goldstone boson". *Nuclear Phys. B* **156** (1979), no. 2, 269–283. (Author's summary) **80g:81081** 81G35
- $\theta$ -vacua in two-dimensional quantum chromodynamics. (Italian and Russian summaries) *Nuovo Cimento A* (11) **51** (1979), no. 3, 325–338. (Author's summary) **80a:81113** 81E10 (22E70, 81G05)
- Witten, Louis** Symmetries of the self-dual  $SU(2)$  gauge fields. *Phys. Rev. D* (3) **18** (1978), no. 10, 3887–3889. (Vittorio Cantoni) **80a:81058** 81D25 (22E70, 53C10)
- Wittgenstein, Ludwig** ★Remarks on the foundations of mathematics. Revised edition. Edited by G. H. von Wright, R. Rhees and G. E. M. Anscombe. Translated from the German by G. E. M. Anscombe. MIT Press, Cambridge, Mass.-London, 1978. 444 pp. ISBN 0-262-23080-1 (Paul Ernest) **80f:00009** 00A25 (03A05)
- See also **Bensch, Rudolf** **80i:03004**
- Wittich, H.** See **Herglotz, Gustav** **80b:01040**
- Wittig, F. E.** Solutions of partial differential equations for mean molar functions. *Z. Naturforsch. A* **34** (1979), no. 1, 99–104. (Author's summary) **80c:80014** 80A30 (35C99)
- Wittman, Donald** A diagrammatic exposition of justice. Game theory, social choice and ethics, Part I. *Theory and Decision* **11** (1979), no. 2, 207–237. (Rubin Saponnik) **80j:90021** 90A08 (92A20)
- de Wit-Morette, Cecile** See **De Wit-Morette, Cecile**
- Wittwer, Gisela** Über asymptotisch optimale Versuchsplanung im Sinne von Sacks-Ylvisaker. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* **9** (1978), no. 1, 61–71. (Andrzej Pázmán) **80a:62118** 62K05 (62M10)
- Über die asymptotische Verteilung des Periodogramms stationärer Gaußscher zufälliger Folgen. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* **9** (1978), no. 3, 357–368. (S. Csibi) **80a:62111** 62M15
- Witzgall, C. J.** (with Shier, D. R.) Norm approximation problems and norm statistics. *J. Res. Nat. Bur. Standards* **83** (1978), no. 1, 71–74. (Valery Fedorov) **80f:65036** 65D99 (62J05)
- Wiweger, Antoni** (with Semadeni, Zbigniew) ★Wstęp do teorii kategorii i funktorów. (Polish) [Introduction to the theory of categories and functors] Second revised edition. Biblioteka Matematyczna [Mathematics Library], 45. Państwowe Wydawnictwo Naukowe (PWN), Warsaw, 1978. 299 pp. (errata insert). (V. Topenčarov) **80a:18002** 18–01
- Wixom, James A.** Interpolation to networks of curves in  $E^2$ . *SIAM J. Numer. Anal.* **15** (1978), no. 6, 1178–1193. (E. Neuman) **80a:65026** 65D05 (65D10)
- Włodarczyk, Edward** Intense rarefaction shock wave generated in a perfect gas by moving thermal sources. (Polish and Russian summaries) *J. Tech. Phys.* **19** (1978), no. 1, 21–30. (Rishi Ram) **80j:76043** 76L05
- A local closed-form solution of the problem of propagation of a nonstationary plane shock wave in a polytropic medium. (Polish and Russian summaries) *J. Tech. Phys.* **19** (1978), no. 4, 435–445. (E. G. Broadbent) **80a:76057** 76L05 (35L67)
- (with Chwalczyk, F.; Rafa, J.) Propagation of three component nonstationary acoustic waves in layer of ideal liquid. I. Basic solution. (Polish and Russian summaries) *J. Tech. Phys.* **19** (1978), no. 4, 467–480. (A. Ishimaru) **80f:76032** 76Q05
- A closed-form solution of the propagation problem of a nonstationary shock wave in a polytropic plastic gas. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **27** (1979), no. 3, 139–145. (Author's summary) **80f:76029** 76L05
- Włodarski, L.** See **Handbook: Mathematics** **80f:00007**
- Wloka, Josef** See **Fliz, Marek** **80f:60001**
- Wnuk, Andrzej** Problems of optimization in linear spaces without norm of the trajectories of systems. (Polish. English and Russian summaries) *Prace Nauk. Inst. Cybernet. Tech. Politech. Wrocław. Ser. Stud. Materiali No. 25 Formalne Opisy Systemów i ich Zastosowania* (1978), 53–66. (Jerzy Klamka) **80a:93004** 93C25
- Wnuk, Barbara** Representation of the Sylow-subgroups ( $p > 2$ ) of the permutation groups by the automorphism groups of certain universal algebras. (Polish. English summary) *Zeszyty Nauk. Wyż. Szkoły Ped. w Opolu Mat.* **20** (1978), Algebra, Zastos. Mat., 5–21. (Author's summary) **80a:20011** 20C30
- Wnuk, Henryk** (with Szczepankiewicz, Eugeniusz) Moments of certain random variables. (Polish. English summary) *Zeszyty Nauk. Wyż. Szkoły Ped. w Opolu Mat.* **20** (1978), Algebra, Zastos. Mat., 179–193. (Editors) **80c:60053** 60G12
- Wodkiewicz, K.** Exact solutions of some multiplicative stochastic processes. *J. Math. Phys.* **20** (1979), no. 1, 45–48. (Ronald F. Fox) **80f:82025a** 82A15 (60H15)
- Erratum: "Exact solutions of some multiplicative stochastic processes" (J. Math. Phys. **20** (1979), no. 1, 45–48). *J. Math. Phys.* **21** (1980), no. 1, 218. (Editors) **80f:82025b** 82A15
- Wofsy, Carla** Reproductive success for social hymenoptera. *Theoret. Population Biol.* **14** (1978), no. 3, 371–379. (Michael Orlove) **80a:92058** 92A15 (92A20)
- Wogen, Warren R.** Quasinormal operators are reflexive. *Bull. London Math. Soc.* **11** (1979), no. 1, 19–22. (Takayuki Furuta) **80a:47030** 47B20 (47A15)
- Wohl, D. H.** (with Carmeli, Moshe) Chern classes, Pontryagin forms and classification of gauge fields. *Lett. Nuovo Cimento* (2) **25** (1979), no. 8, 230–233. (R. Mirman) **80f:81105** 81G20 (57R20, 81E10)

- entin-Wohlman, O. See Entin-Wohlman, O.
- Wojciechowski, S. Completely integrable systems of  $N$  particles in one dimension. *Acta Phys. Polon. A* 53 (1978), no. 5, 649-664. (Author's summary) 80a:34053 34C35 (58F07, 70H05)
- Wojcik, Charles K. Application of quaternion algebra to the theory of skew friction gears. (Arabic summary) *Arabian J. Sci. Engrg.* 5 (1980), no. 1, 31-35. (Author's summary) 80a:70004 70B15
- Wojdylo, B. Programming language from algebraic point of view. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 405-421, Heyn, Klagenfurt, 1979. (From the text) 80a:68016 68B05
- Wojnarowski, Józef (with Buchacz, Andrzej) Application of oriented space techniques in the analysis of discrete nonlinear mechanical systems. (Russian) *VII. Internationale Konferenz über nichtlineare Schwingungen (Berlin, 1975)*, Band II.2, pp. 529-538, Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech., 1977, 6, Akademie-Verlag, Berlin, 1978. (Authors' summary) 80c:93007 93A05
- Wojtasiewicz, Olgierd Adrian The predicate calculus with extra-logical constants as an instrument of semantic description. *Studia Logica* 37 (1978), no. 1, 103-114. (Ayda I. Arruda) 80a:03035 03B99
- Wojtaszczyk, P. The space of multipliers into  $l_1$ . *Ann. Polon. Math.* 36 (1979), no. 1, 55-59. (P. Saphar) 80c:46009 46A45 (47D15)
- Decompositions of  $H_p$  spaces. *Duke Math. J.* 46 (1979), no. 3, 635-644. (T. Figiel) 80a:46061 46J15 (46E15)
- On weakly compact operators from some uniform algebras. *Studia Math.* 64 (1979), no. 2, 105-116. (V. P. Havin) 80a:46042 46J10 (47B38)
- Wojtkowiak, Zdzisław The Wall finiteness obstruction of nilpotent spaces of the same genus. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 6, 553-555. (Jerold W. Grossman) 80c:55019 55P60
- On fibrations which are also cofibrations. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 12, 999-1001 (1979). (Guido Mislin) 80j:55015 55P60
- On the finiteness obstruction of nilpotent spaces of the same genus. *Math. Z.* 166 (1979), no. 2, 103-109. (Peter J. Eccles) 80d:55009 55P15
- Wojtyński, Piotr On structural completeness of many-valued logics. *Studia Logica* 37 (1978), no. 2, 139-147. (A. Rose) 80c:03027 03B50
- Matrix representations for structural strengthenings of  $\lambda$ -propositional logic. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 8 (1979), no. 2, 72-78. (From the introduction) 80i:03041 03B99
- Strongly finite logics: finite axiomatizability and the problem of supremum. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 8 (1979), no. 2, 99-111. (From the text) 80c:03027 03B99
- Wolbarst, A. B. An intuitive approach to group representation theory. II. *Amer. J. Phys.* 47 (1979), no. 1, 103-112. (Author's summary) 80g:81085 81G40 (22E70)
- Wolf, Jack K. (with Heegard, Chris; dePedro, Hugo E.) Permutation codes for the Gaussian broadcast channel with two receivers. *IEEE Trans. Inform. Theory* 24 (1978), no. 5, 569-578. (Ram Astar) 80a:94016 94A24
- (with Gupta, Dev V.) A shortened Viterbi decoding algorithm for terminated rate-1/N convolutional codes with hard decisions. *IEEE Trans. Inform. Theory* 25 (1979), no. 2, 243-246. (Authors' summary) 80a:94028 94B35 (94B10)
- Wolf, Jochen (with Biener, Klaus; Dähnen, Joachim) Lösung einer nichtlinearen Anfangs-Randwertaufgabe für eine partielle Differentialgleichung auf dem Analogrechner zur Simulation diffusionsbeeinflusster Enzymreaktionen. (English and Russian summaries) *Elektron. Informatsionnoyber. Kibernet.* 14 (1978), no. 12, 653-664. (Authors' summary) 80i:92006 92A09
- Wolf, Joel The real and rational cohomology of differential fibre bundles. *Trans. Amer. Math. Soc.* 245 (1978/79), 211-220. (M. Mahowald) 80a:55015 55R20
- Wolf, Joseph A. Representations associated to minimal co-adjoint orbits. *Differential geometrical methods in mathematical physics, II (Proc. Conf., Univ. Bonn, Bonn, 1977)*, pp. 329-349, *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (J. H. Rawnsley) 80c:22020 22E45 (58F06, 81C40)
- Fourier inversion problems on Lie groups and a class of pseudodifferential operators. *Partial differential equations and geometry (Proc. Conf., Park City, Utah, 1977)*, pp. 293-305, *Lecture Notes in Pure and Appl. Math.*, 48, Dekker, New York, 1979. (Kenneth Johnson) 80a:22010 22D99
- Completeness of Poincaré series for automorphic cohomology. *Ann. of Math.* (2) 109 (1979), no. 3, 545-567. (Juan Tiroso) 80a:32035 32N10 (32G20)
- (with Blattner, Robert J.) Explicit quantization of the Kepler manifold. *Proc. Amer. Math. Soc.* 77 (1979), no. 1, 145-149. (J. H. Rawnsley) 80a:22019 22E45 (58F06)
- Wolf, Kurt Bernardo  $\star$ Integral transforms in science and engineering. *Mathematical Concepts and Methods in Science and Engineering*, 11, Plenum Press, New York-London, 1979. xiii + 489 pp. ISBN 0-306-39251-8 (E. J. Scott) 80d:44002 44-01 (00A69)
- The Airy function as a nonsubgroup basis for the oscillator representation ( $D_1^2/a + D_2^2/a$ ) of  $SL(2, \mathbb{R})$ . *Rev. Mexicana Fis.* 26 (1979/80), no. 1, 1-11. (Ernest G. Kalnins) 80a:81023 81C05 (22E70)
- Wolf, Rudolf Approximation of fixed points of condensing mappings. *Applicable Anal.* 9 (1979), no. 2, 125-136. (V. V. Obuhovskii) 80i:47079 47H09 (34K05)
- Wolf, Werner Das asymptotische Verhalten von Wahrscheinlichkeiten grosser Abweichungen. *Math. Nachr.* 88 (1979), 71-91. (J. Steinebach) 80a:60042 60F10
- Wolffhardt, Arne (with Steihaug, Trond) An attempt to avoid exact Jacobian and nonlinear equations in the numerical solution of stiff differential equations. *Math. Comp.* 33 (1979), no. 146, 521-534. (W. H. Enright) 80g:65087 65L05
- (with Norsett, Syvert P.) Order conditions for Rosenbrock type methods. *Numer. Math.* 32 (1979), no. 1, 1-15. (H. Brunner) 80c:65153 65L05
- Wolfe, Douglas A. (with Skillings, John H.) Distribution-free tests for ordered alternatives in a randomized block design. *J. Amer. Statist. Assoc.* 73 (1978), no. 362, 427-431. (J. V. Deshpande) 80a:62062 62G10
- Wolfe, Jerry M. On the convergence of an algorithm for discrete  $L_p$  approximation. *Numer. Math.* 32 (1979), no. 4, 439-459. (G. A. Watson) 80i:65021 65D15
- Wolfe, John (with Johnson, Jerry A.) On the norm of the canonical projection of  $E^{***}$  onto  $E^+$ . *Proc. Amer. Math. Soc.* 75 (1979), no. 1, 50-52. (Y. Benyamini) 80g:46013 46B10
- Wolfe, M. A. Extended iterative methods for the solution of operator equations. *Numer. Math.* 31 (1978/79), no. 2, 153-174. (U. Tippenhauer) 80a:65126 65J15 (47H15)
- Wolfe, Peter Diffraction of a plane wave by a circular disk. *J. Math. Anal. Appl.* 67 (1978), no. 1, 35-57. (R. F. Millar) 80f:35039 35J05 (35C99, 76Q05, 78A45)
- Wolfe, Stephen James On the behavior of characteristic functions of the real line. *Am. Probab.* 6 (1978), no. 4, 554-562. (Reinhard Michel) 80a:60020 60E10 (42A38)
- On the unimodality of infinitely divisible distribution functions. *Z. Wahrsch. Verw. Gebiete* 45 (1978), no. 4, 329-335. (Kumar Jogdeo) 80a:60018 60E07
- Wolfe, William The asymptotic distribution of lattice points in hyperbolic space. *J. Funct. Anal.* 31 (1979), no. 3, 333-340. (P. Günther) 80a:58055 58G25 (10J25)
- v. Wolfersdorf, Lothar Necessary optimality conditions for control processes with singular integral equations and elliptic equations. *Theory of nonlinear operators (Proc. Fifth Internat. Summer School, Central Inst. Math. Mech. Acad. Sci. GDR, Berlin, 1977)*, pp. 279-292, Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech., 1978, 6, Akademie-Verlag, Berlin, 1978. (K. B. Mansimov) 80j:49026 49B34 (35J99, 45G10, 93C20)
- On a method of L. Bittner for deriving maximum principles to optimal control processes. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 2, 197-205. (Junior Stein) 80a:49040 49B27
- Necessary optimality conditions in some problems of parameter control. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 1, 397-406. (M. Q. Jacobs) 80a:49020 49B99 (49D29, 93C20)
- Zum Maximum-Prinzip von Pontrjagin für eine Klasse partieller Differentialgleichungssysteme I. Ordnung. (English and Russian summaries) *Z. Angew. Math. Mech.* 58 (1978), no. 5, 261-269. (Hansgeorg Jeggle) 80a:49020 49B22
- Wolff, Harvey Free monads and the orthogonal subcategory problem. *J. Pure Appl. Algebra* 13 (1978), no. 3, 233-242. (Gavin Wraith) 80i:18007 18C15 (18A40)
- Wolff, Manfred On  $C_0$ -semigroups of lattice homomorphisms on a Banach lattice. *Math. Z.* 164 (1978), no. 1, 69-80. (A. V. Buhvalov) 80a:46026 46B30 (47D05)
- (with Schaefer, Helmut H.; Arendt, Wolfgang) On lattice isomorphisms with positive real spectrum and groups of positive operators. *Math. Z.* 164 (1978), no. 1, 115-123. (A. V. Buhvalov) 80b:47048 47B55 (47D10)
- Wolff, R. (with Schuster, P.; Sigmund, K.) Dynamical systems under constant organization. I. Topological analysis of a family of non-linear differential equations—a model for catalytic hypercycles. *Bull. Math. Biol.* 40 (1978), no. 6, 743-769. (C. P. Bruter) 80a:92020 92A05 (58F99)
- (with Schuster, P.; Sigmund, K.) On  $\omega$ -limits for competition between three species. *SIAM J. Appl. Math.* 37 (1979), no. 1, 49-54. (K. E. Swick) 80g:92029 92A15 (58F13)
- Wolfowitz, J. An upper bound on the rate distortion function for source coding with partial side information at the decoder. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 1, 5-7. (Ram Astar) 80a:94013 94A29
- (with Berger, Toby; Housewright, Kim B.; Omura, Jim K.; Tung, Sui Yin) An upper bound on the rate distortion function for source coding with partial side information at the decoder. *IEEE Trans. Inform. Theory* 25 (1979), no. 6, 664-666. (Authors' summary) 80a:94034 94A29
- Codes within codes. *Z. Wahrsch. Verw. Gebiete* 46 (1979), no. 3, 307-315. (A. D. Wyner) 80j:94017 94A29
- Wolk, Barry (with Lindner, Charles C.; Mendelsohn, Eric; Mendelsohn, N. S.) Orthogonal Latin square graphs. *J. Graph Theory* 3 (1979), no. 4, 325-338. (Jean-Claude Bermond) 80a:05022 05B15 (05C99)
- Wolke, Dieter (with Lucht, Lutz) Trigonometrische Reihen über multiplikativen Zahlenmengen. II. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 3-4, 263-288. (Karl-Heinz Indlekofer) 80i:10051 10H99
- Exponentialsummen und Nullstellen von  $L$ -Reihen. *Math. Z.* 166 (1979), no. 1, 83-91. (Jürgen G. Hinze) 80i:10045 10G05 (10H08)
- Wolkow, Władimir Akimowicz On the history of Polish-Russian and Polish-Soviet scientific contacts. Materials from the Archives of the Soviet Union. (Polish, Russian and French summaries) *Kwart. Hist. Nauk. Tech.* 23 (1978), no. 2, 465-480. (Author's summary) 80f:01023 01A70
- Wolkowicz, Henry (with Styan, George P. H.) Extensions of Samuelson's inequality. *Amer. Statist.* 33 (1979), no. 3, 143-144. (Authors' summary) 80a:62038 62G30 (60E15)
- Wollenberg, Manfred Levinsontheorem für Schrödingeroperatoren. *Math. Nachr.* 78 (1977), 369-383. (J. R. Schulenberg) 80j:35083 35P25
- On the inverse problem in the abstract scattering theory. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics (Leipzig, 1977)*, pp. 372-376, Teubner, Leipzig, 1978. (Charles I. Goldstein) 80j:47012 47A40
- (with Obermann, P.) Abel wave operators. II. Wave operators for functions of operators. *J. Funct. Anal.* 30 (1978), no. 1, 48-59. (M. M. Skrziganov) 80j:4701b 47A40
- (with Obermann, P.) Abel wave operators. I. General theory. *Math. Nachr.* 86 (1978), 141-159. (M. M. Skrziganov) 80j:4701a 47A40
- (with Baumgärtel, Hellmut; Demuth, M.) On the equality of resonances (poles of the scattering amplitude) and virtual poles. *Math. Nachr.* 86 (1978), 167-174. (P. A. Mišnaevskii) 80j:47009 47A40
- (with Košanenko, V. D.) The structure of wave operators. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 2, 265-269. (From the text) 80c:47014 47A40 (81C10)
- Wolkind, D. J. (with Oulton, D. B.; Maurer, R. N.) A stability analysis of a prototype moving boundary problem in heat flow and diffusion. *Amer. Math. Monthly* 86 (1979), no. 3, 175-186. (D. A. Nield) 80i:80006 80A20 (35K05)
- Wollman, Stephen The spherically symmetric Vlasov-Poisson system. *J. Differential Equations* 35 (1980), no. 1, 30-35. (George Contopoulos) 80m:78010 78A30 (35Q02, 82A45)
- Wolniewicz, Bogusław Objectives of propositions. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 7 (1978), no. 3, 143-147. (David Makinson) 80a:03036 03B99 (03A05)
- Some formal properties of objectives. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 8 (1979), no. 1, 16-20. (David Makinson) 80g:03062 03G25 (03A05, 03B05)



- Wolinski, Michal** See Boltjanskii, V. G., 80b:93086
- Wolovich, W. A.** Skew prime polynomial matrices. *IEEE Trans. Automat. Control* 23 (1978), no. 5, 880-886. (Eckehard W. Sachs) 80c:93012 93A10 (15A24)
- (with Ferreira, Pedro) Output regulation and tracking in linear multivariable systems. *IEEE Trans. Automat. Control* 24 (1979), no. 3, 460-465. (T. Kaczorek) 80c:93011 93A10
- (with Elliott, H.) Parameter adaptive identification and control. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 592-599. (S. G. Tzafestas) 80i:93020 93B30 (93C40, 93E12)
- Wolpert, Robert L.** Wiener path intersections and local time. *J. Funct. Anal.* 30 (1978), no. 3, 329-340. (S. J. Taylor) 80a:60104 60J65 (60J55)
- Local time and a particle picture for Euclidean field theory. *J. Funct. Anal.* 30 (1978), no. 3, 341-357. (Marcos D. Maia) 80a:81082 81E10 (00A89, 81C30)
- Wolpert, Scott** The length spectra as moduli for compact Riemann surfaces. *Ann. of Math.* (2) 109 (1979), no. 2, 323-351. (O. M. Fomenko) 80j:58067 58G25 (10D40, 30F40)
- Wolsey, L. A.** (with Nemhauser, George L.) Best algorithms for approximating the maximum of a submodular set function. *Math. Oper. Res.* 3 (1978), no. 3, 177-188. (From the summary) 80c:90100 90C30
- (with Fisher, M. L.; Nemhauser, George L.) An analysis of approximations for maximizing submodular set functions. II. Polyhedral combinatorics. *Math. Programming Stud.* No. 8 (1978), 73-87. (Jacques Dubois) 80d:90090 90C99 (05A05)
- Wolki, Włodzisław J.** Circuit analysis of nonlinear systems using Volterra series. (Polish. English, French, German and Russian summaries) *Rozprawy Elektrotech.* 25 (1979), no. 4, 805-826. (Author's summary) 80c:93009 93A10 (94C05)
- Wolter, Franz-Erich** Distance function and cut loci on a complete Riemannian manifold. *Arch. Math. (Basel)* 32 (1979), no. 1, 92-96. (H. R. Gluck) 80b:53045 53C20
- Wolter, Helmut** Entscheidbarkeit der Theorie der Wohlordnung mit Elimination der Quantoren. (Russian, English and French summaries) *Wiss. Z. Humboldt-Universität Berlin Math.-Natur. Reihe* 26 (1977), no. 5, 669-671. (Author's summary) 80c:03018 03B25 (03C65, 03C80)
- Woltermann, Michael** (with Sehgal, Surinder) Equidistributed  $\frac{1}{2}$ -transitive solvable permutation groups. I. *Comm. Algebra* 7 (1979), no. 15, 1599-1643, 1645-1672. (Michael Klemm) 80j:20006 20B99
- A note on doubly transitive solvable permutation groups. *Comm. Algebra* 7 (1979), no. 17, 1877-1883. (A. R. Camina) 80j:20004 20B20 (20G40)
- Wolter-Wolters, D.** See Prätzel-Wolters, D.
- Womack, Baxter F.** (with Brady, H. Nelson; Tabak, Daniel) Error minimization in multiple-connected subsystems. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 108-110. (Authors' summary) 80m:93007 93A15
- Wong, C. K.** (with Choy, D. M.) Optimal  $\alpha$ - $\beta$  trees with capacity constraint. *Acta Inform.* 10 (1978), no. 3, 273-296. (Fabrizio Luccio) 80c:68038 68C25 (05C05, 68H05)
- (with Coppersmith, D.; Lee, D. T.) An elementary proof of nonexistence of isometries between  $l_p^2$  and  $l_q^2$ . *IBM J. Res. Develop.* 23 (1979), no. 6, 696-699. (Authors' summary) 80i:68030 68C25 (46A45, 46C10)
- (with Chung, Kin Man) Asymptotically optimal interconnection networks from two-state cells. *IEEE Trans. Comput.* 28 (1979), no. 7, 500-505. (Authors' summary) 80g:94081 94C10 (68C25)
- (with Hirschberg, D. S.) Upper and lower bounds for graph-diameter problems with application to record allocation. *J. Combin. Theory Ser. B* 26 (1979), no. 1, 66-74. (Authors' summary) 80c:05062 05C20 (68B15, 68E10)
- (with Stockmeyer, Larry J.) On the number of comparisons to find the intersection of two relations. *SIAM J. Comput.* 8 (1979), no. 3, 388-404. (Authors' summary) 80c:68122 68C25 (68E05)
- Wong, Chi Song** New proofs of three fundamental results of maps of contractive type. *Tamkang J. Math.* 9 (1978), no. 2, 259-263. (J. L. Solomon) 80i:54048 54H25
- Wong, E.** A martingale approach to random fields. *Communication systems and random process theory (Proc. 2nd NATO Advanced Study Inst., Darlington, 1977)*, pp. 765-775, NATO Adv. Study Inst. Ser., Ser. E: Appl. Sci., 25, Sijthoff & Noordhoff, Alphen aan den Rijn, 1978. (H.-J. Engelbert) 80c:60068 60G44 (60G35, 60H05)
- A martingale theory of random fields. *Transactions of the Twenty-Fourth Conference of Army Mathematicians (Univ. Virginia, Charlottesville, Va., 1978)*, pp. 475-480, ARO Rep., 79-1, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Author's summary) 80c:60074 60H05 (60G44)
- Wong, Edward T.** (with Glencross, M. J.; Planitz, M.) Three slants on the generalised inverse. *Math. Gaz.* 63 (1979), no. 425, 173-185. (M. Lotkin) 80j:15002 15A09 (65F05)
- Wong, H. Ship-Fah** (with Deo, Chandrakant M.) Champs aléatoires gaussiens. (English summary) *Canad. J. Statist.* 6 (1978), no. 1, 33-40. (Michel Weber) 80b:60053 60G15
- (with Deo, Chandrakant M.) On quadratic variation of Gaussian random fields. (Russian) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 3, 655-660. (Evarist Giné) 80a:60041 60G15 (60G60)
- Wong, James C. S.** On topological analogues of left thick subsets in semigroups. *Pacific J. Math.* 83 (1979), no. 2, 571-585. (M. M. Day) 80m:43002 43A07 (43A05)
- Wong, Jin Kue** A new implementation of an algorithm for the optimal assignment problem: an improved version of Munkres' algorithm. *BIT* 19 (1979), no. 3, 418-424. (Author's summary) 80n:90066 90B10 (68C25)
- A note on the optimal inviter problem. *Math. Comput. Simulation* 21 (1979), no. 1, 39-41. (Author's summary) 80g:94108 94C15 (68C25)
- Wong, M. K. F.** Multiplicity-free  $6_j$  symbols and Weyl coefficients of  $U(n)$ : explicit evaluation. *J. Math. Phys.* 19 (1978), no. 7, 1635-1643. (Philip H. Butler) 80c:22018 22E70 (33A75, 81G40)
- (with Yeh, Hsin Yang) Invariant operators of  $IU(n)$  and  $IO(n)$  and their eigenvalues. *J. Math. Phys.* 20 (1979), no. 2, 247-250. (Tuong Ton That) 80b:22026 22E70 (81C40)
- (with Yeh, Hsin Yang) Explicit evaluation of the representation functions of  $ISO(n)$ . *J. Math. Phys.* 21 (1980), no. 1, 1-5. (Nigel B. Backhouse) 80m:81035 81C40 (22E70)
- Wong, Pak Ken** On certain quasi-complemented and complemented Banach algebras. *Internat. J. Math. Math. Sci.* 1 (1978), no. 3, 307-317. (J. D. Gray) 80d:46092 46H05 (46K05)
- (with O'Keefe, M.) A smallest graph of girth 5 and valency 6. *J. Combin. Theory Ser. B* 26 (1979), no. 2, 145-149. (Geoffrey Exoo) 80i:05056 05C35
- On the uniqueness of the smallest graph of girth 5 and valency 6. *J. Graph Theory* 3 (1979), no. 4, 407-409. (Geoffrey Exoo) 80i:05057 05C35
- Wong, Pui Man** (with Sibony, Nessim) Remarks on the Caorati-Weierstrass theorem. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 2, pp. 91-95, Proc. Sympos. Pure Math., XXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979. (I. P. Ramadanov) 80i:32054 32H99 (32H30)
- Wong, R.** (with McClure, J. P.) Explicit error terms for asymptotic expansions of Stieltjes transforms. *J. Inst. Math. Appl.* 23 (1978), no. 2, 129-145. (G. M. Habibullah) 80c:44003 44A15 (41A60, 42A38)
- Asymptotic expansions of fractional integrals involving logarithms. *SIAM J. Math. Anal.* 9 (1978), no. 5, 835-842. (H. Brunner) 80c:26007 26A33 (41A60, 45C05, 45G05)
- (with McClure, J. P.) Infinite systems of differential equations. II. *Canad. J. Math.* 31 (1979), no. 3, 596-603. (C. Avramescu) 80a:34005 34G20 (34G10)
- (with McClure, J. P.) Exact remainders for asymptotic expansions of fractional integrals. *J. Inst. Math. Appl.* 24 (1979), no. 2, 139-147. (Authors' summary) 80i:65027 65D30
- (with Shivakumar, P. N.) Asymptotic expansion of multiple Fourier transforms. *SIAM J. Math. Anal.* 10 (1979), no. 6, 1095-1104. (R. L. Cooke) 80a:42009 42B10
- Wong, Raymond Y.** Cyclic group actions on  $Q$  and Hurewicz fibration. Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977), I. *Topology Proc.* 2 (1977), no. 1, 309-319 (1978). (T. B. Rushing) 80a:57072 57S17 (57N20)
- Wong, Roman W.** Finitely generated ideals in free group algebras. *Comm. Algebra* 7 (1979), no. 9, 875-883. (Author's introduction) 80j:16004 16A06
- Wong, S. F.** See Wong, H. Ship-Fah
- Wong, S. P.** (with Tan, Wai Yuan) On the effects of departure from normality on the  $F$ -ratios in a nested random effect model by mixture of normals. (German summary) *Biometrical J.* 21 (1979), no. 3, 199-211. (M. Atiqullah) 80c:62051 62F35 (62J10)
- Wong, Sherman** Some metric properties of piecewise monotonic mappings of the unit interval. *Trans. Amer. Math. Soc.* 246 (1978), 493-500. (L. A. Bunimovich) 80c:28014 28D05 (58F11)
- Wong, Wing S.** (with Bernstein, Philip A.; Shipman, David W.) Formal aspects of serializability in database concurrency control. *IEEE Trans. Software Eng.* 5 (1979), no. 3, 203-216. (Authors' summary) 80i:68021 68B15 (68H05)
- Wong, Wing Yue** (with Gupta, Shanti S.) On subset selection procedures for Poisson processes and some applications to the binomial and multinomial problems. *VIII. Oberwolfach-Tagung über Operations Research (1976)*, pp. 49-70, Operations Research Verfahren, XXIII, Hain, Königstein, 1977. (Authors' introduction) 80c:62033 62F07
- On some nonparametric subset selection procedures for the location and scale parameters. *Bull. Malaysian Math. Soc.* (2) 1 (1978), no. 2, 67-79. (Joachim Kruth) 80a:62065 62G99 (62F07)
- Wongsoelabote, Ahnont** Semirings and path spaces. *Discrete Math.* 26 (1979), no. 1, 55-78. (Norman Biggs) 80c:05072 05C38 (94C99)
- Wongsoelabote, W. M.** (with Liepa, Peter E.) Feedback systems in a general algebraic setting. Special issue on the mathematical foundations of system theory. *IEEE Trans. Circuits and Systems* 25 (1978), no. 9, 728-741. (Authors' summary) 80a:93009 93A05 (08A99)
- Geometric state-space theory in linear multivariable control: a status report. *Automatica—J. IFAC* 15 (1979), no. 1, 5-13. (D. Rebbuhn) 80i:93002 93A10
- Woo, Moo Ha** Regular transformation groups. *J. Korean Math. Soc.* 15 (1978/79), no. 2, 129-137. (Jan Chvalina) 80i:54035 54H15 (54H20)
- Woo, Norman A.** Note on basic  $M$ -tuples. *Fibonacci Quart.* 17 (1979), no. 2, 165-168. (Editors) 80g:10059 10L05
- Wood, A. D.** (with Paris, R. B.) The asymptotic expansion of solutions of the differential equation  $u'' + \lambda^2(u^2 + cu) + au + bu = 0$  for large  $|\lambda|$ . *Philos. Trans. Roy. Soc. London Ser. A* 293 (1980), no. 1404, 511-533. (F. W. J. Olver) 80a:34071 34E05
- Wood, Alanstair D.** On the deficiency indices of a fourth order singular differential operator. *Proc. Roy. Soc. Edinburgh Sect. A* 84 (1979), no. 1-2, 173-176. (Walter Eberhard) 80m:34023 34B25
- Wood, Bruce** Degree of  $L_p$ -approximation by certain positive convolution operators. *J. Approx. Theory* 23 (1978), no. 4, 354-363. (M. W. Müller) 80a:41011 41A25 (41A35, 41A36)
- (with Swettis, J. J.) Approximation by discrete operators. *J. Approx. Theory* 24 (1978), no. 4, 310-323. (Editors) 80d:41012 41A35
- Wood, Carol** (with Saracino, Dan) Periodic existentially closed nilpotent groups. *J. Algebra* 58 (1979), no. 1, 189-207. (Piero Mangani) 80m:03071 03C60 (20A15, 20F18)
- Wood, Constance L.** (with Altavella, Michele M.) Large-sample results for Kolmogorov-Smirnov statistics for discrete distributions. *Biometrika* 65 (1978), no. 1, 235-239. (A. N. Pettitt) 80a:62064 62G10 (62E20)
- A large-sample Kolmogorov-Smirnov test for normality of experimental error in a randomized block design. *Biometrika* 65 (1978), no. 3, 673-676. (Jana Jurečková) 80i:62069 62J10 (62G10)
- On null-hypothesis limiting distributions of Kolmogorov-Smirnov type statistics with estimated location and scale parameters. *Comm. Statist. A—Theory Methods* 7 (1978), no. 12, 1181-1198. (M. Raghuvaran) 80c:62028 62G10
- Wood, D. H.** (with Papadakis, John S.) Addendum: "An addition formula for Riemann functions" (*J. Differential Equations* 24 (1977), no. 3, 397-411). *J. Differential Equations* 29 (1978), no. 3, 474. (Editors) 80b:35107 35L99
- Wood, Derrick** Generalized time-delayed OL languages. *Inform. Sci.* 12 (1977), no. 2, 151-155. (Author's summary) 80c:68199 68F05
- (with Ginsburg, Seymour) Precedence relations in grammar forms. *Acta Inform.* 11 (1978/79), no. 1, 79-88. (Author's review (D.W.)) 80b:68085 68F05 (68F25)
- (with Kriegel, H. P.; Vaishnavi, Vijay K.) 2-3 brother trees. *BIT* 18 (1978), no. 4, 425-435. (E. M. Reingold) 80i:68048 68C25 (68E10)
- (with Culik, Karel, II) Speed-varying OL systems. *Inform. Sci.* 14 (1978), no. 2, 161-170. (Authors' summary) 80c:68201 68F10

- (with Vaishnavi, Vijay K.) An approach to a unified theory of grammar and  $L$  forms. *Inform. Sci.* 15 (1978), no. 1, 77-94. (Authors' summary) **80c:68196** 68F05
- (with Maurer, Hermann; Salomaa, Arto K.) Relative goodness of EOL forms. *RAIRO Inform. Théor.* 12 (1978), no. 4, 291-304. (K. P. Lee) **80c:68092** 68F05
- (with Maurer, Hermann; Salomaa, Arto K.) Context-dependent  $L$  forms. *Inform. and Control* 42 (1979), no. 1, 97-118. (Authors' summary) **80c:68188** 68F05
- (with Culik, Karel, II) Doubly deterministic tabled OL systems. *Internat. J. Comput. Inform. Sci.* 8 (1979), no. 4, 335-347. (Juhani Karhumäki) **80c:68058** 68F05
- (with Maurer, Hermann; Penttonen, Martti; Salomaa, Arto K.) On non-context-free grammar forms. *Math. Systems Theory* 12 (1979), no. 4, 297-324. (S. Ginsburg) **80a:68062** 68F05
- Wood, G. V. (with Kalton, Nigel) Norm-decreasing homomorphisms between ideals of  $C(G)$ . *Houston J. Math.* 4 (1978), no. 3, 363-378. (Benjamin B. Wells) **80f:43014** 43A22 (22D15)
- Wood, John C. Erratum: "Singularities of harmonic maps and applications of the Gauss-Bonnet formula" [Amer. J. Math. 99 (1977), no. 6, 1329-1344; MR 58 #18539]. *Amer. J. Math.* 101 (1979), no. 3, 633. (Editors) **80m:58014** 58E20 (58C27)
- Wood, John W. A connected sum decomposition for complete intersections. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 2*, pp. 191-193. *Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I., 1978*. (Laurence R. Taylor) **80g:57050** 57R65 (14M10)
- Complete intersections as branched covers and the Kervaire invariant. *Math. Ann.* 240 (1979), no. 3, 223-230. (Alan H. Durfee) **80c:14025** 14M10 (57M12, 57R60)
- Wood, M. D. (with Thomas, John B.) Nearly optimal detection of known signals in correlated Gaussian noise. *Inform. Sci.* 20 (1980), no. 1, 13-33. (Authors' summary) **80m:94019** 94A12
- Wood, R. D. (with Schrefler, B.) Geometrically nonlinear analysis—a correlation of finite element notations. *Internat. J. Numer. Methods Engrg.* 12 (1978), no. 4, 635-642. (Authors' summary) **80k:73056** 73K25 (65N30)
- Wood, R. J.  $V$ -indexed categories. *Indexed categories and their applications*, pp. 126-140. *Lecture Notes in Math.*, 661, Springer, Berlin, 1978. (G. M. Kelly) **80j:18012** 18D20 (18A25, 18D05)
- Coalgebras for closed comonads. *Comm. Algebra* 6 (1978), no. 14, 1497-1504. (Manfred B. Wischnewsky) **80d:18008** 18C15
- Woodall, D. R. Menger and König systems. *Theory and applications of graphs (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976)*, pp. 620-635. *Lecture Notes in Math.*, 642, Springer, Berlin, 1978. (D. H. Younger) **80a:05064** 05B40 (05C99)
- The four-colour theorem. *Bull. Inst. Math. Appl.* 14 (1978), no. 10, 245-249. (Editors) **80c:05073** 05C15
- A sufficient condition for Hamiltonian circuits. *J. Combin. Theory Ser. B* 25 (1978), no. 2, 184-186. (J. A. Bondy) **80c:05080** 05C45
- Woodbury, Max A. (with Nau, Dana S.; Markowsky, George; Amos, D. Bernard) A mathematical analysis of human leukocyte antigen serology. *Math. Biosci.* 40 (1978), no. 3-4, 243-270. (Andrew Wohlgenuth) **80a:92063** 92A90 (06A10, 06B15)
- Woodcock, A. E. R. Landscapes of change: catastrophe theory and biological processes. *Applications of catastrophe theory in the behavioral and life sciences. Behavioral Sci.* 23 (1978), no. 5, pp. 390-401. (Shigehiro Ushiki) **80f:58013** 58C28 (92A15)
- Woodcock, C. F. Parseval's formula and  $p$ -adic interpolation. *Proceedings of the Conference on  $p$ -adic Analysis (Nijmegen, 1978)*, pp. 205-217. *Report*, 7806, Katholieke Univ., Nijmegen, 1978. (Daniel Barsky) **80k:12026** 12B40 (43A70, 46P05)
- Convolutions on the ring of  $p$ -adic integers. *J. London Math. Soc. (2)* 20 (1979), no. 1, 101-108. (N. De Grande-De Kimpe) **80k:12027** 12B40 (10A40, 43A22, 43A70, 46P05)
- Woodcock, M. M. (with Goodey, P. R.) A characterization of sets of constant width. *Math. Ann.* 238 (1978), no. 1, 15-21. (G. T. Sallee) **80b:52007** 52A20
- Wooders, Myrna. Equilibria, the core, and jurisdiction structures in economies with a local public good. *J. Econom. Theory* 18 (1978), no. 2, 328-348. (M. B. Suryanarayana) **80c:90011** 90A14
- Woodhouse, Luis (with Robledo, Alberto) Multiple trapping of random walkers on periodic lattices. *J. Statist. Phys.* 19 (1978), no. 2, 129-147. (Authors' summary) **80a:60131** 60K35 (82A67)
- Woodhouse, Nicholas. Some remarks on the energy-momentum tensor in general relativity. *Rep. Math. Phys.* 13 (1978), no. 1, 57-65. (Author's summary) **80b:83007** 83C05
- Woodruff, David S. Compactifications and function algebras. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 1-2, 45-51 (1978). (Kim-Peu Chew) **80c:54020** 54D35 (54C99)
- Woodruff, Edythe P. (with Starbird, Michael) Decompositions of  $E^3$  with countably many nondegenerate elements. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 239-252. *Academic Press, New York, 1979*. (Patrick H. Doyle) **80f:57005** 57N10
- Decompositions of  $E^3$  into cellular sets. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 253-257. *Academic Press, New York, 1979*. (Patrick H. Doyle) **80f:57006** 57N10
- Woods, A. C. The Markoff spectrum of an algebraic number field. *J. Austral. Math. Soc. Ser. A* 25 (1978), no. 4, 486-488. (Harvey Cohn) **80b:10046** 10F20 (12A25)
- Woods, Grant. See Woods, R. Grant
- Woods, John E. An input-output model with a lagged consumption function and proportional growth in autonomous expenditures. *Metroeconomica* 30 (1978), no. 1-3, 223-232. (Author's summary) **80j:90052** 90A17
- A note on Hicksian stability. *Metroeconomica* 30 (1978), no. 1-3, 233-239. (Author's summary) **80j:90039** 90A14 (65F30)
- A note on Hicks' composite commodity theorem. *Z. Nationalökonom.* 39 (1979), no. 1-2, 185-188. (From the text) **80j:90028** 90A12
- Woods, L. C. Transport processes in dilute gases over the whole range of Knudsen numbers. I. General theory. *J. Fluid Mech.* 93 (1979), no. 3, 585-607. (From the summary) **80m:76063** 76N15
- Woods, R. Grant (with Porter, Jack R.) Minimal extremally disconnected Hausdorff spaces. *General Topology Appl.* 8 (1978), no. 1, 9-26. (Stephen Willard) **80c:54043** 54G05
- (with Bell, Murray G.; Ginsburg, John) Cardinal inequalities for topological spaces involving the weak Lindelöf number. *Pacific J. Math.* 79 (1978), no. 1, 37-45. (William G. Fleissner) **80c:54003** 54A25
- Woodside, C. M. (with Pagurek, B.) An algorithm for computing serial correlations of times in  $G/G/1$  queues with rational arrival processes. *Management Sci.* 25 (1979/80), no. 1, 54-63. (Authors' summary) **80c:60119** 60K25
- Woodcock, W. S. (with Nenciu, G.; Rasche, G.; Sühi, M.) General solution of multichannel partial-wave dispersion relations. I. Coincident thresholds, pole approximation. *Helv. Phys. Acta* 51 (1978), no. 4, 608-633. (N. Nakanishi) **80f:81096** 81F15 (47A40)
- Woodbridge, Kent. Values taken many times by Euler's phi-function. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 229-234. (Stanley J. Benkoski) **80g:10008** 10A20 (10H30)
- Woollam, C. R. (with Panwalkar, S. S.) Flow shop scheduling problems with no in-process waiting: a special case. *J. Oper. Res. Soc.* 30 (1979), no. 7, 661-664. (Tadashi Kurisu) **80c:90055** 90B35
- Woollett, E. L. Available energy via nonequilibrium thermodynamics. *Amer. J. Phys.* 47 (1979), no. 3, 250-258. (Author's summary) **80b:80004** 80A10
- Worley, R. T. Denominator sequences for continued fractions. III. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 1, 53-56. (E. Frank) **80c:10012** 10A32
- (with Hossain, F.) Positive points in polar lattices. *J. Austral. Math. Soc. Ser. A* 26 (1978), no. 3, 348-352. (Peter Gruber (Zbl 389:10025)) **80a:10045** 10E05
- Wormald, Nicholas C. Achiral plane trees. *J. Graph Theory* 2 (1978), no. 3, 189-208. (Donald L. Goldsmith) **80b:05021** 05C05 (05C30)
- (with Harary, Frank; Robinson, Robert W.) Isomorphic factorisations. V. Directed graphs. *Mathematika* 25 (1978), no. 2, 279-285. (Jean-Claude Bermond) **80m:05050** 05C20 (05C99)
- (with Wright, E. M.) The exponential generating function of labelled blocks. *Discrete Math.* 25 (1979), no. 1, 93-96. (Donald L. Goldsmith) **80b:05032** 05C30
- A 4-chromatic graph with a special plane drawing. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 1, 1-8. (David M. Berman) **80c:05060** 05C15 (05C38)
- Enumeration of labelled graphs. I. 3-connected graphs. *J. London Math. Soc. (2)* 19 (1979), no. 1, 7-12. (E. M. Palmer) **80i:05052a** 05C30 (05C40)
- Enumeration of labelled graphs. II. Cubic graphs with a given connectivity. *J. London Math. Soc. (2)* 20 (1979), no. 1, 1-7. (E. M. Palmer) **80i:05052b** 05C30 (05C40)
- Wormer, P. E. S. (with Paldus, J.) Calculation of permutation matrices using graphical methods of spin algebras: explicit expressions for the Serber-coupling case. *Phys. Rev. A* (3) 18 (1978), no. 3, 827-840. (Authors' summary) **80m:81034** 81C40 (81G40)
- Wornom, Stephen F. Applications of higher-order numerical methods to the boundary-layer equations. *Numerical methods in laminar and turbulent flow (Proc. First Internat. Conf., Univ. College Swansea, Swansea, 1978)*, pp. 387-398. *Halsted, New York, 1978*. (F. Milinazzo) **80c:76016** 76D10 (65N05)
- Worobjow, N. N. See Vorobiev, M. M.
- Woronowicz, S. L. (with Pus, W.) Form convex functions and the WYDL and other inequalities. *Lett. Math. Phys.* 2 (1977/78), no. 6, 505-512. (S. Kurepa) **80j:47019** 47A60 (47B15)
- ★Operator systems and their application to the Tomita-Takesaki theory. *Lecture Notes Series*, 52. Aarhus Universitet, Matematisk Institut, Aarhus, 1979. 70 pp. (J. Ernest) **80b:46106** 46L10 (47D99)
- (with Kruszyński, Paweł) Partial transposition and nonextendible maps. *Lett. Math. Phys.* 3 (1979), no. 4, 319-324. (E. Størmer) **80j:46095** 46L05
- Worosz, Theophil J. Multiple-valued functions and their application to the fixed point properties of product spaces. *Bull. Malaysian Math. Soc. (2)* 1 (1978), no. 2, 101-109. (Masami Wakae) **80j:55003** 55M20
- Worrall, John. A reply to David Bloor: "Polyhedra and the abominations of Leviticus" [British J. Hist. Sci. 11 (1978), no. 39, part 3, 245-272; MR 80j:01027]. With a response by David Bloor and a further reply by Worrall. *British J. Hist. Sci.* 12 (1979), no. 40, part 1, 71-81. (I. Grattan-Guinness) **80m:01046** 01A80 (00A25)
- See also Lakatos, Imre. **80c:00018**
- Worrell, J. M., Jr. (with Wicke, Howard H.) Spaces which are scattered with respect to collections of sets. *Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977)*, I. *Topology Proc.* 2 (1977), no. 1, 281-307 (1978). (Gary Gruenhage) **80k:54052** 54E30 (54D99)
- Worth, R. E. (with Massey, Fred A.) Interior equilibrium solutions of optimal control problems. *Math. Biosci.* 42 (1978), no. 1-2, 31-35. (J. M. Skowroński) **80c:92031** 92A15 (49A10)
- Worthley, R. G. (with Pesotan, H.; Raktov, B. L.) On main effect fold-over designs. *J. Statist. Plann. Inference* 2 (1978), no. 3, 277-291. (D. V. Chopra) **80b:62061** 62K15
- Wotschke, Detlef (with Wrathall, Celia) A note on classes of complements and the LBA problem. *Acta Inform.* 10 (1978), no. 2, 169-173. (S. A. Greibach) **80c:68095** 68F05
- (with Ginsburg, Seymour; Leong, Benton; Mayer, Otto) On strict interpretations of grammar forms. *Math. Systems Theory* 12 (1978/79), no. 3, 233-252. (Anton Nijholt) **80f:68083** 68F05 (68F25)
- van der Woude, J. C. S. P. ★Disjointness and classes of minimal transformation groups. *Afdeling Zuivere Wiskunde [Department of Pure Mathematics]*, 125. *Mathematisch Centrum, Amsterdam*, 1979. ii + 16 pp. (loose erratum). (Author's summary) **80c:54036** 54H15
- van Wouwe, J. M. ★GO-spaces and generalizations of metrizable. *Mathematical Centre Tracts*, 104. *Mathematisch Centrum, Amsterdam*, 1979. iv + 117 pp. ISBN 90-6196-173-4 (S. A. Peregrudov) **80m:54046** 54F05
- Woyczyński, Wojbor A. Geometry and martingales in Banach spaces. II. Independent increments. *Probability on Banach spaces*, pp. 267-517. *Advances in Probability and Related Topics*, 4, Dekker, New York, 1978. (D. J. H. Garling) **80d:46035** 46B20 (60B11, 60B12)
- (with Marcus, Michael B.) A necessary condition for the central limit theorem on spaces of stable type. *Vector space measures and applications (Proc. Conf., Univ. Dublin, Dublin, 1977)*, I, pp. 327-339. *Lecture Notes in Math.*, 644, Springer, Berlin, 1978. (Gilles Pisier) **80c:60016** 60B12
- Wojniak, M. On the solution of a certain class of spatial problems in the theory of plastic flow. I. Foundations. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)*



- 30 (1978), no. 1, 79-97. (J. P. Boehler) **80c:73033a** 73E99
- On the solution of a certain class of spatial problems in the theory of plastic flow. II. Applications. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* **30** (1978), no. 1, 99-112. (J. P. Boehler) **80c:73033b** 73E99
- (with Capiński, M.; Szafirski, Bolesław) Equivalence of two definitions of statistical solution of the heat equation. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* **21** (1979), 71-79. (L. Cattabriga) **80j:35043** 35K05
- Wojniakowska, Barbara The representation theorem for the algebras determined by the fragments of infinite-valued logic of Łukasiewicz. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **7** (1978), no. 4, 176-178. (Editors) **80b:03108** 03G25 (03B20, 08Bxx)
- Algebraic proof of the separation theorem for the infinite-valued logic of Łukasiewicz. *Rep. Math. Logic* **10** (1978), 129-137 (1979). (Jerzy Kotas) **80m:03057** 03B50 (03G20)
- Wojniakowski, H. (with Traub, J. F.) Convergence and complexity of Newton iteration for operator equations. *J. Assoc. Comput. Mach.* **26** (1979), no. 2, 250-258. (A. Ramm) **80c:65061** 65J15 (68C25)
- Wraith, G. C. (with Reyes, G. E.) A note on tangent bundles in a category with a ring object. *Math. Scand.* **42** (1978), no. 1, 53-63. (Thomas F. Fox) **80f:18011** 18F15 (14A99, 58A05)
- Wraith, Celia (with Chen, Tien Chi) Convergence guarantee and improvements for a fast hardware exponential and logarithm evaluation scheme. *Proceedings of the 4th IEEE Symposium on Computer Arithmetic (Santa Monica, Calif., 1978)*, pp. 175-182. IEEE, Long Beach, Calif., 1978. (Authors' summary) **80g:65016** 65D20 (68C25)
- (with Wotschke, Detlef) A note on classes of complements and the LBA problem. *Acta Inform.* **10** (1978), no. 2, 169-173. (S. A. Greibach) **80a:68095** 68F05
- (with King, K. N.) Stack languages and log  $n$  space. *J. Comput. System Sci.* **17** (1978), no. 3, 281-299. (Authors' summary) **80b:68069** 68F10 (68C40)
- (with Book, Ronald V.) On languages specified by relative acceptance. *Theoret. Comput. Sci.* **7** (1978), no. 2, 185-195. (I. Hal Sudborough) **80c:68026** 68C25
- (with Johnson, Donald B.; Miller, Webb; Minnihan, Brian) Reducibility among floating-point graphs. *J. Assoc. Comput. Mach.* **26** (1979), no. 4, 739-760. (Authors' summary) **80i:65045** 65G05
- Wresinski, W. (with Cattaneo, U.) On contraction of Lie algebra representations. *Comm. Math. Phys.* **68** (1979), no. 1, 83-90. (F. W. Lemire) **80h:17007** 17B10
- (with Romero, M.) On the Lifschitz singularity and the tailing in the density of states for random lattice systems. *J. Statist. Phys.* **21** (1979), no. 2, 169-179. (Koichiro Matsuno) **80h:82008** 82A05 (60K35)
- Wriedt, Michael (with Kosmol, Peter) Starke Lösbarkeit von Optimierungsaufgaben. *Math. Nachr.* **83** (1978), 191-195. (Gottfried Anger) **80c:49008** 49A50 (46G99)
- Wright, A. L. (with Denny, J. L.) On tests for Markov dependence. *Z. Wahrsch. Verw. Gebiete* **43** (1978), no. 4, 331-338. (G. Roussas) **80a:62131** 62M05 (60J10, 62B05)
- Wright, Alden H. (with Messer, Robert) Embedding open 3-manifolds in compact 3-manifolds. *Pacific J. Math.* **82** (1979), no. 1, 163-177. (J. S. Birman) **80m:57004** 57N10
- (with Meyerson, Mark D.) A new and constructive proof of the Borsuk-Ulam theorem. *Proc. Amer. Math. Soc.* **73** (1979), no. 1, 134-136. (Gencho Skordev) **80c:55006** 55M20
- Wright, C. C. (with Cummings, P. T.; Perram, John W.; Smith, E. R.) Solution of the Ornstein-Zernike equation for a soft-core Yukawa fluid. *J. Statist. Phys.* **21** (1979), no. 6, 659-667. (Authors' summary) **80k:82059** 82A50
- Wright, C. R. B. On splitting in finite groups. *Proc. Amer. Math. Soc.* **72** (1978), no. 3, 436-438. (John F. Bowers) **80a:20029** 20D10
- Wright, David See Wright, David Lee
- Wright, David G. Cantor sets in 3-manifolds. *Rocky Mountain J. Math.* **9** (1979), no. 2, 377-383. (John G. Hocking) **80j:57011** 57N10 (57N12)
- Wright, David Lee The amalgamated free product structure of  $GL_2(k[X_1, \dots, X_n])$  and the weak Jacobian theorem for two variables. *J. Pure Appl. Algebra* **12** (1978), no. 3, 235-251. (Chr. U. Jensen) **80a:20049** 20G15 (13C10, 14K30)
- (with Alperin, Roger)  $K_2(2, [k, T, T^{-1}])$  is generated by "symbols". *J. Algebra* **59** (1979), no. 1, 39-46. (Alan Candiotti) **80k:13006** 13F07 (12A62, 18F25)
- Wright, E. M. (with Wormald, Nicholas C.) The exponential generating function of labelled blocks. *Discrete Math.* **25** (1979), no. 1, 93-96. (Donald L. Goldsmith) **80h:05032** 05C30
- Wright, F. T. (with Wilmesmeier, James M.) The almost sure stability of quadratic forms. *Ann. Probab.* **7** (1979), no. 4, 738-743. (R. J. Tomkins) **80f:60032** 60F15
- Wright, F. W. (with Ball, D. J.; Laws, B. C.) Simplified optimum control of distributed parameter systems. *Control of distributed parameter systems (Proc. Second IFAC Symp., Coventry, 1977)*, pp. 329-336. IFAC, Düsseldorf, 1978. (Authors' summary) **80c:93071** 93C20
- Wright, Fred M. (with Andronikou, Anastasios M.) On the equality of two Stieltjes integrals in the complex plane. *Bull. Soc. Math. Grèce (N.S.)* **19** (1978), no. 2, 183-193. (Joaquin Bustoz) **80d:30038** 30E20
- von Wright, G. H. See Wittgenstein, Ludwig. **80f:00009**
- Wright, J. (with Basarab-Horwath, P.; Streater, R. F.) Lorentz covariance and kinetic charge. *Comm. Math. Phys.* **68** (1979), no. 3, 195-207. (Y. Kato) **80k:81217** 81M05 (22E70)
- Wright, Jesse B. (with Thatcher, James W.; Wagner, Eric G.) Data type specification: parameterization and the power of specification techniques. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 119-132. ACM, New York, 1978. (Authors' summary) **80d:68028** 68B15
- (with Wagner, Eric G.; Thatcher, James W.) Programming languages as mathematical objects. *Mathematical foundations of computer science, 1978 (Proc. Seventh Symp., Zakopane, 1978)*, pp. 84-101. *Lecture Notes in Comput. Sci.*, **64**, Springer, Berlin, 1978. (G. Berry) **80c:68008** 68B10
- Wright, John David Maitland Sur les algèbres d'opérateurs. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 13, A869. (Author's summary) **80i:46053** 46L10
- On  $C^*$ -algebras which are almost separably representable. *J. London Math. Soc.* (2) **18** (1978), no. 1, 147-150. (G. K. Pedersen) **80j:46100** 46L05
- Sur certains espaces vectoriels réticulés. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 4, A169-A170. (Author's summary) **80m:46007** 46A40
- Wright, Steve On orthogonalization of  $C^*$ -algebras. *Indiana Univ. Math. J.* **27** (1978), no. 3, 383-399. (Takateru Okayasu) **80b:46072** 46L05
- Wrobel, Volker Streng singuläre Operatoren in lokal konvexen Räumen. *Math. Nachr.* **83** (1978), 127-142. (Klaus Kalb) **80i:47031** 47B05 (47A53, 47A55)
- Wrons, W. Some properties of  $m$ -directional curvature in Riemannian spaces. *Tensor (N.S.)* **32** (1978), no. 1, 69-74. (Ann Stehney) **80c:53019a** 53B20
- An analogue of the generalized Schur's theorem. *Tensor (N.S.)* **32** (1978), no. 1, 75-76. (Ann Stehney) **80c:53019b** 53B20 (53C20)
- Wronica, Z. Approximation by complex splines. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* **20** (1979), 67-88. (Charles K. Chui) **80j:41022** 41A15
- Construction of an orthonormal basis in the space of functions analytic in a disc and of class  $C^n$  in its closure. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* **21** (1979), 91-96. (V. Ganapathy Iyer) **80k:46026** 46E15 (30H05)
- Wronski, Andrzej (with Graczyńska, E.) On normal Agassiz systems of algebras. *Colloq. Math.* **40** (1978/79), no. 1, 1-8. (G. Grätzer) **80k:08003a** 08A05
- (with Graczyńska, E.) On weak Agassiz systems of algebras. *Colloq. Math.* **40** (1978/79), no. 1, 9-12. (G. Grätzer) **80k:08003b** 08A05
- A three-element matrix whose consequence operation is not finitely based. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **8** (1979), no. 2, 68-71. (From the introduction) **80h:03047** 03B99
- Wronski, Stanisław On fields of sets with a nowhere dense boundary. *Demonstratio Math.* **12** (1979), no. 2, 373-377. (P. Kratochvíl) **80m:06015** 06E15 (54H10)
- Wschebor, Mario (with Cabaña, Enrique M.) Sur le processus de Wiener à deux paramètres. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 8, A453-A454. (Authors' summary) **80i:60010** 60J65
- Wu, A. K. (with Miele, A.; Liu, C. T.) A transformation technique for optimal control problems with partially linear state inequality constraints. *J. Optim. Theory Appl.* **28** (1979), no. 2, 185-212. (Authors' summary) **80c:93086** 93C99
- Wu, Alexander S. (with Barlow, Richard E.) Coherent systems with multistate components. *Math. Oper. Res.* **3** (1978), no. 4, 275-281. (Authors' summary) **80i:90053** 90B25
- Wu, Angela (with Rosenfeld, Azriel) Sequential and cellular graph automata. *Inform. Sci.* **20** (1980), no. 1, 57-68. (Authors' summary) **80i:68041** 68D20
- Wu, Benjamin C. (with Altiero, Nicholas J.) A boundary integral method applied to plates of arbitrary plan form and arbitrary boundary conditions. *Comput. & Structures* **10** (1979), no. 4, 703-707. (Petr Procházka) **80i:73062** 73K10
- Wu, C. T. (with Abrams, R. A.) Projection and restriction methods in geometric programming and related problems. *J. Optim. Theory Appl.* **26** (1978), no. 1, 59-76. (From the summary) **80c:90121** 90C25 (90C10)
- Wu, Chian Shi See Wu, Jian Shi
- Wu, Chien Fu (with Wynn, Henry P.) The convergence of general step-length algorithms for regular optimum design criteria. *Ann. Statist.* **6** (1978), no. 6, 1273-1285. (Valery Fedorov) **80f:62074** 62K05
- Some algorithmic aspects of the theory of optimal designs. *Ann. Statist.* **6** (1978), no. 6, 1286-1301. (J. Mockus) **80d:62061** 62K05 (90C50)
- Wu, Chien H. Large finite strain membrane problems. *Quart. Appl. Math.* **36** (1978/79), no. 4, 347-359. (B. A. Bondarenko) **80c:73032** 73G05
- Wu, Ding Jia Cohomology operations and the groups  $\pi(K, L; SY_{N-1})$ . (Chinese) *Acta Math. Sinica* **20** (1977), no. 3, 222-224. (Editors) **80k:55015** 55S20 (55Q55)
- Wu, F. Y. Graph theory in statistical physics. *Studies in foundations and combinatorics*, pp. 151-166. *Advances in Math., Suppl. Studies, I*, Academic Press, New York, 1978. (Author's summary) **80d:82025** 82A05 (82A67)
- On the Temperley-Nagle identity for graph embeddings. *J. Phys. A* **11** (1978), no. 10, L243-L246. (Author's summary) **80i:05040** 05C10
- (with Hintermann, A.; Kunz, H.) Exact results for the Potts model in two dimensions. *J. Statist. Phys.* **19** (1978), no. 6, 623-632. (K. S. Viswanathan) **80a:82039** 82A67 (65U05)
- Wu, H. An elementary method in the study of nonnegative curvature. *Acta Math.* **142** (1979), no. 1-2, 57-78. (Ju. Burago) **80c:53054** 53C20 (31C05, 32F05, 53C55)
- (with Greene, R. E.)  $C^\infty$  approximations of convex, subharmonic, and plurisubharmonic functions. *Ann. Sci. École Norm. Sup. (4)* **12** (1979), no. 1, 47-84. (H. Jacobowitz) **80m:53055** 53C99 (32E99, 58C99)
- Wu, J. C. (with Sugavanam, A.) Method for the numerical solution of turbulent flow problems. *AIAA J.* **16** (1978), no. 9, 948-955. (David M. Burley) **80c:76026** 76F05 (65P05)
- Wu, Jang Mei G. Comparisons of kernel functions, boundary Harnack principle and relative Fatou theorem on Lipschitz domains. (French summary) *Ann. Inst. Fourier (Grenoble)* **28** (1978), no. 4, 147-167. vi. (Teruo Ikegami) **80g:31005** 31B20
- Wu, Jian Shi (with Wu, Yong Shi)  $U_2(2)$  invariance of the principal bundles for  $SU_2$  dual charges and the corresponding angular momentum operators. (Chinese) *Kexue Tongbao* **23** (1978), no. 10, 601-604, 583. (M. K. F. Wong) **80k:81054** 81E10 (53C05, 55R40)
- Wu, Julian J. (with Shen, C. N.) Vibrations of a helicopter rotor blade using finite element-unconstrained variational formulations. *Transactions of the Twenty-Third Conference of Army Mathematicians (Langley Res. Center, Hampton, Va., 1977)*, pp. 375-400. *ARO Rep.* **78**, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1978. (Editors) **80d:73052** 73D35 (49B99)
- (with Vasilakis, J. D.) Effect of damping at the support of a rotating beam on vibrations. *Transactions of the Twenty-Third Conference of Army Mathematicians (Langley Res. Center, Hampton, Va., 1977)*, pp. 401-420. *ARO Rep.* **78**, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1978. (Authors' summary) **80d:73084** 73K05
- (with Peters, David A.) Asymptotic solutions to a stability problem. *Transactions of the Twenty-Fourth Conference of Army Mathematicians (Univ. Virginia, Charlottesville, Va., 1978)*, pp. 135-165. *ARO Rep.* **79**, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Authors' summary) **80c:93103** 93D05 (73D30)
- Wu, Kathleen Johnson On a tableau rule for identity. *Notae Dae J. Formal Logic* **21** (1980), no. 1, 175-178. (E. Mendelson) **80m:03027** 03B10
- Wu, Li Sheng 5-designs in affine spaces. (Chinese) *Kexue Tongbao* **23** (1978), no. 8,

- 470-473. (Stephen H. Y. Hung) **80d:55012** 05B05
- Wu, Lian Du (with Wang, Chang Bin; Tong, Fu) A seminormal method for computing the second-order perturbation of artificial satellites. *Chinese Astronom. J.* 3 (1979), no. 3, 238-257. (Authors' summary) **80f:70027** 70M05
- On the additional perturbations in the theory of motion of artificial satellites. *Chinese Astronom. J.* 3 (1979), no. 4, 409-415. (Author's summary) **80k:70034** 70M05
- Wu, Pei Yuan The hyperinvariant subpace lattice of a contraction of class  $C_{\phi}$ . *Proc. Amer. Math. Soc.* 72 (1978), no. 3, 527-530. (Mitsuru Uchiyama) **80e:47006** 47A15
- Hyperinvariant subspaces of weak contractions. *Acta Sci. Math. (Szeged)* 41 (1979), no. 1-2, 259-266. (John P. Daugherty) **80j:47014** 47A45 (47A15)
- Erratum: "Hyperinvariant subspaces of the direct sum of certain contractions" [Indiana Univ. Math. J. 27 (1978), no. 2, 267-274; MR 58 #12444]. *Indiana Univ. Math. J.* 28 (1979), no. 4, 699. (Editors) **80k:47008** 47A15
- Bi-invariant subspaces of weak contractions. *J. Operator Theory* 1 (1979), no. 2, 261-272. (Norberto Salinas) **80k:47009** 47A15
- $C_{11}$  contractions are reflexive. *Proc. Amer. Math. Soc.* 77 (1979), no. 1, 68-72. (E. Durszt) **80k:47010** 47A15
- Wu, S. H. (with Combato, J. P.) The stabilization energy of linear finite-dimensional systems. *Internat. J. Systems Sci.* 10 (1979), no. 12, 1391-1400. (Authors' summary) **80j:93099** 93D99
- Wu, T. S. Notes on topological dynamics. III. Almost periodic extensions of minimal sets. Memorial issue for Marston Morse. *Bull. Inst. Math. Acad. Sinica* 6 (1978), no. 2, part 1, 271-283. (J. Auslander) **80f:54040** 54H20
- Wu, Ta You See Festschrift: Wu, Ta You. **80f:81006**
- Wu, Tai Tsun Introduction to gauge theory. *Differential geometrical methods in mathematical physics, II* (Proc. Conf., Univ. Bonn, Bonn, 1977), pp. 161-169, Lecture Notes in Math., 676, Springer, Berlin, 1978. (John Madore) **80c:81091** 81E15 (53C05)
- (with McCoy, Barry M.) Nonperturbative quantum field theory. *Sci. Sinica* 22 (1979), no. 9, 1021-1032. (Gerhard Hegerfeldt) **80m:81059** 81E15
- Wu, Wen Jun Mechanical theorem proving in elementary differential geometry. (Chinese) *Kexue Tongbao* 23 (1978), no. 9, 523-524. (K.-T. Chen) **80e:12028** 12H05 (03B25, 53-04)
- Wu, Xi Zeng Polarization of the gravitational waves of C. N. Yang's gravitational field. (Chinese. English summary) *Kexue Tongbao* 24 (1979), no. 19, 873-874. (Author's summary) **80k:83021** 83C35
- Wu, Yel Ching (with Garfinkel, Gerald S.) Cohomology and special extensions of groups. *Czechoslovak Math. J.* 29(104) (1979), no. 1, 1-10. (A. Babakhanian) **80b:20066** 20J05 (20J10)
- Wu, Yensen S. (with Fairweather, Graeme; Rizzo, Frank J.; Shippy, David J.) On the numerical solution of two-dimensional potential problems by an improved boundary integral equation method. *J. Comput. Phys.* 31 (1979), no. 1, 96-112. (Authors' summary) **80c:65221** 65N99 (65R10)
- Wu, Yong Shi (with Chen, Shi; Du, Dong Sheng; Guo, Han Ying) Monopoles in the broken  $SO_3$  and  $SU_2$  gauge theories. (Chinese) *Kexue Tongbao* 23 (1978), no. 3, 150-153, 178. (From the text) **80j:81056** 81E15 (22E70)
- (with Wu, Jian Shi)  $U_2(2)$  invariance of the principal bundles for  $SU_2$  dual charges and the corresponding angular momentum operators. (Chinese) *Kexue Tongbao* 23 (1978), no. 10, 601-604, 583. (M. K. F. Wong) **80k:81054** 81E10 (53C05, 55R40)
- (with Zou, Zhen Long; Huang, Peng; Zhang, Yuan Zhong; Li, Gen Dao; An, Ying; Chen, Shi; He, Zuo Xiu; Zhang, Li Ning; Guo, Han Ying) Some researches on gauge theories of gravitation. *Sci. Sinica* 22 (1979), no. 6, 628-636. (Kenneth Dunn) **80k:83033** 83C45
- Wulbert, Daniel E. The rational approximation of real functions. *Amer. J. Math.* 100 (1978), no. 6, 1281-1315. (E. W. Cheney) **80i:41012** 41A20
- Wulbrand, Wilhelm (with Gerlich, Gerhard) Kinetische Gleichungen für Systeme mit unendlich vielen Freiheitsgraden. *Abh. Braunschweig. Wiss. Ges.* 29 (1978), 97-105. (Author's introduction) **80j:82002** 82A05
- Wulfsberg, Audrey Infinitely divisible stochastic differential equations in space-time. *Vector space measures and applications* (Proc. Conf., Univ. Dublin, Dublin, 1977), II, pp. 198-208, Lecture Notes in Math., 645, Springer, Berlin, 1978. (Ju. L. Daleckiĭ) **80g:60060** 60H10 (92A15)
- Wulst, M. (with Naumann, Joachim) On evolution inequalities of Bingham type in three dimensions. I. *J. Math. Anal. Appl.* 68 (1979), no. 1, 211-227. (P. S. Milojević) **80g:47058** 47H05 (34G20)
- Wunderlich, Walter Darstellend-geometrischer Beweis eines merkwürdigen Schliessungssatzes. *Anz. Österreich. Akad. Wiss. Math.-Natur. Kl.* 1978, no. 6, 150-152. (L. Gyarmathi) **80d:51017** 51N05
- Kurzer Beweis eines Satzes aus der Kinematik ähnlich-veränderlicher Felder. *Anz. Österreich. Akad. Wiss. Math.-Natur. Kl.* 1978, no. 9, 219-222. (O. Bottema) **80c:51017** 51N05 (70B05)
- Über gefährliche Annahmen beim Clausenchen und Lambertschen Achtpunktpunktproblem. *Bayer. Akad. Wiss. Math.-Natur. Kl. Sitzungsber.* 1978, 23-46 (1979). (H. Brauner) **80m:51011** 51M05
- Über die Wattische Geradenführung. *Ber. Math.-Statist. Sect. Forsch. Graz* 1978, no. 92-95, Ber. No. 95, 8 pp. (J. Hoscček) **80k:51013** 51M15
- Sur une déformation remarquable du système des génératrices d'un cône du second degré et un problème de géodésie. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 24(28) (1978), no. 3-4, 81-85. (O. Bottema) **80k:53015** 53A17 (51N05)
- Büschungsloxodromen und ebene Loxodromen im isotropen Raum. *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber.* II 187 (1978), no. 8-10, 339-361. (K. Strubecker) **80k:53022** 53A40
- Snapping and shaky antiprisms. *Math. Mag.* 52 (1979), no. 4, 235-236. (B. G. Roth) **80j:52007** 52A25
- Zur Geometrie der Vogeiler. *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber.* II 187 (1979), no. 1-3, 1-19. (O. Bottema) **80g:51014** 51M15 (92A05)
- Wunderlin, A. (with Haken, H.) Laser instabilities—an example from synergetics. *Stochastic behavior in classical and quantum Hamiltonian systems* (Volta Memorial Conf., Como, 1977), pp. 213-231, Lecture Notes in Phys., 93, Springer, Berlin, 1979. (Authors' summary) **80k:81204** 81K05 (58F13)
- Wundt, Wilhelm See Kreiser, L., **80j:83010** and Terton, Gerhard, **80j:83011**
- Wunsch, Gerhard ★Zellulare Systeme. Wissenschaftliche Taschenbücher, Reihe Mathematik/Physik, 194. Akademie-Verlag, Berlin, 1977. 150 pp. (O. G. Nakonečnĭ) **80c:93012** 93A10 (68D20)
- ★Teopna caetres. (Russian) [Systems theory] Translated from the German and with an appendix by T. E. Krenkel'. *Izdat. "Sovetskoe Radio", Moscow*, 1978. 288 pp. (Editors) **80c:93002** 93-02
- Wünsche, A. Dispersionsgleichungen für Oberflächenwellen und verallgemeinerte Brewster-Fälle an der Grenze zu optisch einachsigen Medien. (English summary) *Ann. Physik* (7) 36 (1979), no. 4, 281-303. (Author's summary) **80m:78018** 78A40
- Wünsche, S. (with Siegel, G.) Abschätzungen der Erneuerungsfunktion. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 2, 265-275. (Authors' summary) **80k:90076** 90B25 (90B22)
- Würbach, D. (with Hempel, L.) Eine Existenzbedingung für Multiströme. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 2, 219-226. (H. Gröflin) **80j:90062** 90B10
- Wurfel, Tillmann Ring extensions and essential monomorphisms. *Proc. Amer. Math. Soc.* 69 (1978), no. 1, 1-7. (Edward L. Green) **80k:16020** 16A33 (16A56)
- Un critère de liberté pour les pro-p-groupes et la structure du groupe de Brauer. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 17, A793-A795. (Author's summary) **80d:12022** 12G05
- Würger, Urs On the relation of Morava K-theories to Brown-Peterson homology. *Topology and algebra* (Proc. Colloq., Eidgenöss. Tech. Hochschule, Zurich, 1977), pp. 269-280, Monographies Enseignement Math., 26, Univ. Genève, Geneva, 1978. (David C. Johnson) **80i:55005** 55N22
- A splitting theorem for certain cohomology theories associated to  $BP^{*}(-)$ . *Manuscripta Math.* 29 (1979), no. 1, 93-111. (Nobuaki Yagita) **80k:55019** 55N22
- Wüst, R. (with Klaus, M.) Characterization and uniqueness of distinguished selfadjoint extensions of Dirac operators. *Comm. Math. Phys.* 64 (1978/79), no. 2, 171-176. (Sandro Graffi) **80k:81025** 81C10 (47B25)
- Wyrtack, L. (with Werner, Helmut) Nonlinear quadrature rules in the presence of a singularity. *Comput. Math. Appl.* 4 (1978), no. 3, 237-245. (Authors' summary) **80a:65054** 65D30
- See also Padé approximation and its applications, **80m:41001**
- Wybourne, B. G. (with Butler, P. H.; Haase, R. W.) Calculation of  $3jm$  factors and the matrix elements of  $E_7$  group generators. *Austral. J. Phys.* 32 (1979), no. 3, 137-154. (John J. Sullivan) **80c:81098** 81G30 (22E70)
- Wyderka, Zdzisław Some optimal control problems for linear systems. *Systems Sci.* 4 (1978), no. 1, 53-59. (Tsutomu Mita) **80a:93079** 93C05
- van Wyk, J. W. J. (with de Wet, T.; Venter, J. H.) The null distributions of some test criteria of multivariate normality. *South African Statist. J.* 13 (1979), no. 2, 153-176. (Authors' summary) **80c:62047** 62H10
- Wylde, D. (with Rittenberg, V.) Some remarks on Adler's classical algebraic chromodynamics. *Phys. Rev. D* (3) 18 (1978), no. 12, 4806-4811. (Authors' summary) **80b:81113** 81G35 (17A70)
- Wyman, Benwick F. Time varying linear discrete-time systems: realization theory. *Studies in foundations and combinatorics*, pp. 233-258, *Advances in Math., Suppl. Studies*, 1, Academic Press, New York, 1978. (Manfred B. Wischnewsky) **80j:93083** 93C55 (93B20)
- Wyner, Aaron D. Signal design for PAM data transmission to minimize excess bandwidth. *Bell System Tech. J.* 57 (1978), no. 9, 3277-3307. (N. C. Mohanty) **80a:94010** 94A12
- An analog scrambling scheme which does not expand bandwidth. I. Discrete time. *IEEE Trans. Inform. Theory* 25 (1979), no. 3, 261-274. (N. C. Mohanty) **80c:94082** 94A05
- Wynn, Henry P. (with Wu, Chien Fu) The convergence of general step-length algorithms for regular optimum design criteria. *Ann. Statist.* 6 (1978), no. 6, 1273-1285. (Valery Fedorov) **80f:62074** 62K05
- Wynn, P. The calculus of finite differences over certain systems of numbers. *Calcolo* 14 (1977), no. 4, 303-341 (1978). (C. Dagnino) **80c:65013** 65D05 (39A12, 65D30)
- Wyrtch, Herbert Eine lineare Approximation der zentralen Anfangswerte gewisser gewöhnlicher Differentialgleichungen im überkritischen Fall. *Arch. Math. (Basel)* 31 (1978/79), no. 6, 570-579. (H. Hochstadt) **80g:34006** 34A30 (34E05)
- Wysocki, Michał Asymptotic properties of the solution of an equation of nonstationary filtration type. (Polish) *Mat. Stos.* (3) 13 (1978), 99-125. (Genowefa Majcher) **80d:35018** 35B40 (35K55)
- Wys, Walter Quasimultiplication and polynomial sequences. *Discrete Math.* 27 (1979), no. 3, 317-330. (J. B. Roberts) **80m:05008** 05A10 (10A40)
- (with Gudder, Stanley P.; Marchand, Jean-Paul) Bures distance and relative entropy. *J. Math. Phys.* 20 (1979), no. 9, 1963-1966. (C. Martin Edwards) **80j:46109** 46L60 (46L10, 82A99)
- (with Benoit, Rodney W.; Marchand, Jean-Paul) A note on relative entropy. *Lett. Math. Phys.* 3 (1979), no. 3, 169-173. (Authors' summary) **80g:94024** 94A17
- Xanthopoulos, Basilis C. (with Ashtekar, Abhay) Isometries compatible with asymptotic flatness at null infinity: a complete description. *J. Math. Phys.* 19 (1978), no. 10, 2216-2222. (P. K. Smer) **80c:83010** 83C30 (58D30)
- Multipole moments in general relativity. *J. Phys. A* 12 (1979), no. 7, 1025-1028. (Philippe-A. Dionne) **80d:83068** 83C99
- A technique for generating solutions of Einstein's equation. *Proc. Roy. Soc. London Ser. A* 365 (1979), no. 1722, 381-394. (J. D. Finley, III) **80f:83018** 83C20
- (with Chandrasekhar, S.) On the metric perturbations of the Reissner-Nordström black hole. *Proc. Roy. Soc. London Ser. A* 367 (1979), no. 1728, 1-14. (Andrew King) **80f:83043** 83D05 (85A99)
- Xia, Dao Xing Non-normal operators. II. (Chinese) *Acta Math. Sinica* 21 (1978), no. 2, 187-189. (Charles S. C. Lin) **80g:47020** 47A67 (45P05, 47B38)
- Nonnormal operators—semihypnormal operators. (Chinese. English summary) *Kexue Tongbao* 24 (1979), no. 17, 773-777. (Author's summary) **80i:47039** 47B20
- Xiao, Ding Chang (with Guo, Shuo Hong; Li, Hua Zhong) On the problem of dual charge (magnetic monopole) in nonabelian gauge groups. *Sci. Sinica* 22 (1979), no. 2, 149-167. (M. Seetharaman) **80k:81062** 81E15 (22E70)
- Xiao, Ling (with Zhang, Tong) Interactions of elementary waves in one-dimensional adiabatic flow. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 5,



- 596-619. (Authors' summary) **80k:76058** 76L05 (35L67)
- Xie, Ting Fan On a theorem of Siddiqi. (Chinese) *Kexue Tongbao* **23** (1978), no. 12, 713-714. (Editors) **80g:42005** 42A16
- Xie, Yang Zhi Approximate calculation of rectangular coordinates with respect to the principal axes. (Chinese) *Knowledge Practice Math.* No. 3 (1978), 41-46. **80g:65059** 65H10
- Xie, Zhong Jie (with Cheng, Qian Sheng) Optimum high-resolution window functions for spectral estimates. (Chinese) *Acta Math. Appl. Sinica* **2** (1979), no. 2, 119-131. (From the introduction) **80k:94004** 94A05
- (with Cheng, Qian Sheng) The maximum signal-to-noise ratio filtering of signals with nonstationary additive noise. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 6, 693-712. (Authors' summary) **80m:94020** 94A12 (60G35)
- Xie, Yuan Long (with Gu, Chao Hao; Hu, He Sheng; Li, Da Qian; Shen, Chun Li; Yang, Chen Ning) Riemannian spaces with local duality and gravitational instantons. *Sci. Sinica* **21** (1978), no. 4, 475-482. (M. A. H. MacCallum) **80a:81085** 81E15 (53C05, 58E30)
- Xu, Cheng Xu Construction of orthogonal arrays  $L_{2^p} (p^{1+27-19})$  with odd prime  $p$ . (Chinese) *Acta Math. Appl. Sinica* **2** (1979), no. 1, 92-97. (Hugo S. Sun) **80j:05026** 05B15 (05B10, 10L05)
- Xu, Yi Chao Siegel domains of the first kind over square cones. (Chinese. English summary) *Acta Math. Sinica* **21** (1978), no. 1, 1-17. (Y.-T. Siu) **80j:32048** 32M10
- Classification of square type domains. *Sci. Sinica* **22** (1979), no. 4, 375-392. (S. Murakami) **80i:32060** 32M10
- Xu, Yong Hua The  $\sigma$ -structure of rings. I. (Chinese) *Acta Math. Sinica* **20** (1977), no. 1, 61-72. (Chan-nan Chang) **80c:16030** 16A72 (16A66)
- ngheem Xuán Hai See Nghiêem Xuán Hai
- nguyên Xuán Ký See Nguyễn Xuán Ký
- nguyên-Xuan-Loc See Nguyễn-Xuan-Loc
- Xuong, Nguyen Huy See Nguyễn Huy Xuong
- Xu Yi See Xu, Yi Chao
- Li-gjun-Y See Li-Gjun-Y
- Yaari, Menahem E. Separably concave utilities or the principle of diminishing eagerness to trade. *J. Econom. Theory* **18** (1978), no. 1, 102-118. (Massimiliano Ottaviani) **80i:90019** 90A10 (90A06)
- Yabuta, Kôzô (with Tomiyama, Jun) General short exact sequence theorem for Toeplitz operators of uniform algebras.  $C^*$ -algebras and applications to physics (Proc. Second Japan-USA Sem., Los Angeles, Calif., 1977), pp. 126-130. *Lecture Notes in Math.* **650**, Springer, Berlin, 1978. (R. G. Douglas) **80i:47042** 47B35 (46J10, 46M20)
- (with Ohno, Yoshiaki) A theorem of Helson and Sarason in uniform algebras. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 4, 128-131. (H. S. Bear) **80k:46056** 46J10
- Yadav, J. M. S. (with Prasad, Y. N.) Some infinite integrals involving generalized functions of  $r$  variables. (Hindi. English summary) *Vijnana Parishad Amsandhan Patrika* **21** (1978), no. 3, 213-220. (R. S. Dahiya) **80k:33013** 33A35
- Yadav, J. S. (with Kapur, V. K.) The simultaneous effects of thermal and inertia on the performance of non-Newtonian squeeze films. *Appl. Sci. Res.* **35** (1979), no. 5-6, 357-366. (Authors' summary) **80m:76007** 76A05
- Yadav, R. B. S. (with Singh, T.) Cylindrically symmetric self-gravitating fluids with pressure equal to energy density. *Acta Phys. Acad. Sci. Hungar.* **45** (1978), no. 2, 107-112 (1979). (N. Rosen) **80c:83023** 83C55
- (with Singh, T.) Some exact solutions of charged fluid spheres in Einstein-Cartan theory. *Acta Phys. Polon. B* **9** (1978), no. 10, 831-836. (Authors' summary) **80c:83015a** 83C20 (53B50)
- (with Singh, T.) Static fluid spheres in Einstein-Cartan theory. *Acta Phys. Polon. B* **9** (1978), no. 10, 837-847. (Authors' summary) **80c:83015b** 83C20 (53B50)
- (with Singh, T.) Static fluid spheres in Einstein-Cartan theory. *Indian J. Pure Appl. Math.* **10** (1979), no. 1, 14-25. (Authors' summary) **80c:83045** 83D05
- Yadav, S. L. (with Srivastava, J. P.; Rai, S. P.) On almost product and almost decomposable manifolds. *Publ. Inst. Math. (Beograd) (N.S.)* **25**(39) (1979), 183-196. (E. Pavlov) **80k:53058** 53C15
- Yadav, Sarjoo Prasad Absolute Riesz summability sequences for Fourier series. *Indian J. Pure Appl. Math.* **10** (1979), no. 2, 230-235. (Yung-Ming Chen) **80k:42004** 42A24
- On  $[C, l]$ -summability of ultraspherical series. *Indian J. Pure Appl. Math.* **10** (1979), no. 9, 1076-1081. (D. P. Gupta) **80k:42028** 42C10 (40G05)
- Yadava, Virendra Singh (with Chandra, Prem) Absolute summability of series associated with Fourier series by Riesz means. *Indian J. Pure Appl. Math.* **8** (1977), no. 12, 1459-1464. (From the text) **80k:42003** 42A24
- (with Chandra, Prem) The  $[E, q]$ -summability of a series associated with Fourier series. *Indian J. Pure Appl. Math.* **10** (1979), no. 11, 1337-1342. (Authors' summary) **80k:42008** 42A24
- Yadegar, J. (with Hughes, J. W. B.)  $O(3)$  shift operators: the general analysis. *J. Math. Phys.* **19** (1978), no. 10, 2068-2078. (Nigel B. Backhouse) **80a:22020** 22E47 (81C40)
- Yadegari, Mohammad The use of mathematical induction by Abū Kāmil Shujā' ibn Aslam (850-930). *Isis* **69** (1978), no. 247, 259-262. (William C. Waterhouse) **80c:01005** 01A30
- Yalla, M. (with Syski, R.) Randomization of intensities in a Markov chain. *Adv. in Appl. Probab.* **11** (1979), no. 2, 397-421. (R. L. Tweedie) **80f:60069** 60J35
- Yadykin, I. B. See Jadykin, I. B.
- Yadykin, S. A. See Jadykin, S. A.
- Yaffe, Laurence G. Quantizing gauge theories: non-classical field configurations, broken symmetries and gauge copies. *Nuclear Phys. B* **151** (1979), no. 2, 247-260. (Author's summary) **80b:81061** 81D20 (58E15)
- (with Levine, Herbert) Higher-order instanton effects. *Phys. Rev. D* **3** (1979), no. 4, 1225-1242. (Authors' summary) **80d:81076** 81E10 (47A40)
- Yager, Ronald R. On solving fuzzy mathematical relationships. *Inform. and Control* **41** (1979), no. 1, 29-55. (Siegfried Gottwald) **80i:03064** 03E72 (06A99, 94D05)
- On the measure of fuzziness and negation. I. Membership in the unit interval. *Internat. J. Gen. Systems* **5** (1979), no. 4, 221-229. (Author's summary) **80i:03064** 03E72 (94D05)
- Mathematical programming with fuzzy constraints and a preference on the objective. *Kybernetes* **8** (1979), no. 4, 285-291. (Milan Mareš) **80i:90104** 90C99 (03E72)
- Fuzzy sets, probabilities, and decision. *J. Cybernet.* **10** (1980), no. 1-3, 1-18. (Author's summary) **80k:93013** 93A99 (03E72, 94D05)
- Fuzzy subsets of type II in decisions. *J. Cybernet.* **10** (1980), no. 1-3, 137-159. (Author's summary) **80k:03060** 03E72 (94D05)
- A linguistic variable for importance of fuzzy sets. *J. Cybernet.* **10** (1980), no. 1-3, 249-260. (Author's summary) **80k:03061** 03E72 (68F99, 94D05)
- See also *Advances in fuzzy set theory and applications*, **80k:00006**
- Yagita, Nobuaki A topological note on the Adams spectral sequence based on Morava's  $K$ -theory. *Proc. Amer. Math. Soc.* **72** (1978), no. 3, 613-617. (Harvey Margolis) **80a:55007** 55N22
- On an invariant defined by using  $P(n)_*$  theory. *Publ. Res. Inst. Math. Sci.* **14** (1978/79), no. 2, 327-335. (P. S. Landweber) **80f:55007** 55N20 (55N22)
- Yaglom, A. M. See Jaglom, A. M.
- Yaglom, I. M. See Jaglom, I. M.
- Yahagi, Osamu Construction of number fields with prescribed  $l$ -class groups. *Tokyo J. Math.* **1** (1978), no. 2, 275-283. (Richard Massy) **80d:12004** 12A55
- Yahav, Joseph A. On a screening problem. *Ann. Statist.* **7** (1979), no. 5, 1140-1143. (Campbell B. Read) **80g:62059** 62L10
- Yahya, Q. A. M. M. Fermat's last theorem—a topological verification. *Portugal. Math.* **36** (1977), no. 1, 25-31. (Richard T. Bumby) **80k:10018** 10B15 (54H25)
- Yahya, S. M. (with Al-Daffa', Ali Abdullah) On cogenerators in modules. *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 1, 153-166. (David W. Sharpe) **80j:16017** 16A48 (16A64)
- Yajima, Kenji The quasiclassical limit of quantum scattering theory. *Comm. Math. Phys.* **69** (1979), no. 2, 101-129. (H. Wakita) **80m:81082** 81F20 (35P25)
- Yajima, Nobuo (with Watanabe, Shinsuke; Miyakawa, Makoto) Method of conservation laws for solving nonlinear Schrödinger equation. *J. Phys. Soc. Japan* **46** (1979), no. 5, 1653-1659. (Authors' summary) **80c:35092** 35Q20 (81C05)
- Yajima, Yukinobu (with Tamano, Ken-ichi) On total paracompactness and total metacompactness. *Fund. Math.* **105** (1979/80), no. 1, 73-78. (J. E. Vaughan) **80k:54032** 54D18 (54E99)
- On the order star-finite and closure-preserving covers. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 1, 19-22. (R. Telgársky) **80c:54023** 54D18 (54F45)
- Yakovlev, Y. (with Midy, P.) An extrapolation method for the quadrature of functions with singularities in the vicinity of the interval of integration. *Numer. Math.* **32** (1979), no. 2, 183-196. (Helmut Brass) **80b:65010** 65D30
- Yakovlev, Sidney (with Szidarovszky, Ferenc) ★ Principles and procedures of numerical analysis. *Mathematical Concepts and Methods in Science and Engineering*, **14**. Plenum Press, New York-London, 1978. xii + 331 pp. ISBN 0-306-40087-1 (John Todd) **80b:65002** 65-01
- (with Denny, J. L.) Admissible run-contingency type tests for independence and Markov dependence. *J. Amer. Statist. Assoc.* **73** (1978), no. 361, 177-181. (R. Birch) **80c:62038** 62H17 (62F03)
- (with Krimmel, J. E.; Szidarovszky, Ferenc) Weighted Monte Carlo integration. *SIAM J. Numer. Anal.* **15** (1978), no. 6, 1289-1300. (Istvan Deak) **80b:65008** 65C05
- (with Schuster, E.) Contributions to the theory of nonparametric regression, with application to system identification. *Ann. Statist.* **7** (1979), no. 1, 139-149. (E. Nadaraya) **80d:62032** 62G05
- Nonparametric estimation of Markov transition functions. *Ann. Statist.* **7** (1979), no. 3, 671-679. (Ludger Rüschendorf) **80f:62081** 62M05 (62G05)
- Yalavigi, C. C. Direct construction of Kirkman's designs for  $k=3$ . *Math. Ed. (Siwan)* **12** (1978), no. 2, A28-A30. (Stephen H. Y. Hung) **80b:05013** 05B05
- Yamada, Akira On a lemma of Schiffer. (Japanese) *Sūgaku* **29** (1977), no. 4, 365-366 (1978). (C. Tanaka) **80b:30016** 30C70
- Yamada, Gen (with Irie, Toshihiro) Analysis of free vibration of annular plate of variable thickness by use of a spline technique method. *Bull. JSME* **23** (1980), no. 176, 286-292. (Authors' summary) **80m:73051** 73K10 (73D99)
- Yamada, Hiromichi Finite groups with a standard subgroup isomorphic to  $G_2(2')$ . *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* **26** (1979), no. 1, 1-52. (J. E. Humphreys) **80g:20028** 20D05
- Finite groups with a standard subgroup isomorphic to  ${}^3D_4(2^{1/4})$ . *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* **26** (1979), no. 2, 255-278. (Koichiro Harada) **80k:20016** 20D05
- Yamada, Keigo Approximation of Markovian control systems by discrete control policies. *Proceedings of the International Symposium on Stochastic Differential Equations (Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976)*, pp. 463-491. Wiley, New York, 1978. (Author's summary) **80f:93104** 93E20
- Yamada, Kôkoku (with Yosida, Kei) Orthogonality catastrophe for a system of interacting electrons. *Progr. Theoret. Phys.* **60** (1978), no. 2, 353-364. (Panayotis Tsilimigras) **80g:81082** 81G35
- Yamada, Miyuki Completely regular semigroups having certain properties. *Proceedings of the 2nd Symposium on Semigroups (Tokyo Gakugei Univ., Tokyo, 1978)*, pp. 7-16. Tokyo Gakugei Univ., Tokyo, 1978. (M. Friedberg) **80k:20046** 20M10
- $H$ -compatible orthodox semigroups. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 721-748. *Colloq. Math. Soc. János Bolyai*, **20**, North-Holland, Amsterdam, 1979. (K. S. S. Nambooripad) **80i:20069** 20M10
- Yamada, Naoki Estimates on the support of solutions of elliptic variational inequalities in bounded domains. *Hiroshima Math. J.* **9** (1979), no. 1, 7-16. (Gianfranco Bottaro) **80g:49017** 49A29 (35J99)
- Yamada, Takashi (with Mayeda, Hirokazu) Strong structural controllability. *SIAM J. Control Optim.* **17** (1979), no. 1, 123-138. (Devendra P. Garg) **80c:93031** 93B05
- Yamada, Tomoji (with Fujisaka, Hirokazu) Theoretical study of time correlation functions

- in a discrete chaotic process. *Z. Naturforsch. A* 33 (1978), no. 12, 1455–1460. (Authors' summary) **80a:82004** 82A05 (00A89)
- Yamada, Toshihiko** More on the Schur index and the order and exponent of a finite group. *Tokyo J. Math.* 1 (1978), no. 2, 269–273. (Hans Opolka) **80a:20013** 20C15 (12A80)
- A remark on Schur indices of  $p$ -groups. *Proc. Amer. Math. Soc.* 76 (1979), no. 1, 45. (Wolfgang Willems) **80d:20012** 20C15
- Yamada, Toshio** Sur une construction des solutions d'équations différentielles stochastiques dans le cas non-lipschitzien. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 114–131, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (S. M. Hrisanov) **80k:60076** 60H10
- Yamada, Yoshiaki** (with Gambin, Wiktor) Crack tip singularity analysis by global-local model of large finite elements. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 3, 147–154. (Authors' summary) **80k:73058** 73M05
- Yamada, Yoshio** On the decay of solutions for some nonlinear evolution equations of second order. *Nagoya Math. J.* 73 (1979), 69–98. (R. Kannan) **80b:34084** 34G20 (35B40)
- Note on certain nonlinear evolution equations of second order. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 5, 167–171. (Giovanni Vidossich) **80b:34074** 34G10 (35L70, 47H05)
- (with Tazaki, Saburo; Gray, Robert M.) Asymptotic performance of block quantizers with difference distortion measures. *IEEE Trans. Inform. Theory* 26 (1980), no. 1, 6–14. (Authors' summary) **80m:94039** 94A34
- Yamagata, Hideo** On the localizability of  $c$ -solitons solution. *Math. Japon.* 23 (1978/79), no. 2, 165–180. (A. Rouet) **80b:81092** 81E99 (35Q20)
- Yamagata, Kunio** Indecomposable injective functors from an abelian category to the category of abelian groups. *Comm. Algebra* 7 (1979), no. 4, 341–365. (Carol L. Walker) **80j:18017** 18E10 (16A48, 18G05)
- On Morita duality for additive group valued functors. *Comm. Algebra* 7 (1979), no. 4, 367–392. (Wolfgang Grötz) **80d:16029** 16A90 (16A49, 18E99)
- Yamagata, Masahiro** (with Narita, Fumio; Takahashi, Takao; Toki, Yasunori) On some relation of curvature between Brieskorn manifolds and standard sphere. *Sci. Rep. Hiroaki Univ.* 26 (1979), no. 1, 1–6. (R. E. Stong) **80j:53048** 53C25 (57R15)
- Yamaguchi, Hiroshi** Fonctions entières paraboliques dans  $\mathbb{C}^2$ . *Séminaire Pierre Lelong-Henri Skoda (Analyse), Année 1976/77*, pp. 325–334, *Lecture Notes in Math.*, 694, Springer, Berlin, 1978. (Lawrence Gruman) **80g:32006** 32A15 (30F99)
- Forme de Levi et l'équation  $\bar{\partial}u/\partial\bar{z} = e^{2u}$ . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 12, A619–A622. (Author's summary) **80c:32021** 32F20
- Yamaguchi, Hiroyuki** (with Ono, Takashi) On Hasse principle for division of quadratic forms. *J. Math. Soc. Japan* 31 (1979), no. 1, 141–159. (Daniel B. Shapiro) **80c:10023** 10C05 (15A63, 15A66)
- Yamaguchi, Keizo** Projectively connected manifolds admitting groups of projective transformations of dimension  $n^2 + n$ . *Hokkaido Math. J.* 8 (1979), no. 2, 260–282. (O. Kowalski) **80k:53051** 53C05 (53C10)
- Yamaguchi, Masaru** Almost periodic solutions of undamped linear wave equations. *Proc. Fac. Sci. Tokai Univ.* 14 (1979), 59–65. (H. Günzler) **80i:35009** 35B15 (35L05)
- Yamaguchi, Meiri** (with Kawahara, Yasuo) On the minimal realization and the category of response for state-behavior machines. *Bull. Kyushu Inst. Tech. Math. Natur. Sci.* No. 26 (1979), 25–30. (Aleksander Albicki) **80k:18005** 18B20
- Yamaguchi, Satoru** Spectra of flag manifolds. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 33 (1979), no. 1, 95–112. (Shūichi Tanno) **80b:58056** 58G25 (10D24, 22E46, 53C30)
- Yamaguchi, Seichi** (with Kon, Masahiro) Kaehler manifolds satisfying the axiom of anti-invariant 2-spheres. *Geom. Dedicata* 7 (1978), no. 4, 403–406. (C. S. Houh) **80c:53064** 53C55
- (with Sato, Shizuko) On holomorphically subplanar curves in almost complex manifolds. *Tensor (N.S.)* 32 (1978), no. 2, 231–242. (T. Suguri) **80c:53029** 53B35
- Some inequalities in a  $K$ -contact Riemannian manifold. *TRU Math.* 14 (1978), no. 1, 43–46. (J. R. Vanstone) **80g:53035** 53C25
- (with Inoue, M.; Kuroumaru, M.) A solution of Fredholm integral equation by means of the spline fit approximation. *Comput. & Fluids* 7 (1979), no. 1, 33–46. (Authors' summary) **80c:76011** 76C05 (65R20)
- On Kaehlerian torse-forming vector fields. *Kodai Math. J.* 2 (1979), no. 1, 103–115. (V. Mihova-Nehmer) **80g:53017** 53B35
- Yamaguchi, Tadashi** On the comparison of geodesic triangles on manifolds whose sectional curvatures are upper-bounded. *Math. Rep. Kyushu Univ.* 11 (1977/78), no. 1, 25–30. (H. Jacobowitz) **80k:53068** 53C20
- Yamaguti, Masaya** (with Fujii, Hiroshi) On numerical deformation of singularities in nonlinear elasticity. *Computing methods in applied sciences and engineering (Proc. Third Internat. Sympos., Versailles, 1977)*, I, pp. 267–281, *Lecture Notes in Math.*, 704, Springer, Berlin, 1979. (From the introduction) **80m:73012** 73C50 (65P05)
- (with Matano, Hiroshi) Euler's finite difference scheme and chaos. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 3, 78–80. (P. J. Holmes) **80d:58043** 58F13 (34A50, 39A10)
- Yamaki, Hiroyoshi** (with Harada, Koichiro) The irreducible subgroups of  $GL_n(2)$  with  $n \leq 6$ . *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 2, 75–78. (James C. Pomfret) **80c:20063** 20G40
- Yamamoto, Hiro-o** Squeezing deformations in Schottky spaces. *J. Math. Soc. Japan* 31 (1979), no. 2, 227–243. (B. N. Apanasov) **80g:30029** 30F35 (32G15)
- Yamamoto, Hiroshi** Spinor soliton as an elementary particle. *Progr. Theoret. Phys.* 58 (1977), no. 3, 1014–1023. (V. Z. Enol'skii) **80k:81177** 81G25
- Yamamoto, Kanezaki** On the compact convex base of a dual cone. *Hokkaido Math. J.* 7 (1978), no. 2, 183–188. (R. J. Nagel) **80a:46006** 46A40
- Yamamoto, Kunio** (with Taguchi, Yukio; Tanaka, Azuma) Haag's theorem and dimensional regularization. *Phys. Lett. B* 90 (1980), no. 4, 422–423. (Authors' summary) **80m:81067** 81E99
- Yamamoto, Norio** (with Shinohara, Yoshitane) Galerkin approximations of periodic solution and its period to van der Pol equation. *J. Math. Tokushima Univ.* 12 (1978), 19–42. (Ian Gladwell) **80c:65178** 65L10 (34C25)
- Yamamoto, Sumiyasu** (with Tazawa, Shinsei; Ushio, Kazuhiko) Partite-claw-decomposition of a complete multipartite graph. *Hiroshima Math. J.* 8 (1978), no. 1, 195–206. (F. Harary) **80i:05033a** 05C05
- (with Ushio, Kazuhiko; Tazawa, Shinsei) On claw-decomposition of a complete multipartite graph. *Hiroshima Math. J.* 8 (1978), no. 1, 207–210. (F. Harary) **80i:05033b** 05C05
- Yamamoto, Tetsuro** (with Ikebe, Yasuhiko) Inversion of band matrices. *Linear Algebra Appl.* 24 (1979), 105–111. (M. F. Smiley) **80c:15003b** 15A09 (65F05)
- Yamamoto, Toshio** (with Yasuda, Kimihiko; Nagasaka, Imao) On the internal resonance in a nonlinear two-degree-of-freedom system (when the natural frequencies are in the ratio 2:3). *Bull. JSME* 22 (1979), no. 171, 1274–1283. (Authors' summary) **80i:34057** 34C15
- Yamamoto, Yoneo** (with Aoe, Junichi) Simplification of LR(1) parsers by GO to graph. *Systems-Comput.-Controls* 8 (1977), no. 4, 68–76 (1979). (Ju. G. Karpov) **80k:68065** 68F25
- Yamamoto, Yoshihiko** (with Ikeda, Akira) On the spectra of 3-dimensional lens spaces. *Osaka J. Math.* 16 (1979), no. 2, 447–469. (Harold Donnelly) **80c:58042** 58G25 (10J25, 53C30)
- Yamamoto, Yoshitsugu** Generalized factor theorem and an algorithm for finding a factor. (Japanese summary) *J. Oper. Res. Soc. Japan* 1978, no. 3, 400–419. (Charles H. C. Little) **80b:05048** 05C99 (68E10, 90B10)
- Yamamoto, Sadayuki** A note on Omori-Lie groups. *Bull. Austral. Math. Soc.* 19 (1978), no. 3, 333–349. (Pierre de la Harpe) **80f:58006** 58B25 (58C20, 58D05)
- Yamanaka, Kazuo** (with Uchida, Keno; Shimemura, Etsujiro) Optimal control of systems with random delay. *Internat. J. Control* 29 (1979), no. 3, 489–495. (B. Wittenmark) **80g:93095** 93E20
- Yamasaki, Maretsugu** (with Nakamura, Tadashi) Sufficient conditions for duality theorems in infinite linear programming problems. *Hiroshima Math. J.* 9 (1979), no. 2, 323–334. (From the introduction) **80g:90073** 90C05
- Yamasaki, Masayuki** Whitney's trick for three 2-dimensional homology classes of 4-manifolds. *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 365–371. (R. C. Kirby) **80k:57024** 57N15
- Yamasaki, Yohel** Theory of division games. *Publ. Res. Inst. Math. Sci.* 14 (1978), no. 2, 337–358. (Milan Mareš) **80c:90132** 90D05
- Yamashiro, S. M.** (with Daubenspeck, J. A.; Bennett, F. M.) Optimal regulation of left ventricular ejection pattern. *Appl. Math. Comput.* 5 (1979), no. 1, 41–54. (Authors' summary) **80b:92012** 92A09
- Yamashita, Haruki** (with Nakano, Hideo; Kawano, Tadashi; Nakanishi, Yoshiro) Syndrome analysis in self-diagnosable system. *Systems-Comput.-Controls* 8 (1977), no. 3, 27–34 (1979). (Luigi Fratta) **80g:94076** 94C05 (68G05)
- Yamashita, Hideo** (with Nakamae, Eiichi) A pivot-ordering algorithm for minimizing computation time in transient circuit analysis. *Electron. Comm. Japan* 60 (1977), no. 10, 16–24. (Authors' summary) **80g:94114** 94C30
- (with Nakamae, Eiichi) A pivot ordering algorithm aimed at minimizing computation time. *IEEE Trans. Circuits and Systems* 25 (1978), no. 8, 634–637. (Izset Cem Gökner) **80k:65031** 65F05
- Yamashita, K.** (with Denham, M. J.) On the controllability of delay-differential systems. *Internat. J. Control* 30 (1979), no. 5, 813–822. (Edward W. Kamen) **80k:93015** 93B05
- Yamashita, Kazumi** (with Hama, Hiromitsu) Walsh-Hadamard power spectra invariant to certain transform groups. *IEEE Trans. Systems Man Cybernet.* 9 (1979), no. 4, 227–237. (V. Ju. Trahtman) **80f:68102** 68G10
- Yamashita, Shinji** A theorem of Beurling and Tsuji is best possible. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 286–288. (Y. Komatu) **80b:30025** 30D40
- Conformality and semiconformality of a function holomorphic in the disk. *Trans. Amer. Math. Soc.* 245 (1978/79), 119–138. (J. G. Krzyż) **80k:30018** 30C55 (30D40, 30D45)
- On a theorem of Duren, Shapiro and Shields. *Proc. Amer. Math. Soc.* 73 (1979), no. 2, 180–182. (A. W. Goodman) **80b:30012** 30C55
- Criteria for functions to be of Hardy class  $H^p$ . *Proc. Amer. Math. Soc.* 75 (1979), no. 1, 69–72. (J. A. Cima) **80b:30031** 30D55
- Yamauchi, Kazumari** On infinitesimal projective transformations of a Riemannian manifold with constant scalar curvature. *Hokkaido Math. J.* 8 (1979), no. 2, 167–175. (R. Miron) **80m:53018** 53B20
- (with Hasegawa, Izumi) On infinitesimal holomorphically projective transformations in compact Kaehlerian manifolds. *Hokkaido Math. J.* 8 (1979), no. 2, 214–219. (R. Miron) **80m:53022** 53B35
- Yamauchi, Toshihiro** (with Itakura, Hidekiyo) Multidimensional scaling techniques—a survey for multivariate analysis. (Japanese) *Systems and Control* 23 (1979), no. 8, 433–443. **80f:62060** 62H25 (62P15)
- Yasuda, Hiroo** Zur Optimalität der Singulärlösung: eine Verbesserung des Jacobson-Verfahrens. *Mem. Defense Acad.* 18 (1978), no. 4, 227–245. (H. S. P. Grässer) **80c:49016** 49B10
- Yamazaki, Tadashi** On a generalization of the Fourier transformation. *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* 25 (1978), no. 2, 237–252. (Stephen Gelbart) **80a:22019** 22E45 (10D40, 12B27)
- Yamazaki, Yasuko** On the variety of Borel subgroups containing a given diagonalizable subset. *Natur. Sci. Rep. Ochanomizu Univ.* 29 (1978), no. 1, 11–17. (Wim H. Heeslink) **80f:20049** 20G15 (14L99)
- Yammine, Sleiman** Extension des scalaires dans des algèbres universelles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 287 (1978), no. 16, A1051–A1054. (Author's summary) **80d:17011** 17B35
- Yan, Jia An** Stochastic integrals of measurable processes with respect to local martingales. (Chinese. English summary) *Acta Math. Sinica* 21 (1978), no. 1, 18–25. (Tack-Wang Lee) **80b:60078** 60H05 (60G44)
- Yan, Mu Lin** (with Zhao, Bao Heng; Guo, Han Ying) Renormalization of a gravitational field with torsion. (Chinese. English summary) *Kexue Tongbao* 24 (1979), no. 13, 587–591. (Hsin-Yang Yeh) **80j:83019** 83C45 (53C80, 81E15)
- Yanagawa, Noboru** (with Nishida, Toshio) A graphical decomposition of the stochastic network. (Japanese summary) *J. Oper. Res. Soc. Japan* 22 (1979), no. 2, 85–94. (Authors' summary) **80d:90039** 90B15
- Yanagi, Kenjiro** A common fixed-point theorem for a sequence of multivalued mappings. *Publ. Res. Inst. Math. Sci.* 15 (1979), no. 1, 47–52. (S. K. Kaul) **80c:54063** 54H25 (54C60)



- Yamagata, Syun-ichi** (with Yosimura, Zen-ichi) Ring spectra with coefficients in  $V(1)$  and  $V(2)$ . *J. Japan. J. Math. (N.S.)* 3 (1977), no. 1, 191–222. (P. S. Landweber) **80h:55005a** 55N20 (55N22)
- Yamagata, Hiroshi** On isomorphism theorems of formal groups. *J. Algebra* 55 (1978), no. 2, 341–347. (Mitsuhiko Takeuchi) **80g:16011** 16A24 (14L05)
- On group-theoretic properties of cocommutative Hopf algebras. *Hiroshima Math. J.* 9 (1979), no. 1, 179–200. (Mitsuhiko Takeuchi) **80g:14038** 14L05 (16A24)
- Yamagihara, Niro** Meromorphic solutions of the difference equation  $y(x+1) = y(x) + 1 + \lambda/y(x)$ . *I. Funkcial. Ekvac.* 21 (1978), no. 2, 97–104. (I. M. Sheffer) **80a:30021** 30D05
- (with Nakamura, Yoshikuni) Composition operators on the class  $N^+$ . *TRU Math.* 14 (1978), no. 2, 9–16. (V. Kabailla) **80f:30024** 30D50 (47B38)
- Yamase, Tatsuhiro** (with Inagaki, Yasuyoshi; Fukumura, Tetsuo) One-dimensional finite-length 2-state and 3-neighbor asynchronous cellular automaton and the Garden of Eden problem. *Systems-Comput.-Controls* 8 (1977), no. 3, 9–17 (1979). (E. Ikauniekis) **80c:68045** 68D20
- Yanag, Yan-Cheong, Sik K.** See **Leung-Yan-Cheong, Sik K.**
- Yanenko, N. N.** See **Janenko, N. N.**
- Yang, An Zhou** The generalized continuum hypothesis with parameters and the axiom of choice. (Chinese. English summary) *Acta Math. Sinica* 21 (1978), no. 3, 243–246. (Editors) **80d:04006** 04A30
- Yang, C. C.** See **Yang, Chung Chun**
- Yang, Chao Hui** Hadamard matrices, finite sequences, and polynomials defined on the unit circle. *Math. Comp.* 33 (1979), no. 146, 688–693. (Edward Spence) **80i:05024** 05B20 (15A57)
- Yang, Chen Ning**  $SU_2$  monopole harmonics. *J. Math. Phys.* 19 (1978), no. 12, 2622–2627. (Author's summary) **80c:81056** 81D99
- (with Gu, Chao Hao; Hu, He Sheng; Li, Da Qian; Shen, Chun Li; Xin, Yuan Long) Riemannian spaces with local duality and gravitational instantons. *Sci. Sinica* 21 (1978), no. 4, 475–482. (M. A. H. MacCallum) **80a:81085** 81E15 (53C05, 58E30)
- (with Gu, Chao Hao; Hu, He Sheng; Shen, Chun Li) A geometrical interpretation of instanton solutions in Euclidean space. *Sci. Sinica* 21 (1978), no. 6, 767–772. (B. Z. Moroz) **80c:81065** 81E10 (53C05)
- Yang, Chung Chun** (with Osgood, Charles F.) On entire functions having prescribed asymptotic behavior along the real axis. *Bull. Calcutta Math. Soc.* 70 (1978), no. 1, 25–28. (G. Halász) **80h:30023** 30D20
- (with Urabe, Hironobu) On the zeros of an entire function which is periodic mod a non-constant entire function of order less than one. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 6, 142–144. (T. Kövari) **80a:30029** 30D20
- On some nonlinear generalizations of Gronwall-Bellman's inequality. *Bull. Inst. Math. Acad. Sinica* 7 (1979), no. 1, 15–19. (D. Balnov) **80c:26013** 26D10
- (with Lee, Ting N.) On a class of continued fractions with entries being complex variable functions: an application to the finite inhomogeneous network synthesis. *Indust. Math.* 29 (1979), no. 1, 39–58. (L. J. Lange) **80k:94035** 94C05 (30C15)
- (with Lee, D. T.) A note on the all nearest-neighbor problem for convex polygons. *Inform. Process. Lett.* 8 (1979), no. 4, 193–194. (D. T. Lee) **80c:68065** 68G10 (52–04, 52A25, 68C05)
- Yang, Dong Ping** The existence of nonmitotic  $\alpha$ -recursively enumerable sets. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 2, 195–203. (Author's summary) **80h:03066** 03D60
- Yang, Grace L.** (with Chen, T. C.) On statistical methods in neuronal spike-train analysis. *Math. Biosci.* 38 (1978), no. 1–2, 1–34. (Charles J. Mode) **80i:92004a** 92A05
- (with Sirivanci, Mete) Corrida: "Estimation of a time-truncated exponential parameter used in life testing" *J. Amer. Statist. Assoc.* 72 (1977), no. 358, 444–447; MR 56 #4095; *J. Amer. Statist. Assoc.* 74 (1979), no. 366, part 1, 516. (Editors) **80k:62105** 62N05 (60F05, 62G05)
- (with Chen, T. C.) Erratum: "On statistical methods in neuronal spike-train analysis" *Math. Biosci.* 38 (1978), no. 1–2, 1–34; MR 80i:92004a. *Math. Biosci.* 43 (1979), no. 3–4, 309. (Charles J. Mode) **80i:92004b** 92A05
- Yang, Hsi Nien** Approximation by polynomial mapping subordinate to a biholomorphic mapping. *Chinese J. Math.* 6 (1978), no. 1, 87–102. (Anne-Marie Chollet) **80c:32011** 32E30
- Yang, J. S.** Topological dynamics and algebras with an involution. *Bull. Austral. Math. Soc.* 20 (1979), no. 3, 467–472. (William L. Green) **80m:46060** 46L55
- Yang, K. D.** See **Young, K. David**
- Yang, Mark C. K.** (with Huang, Chün Hsiung) The generalization of the effect of correlated defective inspection scheme for process control. *J. Nat. Chiao Tung Univ.* 5 (1978), 69–72. (S. Blumenthal) **80h:62167** 62N10
- Yang, Paul** Curvatures of complex submanifolds of  $C^n$ . *J. Differential Geom.* 12 (1977), no. 4, 499–511 (1978). (Yoshiaki Maeda) **80c:53071** 53C40
- Yang, Shi Nine** See **Yang, Hsi Nien**
- Yang, Sung Kil** (with Fujisaki, Haruo) On the higher rank cylinder kernel. *Progr. Theoret. Phys.* 62 (1979), no. 4, 1049–1056. (R. Delbourgo) **80j:81071** 81F15
- Yang, Zhen Xiang** The classification of noncompact locally symmetric spaces. (Chinese) *Acta Math. Sinica* 21 (1978), no. 3, 273–276. (Yung-Chow Wong) **80j:53052** 53C35
- Yanitskiy, V. Ye.** See **Janicki, V. E.**
- Yankovsky, George** See **Janicki, V. E.**
- Yamakis, Mihalis** Node- and edge-deletion NP-complete problems. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 253–264. *ACM, New York*, 1978. (David A. Plaisted) **80k:68031** 68C25 (05C99)
- (with Pavlidis, Theodosios) Topological characterization of families of graphs generated by certain types of graph grammars. *Inform. and Control* 42 (1979), no. 1, 72–86. (Authors' summary) **80c:68174** 68E10 (68F05)
- The effect of a connectivity requirement on the complexity of maximum subgraph problems. *J. Assoc. Comput. Mach.* 26 (1979), no. 4, 618–630. (M. I. Dehtjar) **80g:68036** 68C25 (05C35, 68E10)
- (with Papadimitriou, Christos H.) Scheduling interval-ordered tasks. *SIAM J. Comput.* 8 (1979), no. 3, 405–409. (Authors' summary) **80c:68087** 68C15 (68C25)
- Yano, Kentaro** (with Hiramatsu, Hitosi) Isometry of Riemannian manifolds to spheres. *J. Differential Geom.* 12 (1977), no. 3, 443–460. (C.-C. Hsiung) **80g:53036** 53C25 (53C45)
- (with Ki, U Hang; Pak, Jin Suk) Infinitesimal variations of the Ricci tensor of a submanifold. *Kodai Math. Sem. Rep.* 29 (1977/78), no. 3, 271–284. (Huei-Shyong Lue) **80c:53056** 53C40
- (with Ki, U Hang) On  $(f, g, u, v, w, \lambda, \mu, \nu)$ -structures satisfying  $\lambda^2 + \mu^2 + \nu^2 = 1$ . *Kodai Math. Sem. Rep.* 29 (1977/78), no. 3, 285–307. (Y. Tashiro) **80c:53029** 53C15 (53C25)
- (with Sawaki, Sumio) On the Weyl and Bochner curvature tensor. *Rend. Accad. Naz. XL* (5) 3 (1977/78), 31–54 (1979). (E. Pavlov) **80h:53058** 53C40
- (with Hiramatsu, Hitosi) Integral inequalities and their applications in Kaehlerian manifolds admitting a holomorphically projective vector field. Memorial issue for Marston Morse. *Bull. Inst. Math. Acad. Sinica* 6 (1978), no. 2, part 1, 313–332. (Huei-Shyong Lue) **80j:53031** 53B35
- (with Chen, Bang-yen) On the theory of normal variations. *J. Differential Geom.* 13 (1978), no. 1, 1–10. (John J. O'Sullivan) **80c:53038** 53C40
- (with Ki, U Hang; Pak, Jin Suk) Infinitesimal variations of invariant submanifolds of a Sasakian manifold. *Kodai Math. J.* 1 (1978), no. 2, 219–236. (Huei-Shyong Lue) **80c:53049** 53C25
- (with Ishihara, Shigeru) Real hypersurfaces of a complex manifold and distributions with complex structure. *Kodai Math. J.* 1 (1978), no. 2, 289–303. (Steven Shnider) **80c:32016** 32F25 (53B35, 58H05)
- (with Kon, Masahiro) Infinitesimal variations of submanifolds of an even-dimensional sphere. *Kodai Math. J.* 1 (1978), no. 3, 362–375. (M. C. Chaki) **80d:53015** 53B25
- (with Kon, Masahiro) CR-sous-variétés d'un espace projectif complexe. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 9, A515–A517. (Authors' summary) **80c:53072** 53C40 (32C05, 53C55)
- Yano, Mayumi** (with Asou, Motoko; Tsuboi, Yasuko) Analysis of two types of the master and the Langevin equations. *Natur. Sci. Rep. Ochanomizu Univ.* 29 (1978), no. 1, 61–69. (T. Kahan) **80j:82005** 82A05 (45K05)
- Yano, Tamaki** On the theory of  $b$ -functions. *Publ. Res. Inst. Math. Sci.* 14 (1978), no. 1, 111–120. (Helmut Hamm) **80h:32026** 32C40 (47F05)
- (with Sekiguchi, Jiro) The algebra of invariants of the Weyl group  $W(F_4)$ . *Sci. Rep. Saitama Univ. Ser. A* 9 (1979), no. 2, 21–32. (E. Vinberg) **80h:32011** 32B30 (14L30, 20H15)
- (with Sekiguchi, Jiro) A note on the Coxeter group of type  $H_3$ . *Sci. Rep. Saitama Univ. Ser. A* 9 (1979), no. 2, 33–44. (E. Vinberg) **80h:32012** 32B30 (14L30, 20H15)
- Yanovskii, L. P.** See **Janovskii, L. P.**
- Yanovitch, Michael** Vertically propagating hydromagnetic waves in an isothermal atmosphere with a horizontal magnetic field. *Wave Motion* 1 (1979), no. 2, 123–125. (Vance Faber) **80k:76081** 76W05 (85A30)
- Yao, Andrew Chi Chih** (with Yao, F. Frances) On the average-case complexity of selecting  $k$ th best. *19th Annual Symposium on Foundations of Computer Science (Ann Arbor, Mich., 1978)*, pp. 280–289. *IEEE, Long Beach, Calif.*, 1978. (Authors' summary) **80c:68128** 68C25
- (with Graham, R. L.; Yao, F. Frances) Addition chains with multiplicative cost. *Discrete Math.* 23 (1978), no. 2, 115–119. (Joel I. Seiferas) **80d:68051** 68C25 (68E99)
- On the loop switching addressing problem. *SIAM J. Comput.* 7 (1978), no. 4, 515–523. (Fan R. K. Chung) **80c:68051** 68E10 (68B05)
- The complexity of pattern matching for a random string. *SIAM J. Comput.* 8 (1979), no. 3, 368–387. (Author's summary) **80g:68064** 68C25
- Yao, F. Frances** (with Yao, Andrew Chi Chih) On the average-case complexity of selecting  $k$ th best. *19th Annual Symposium on Foundations of Computer Science (Ann Arbor, Mich., 1978)*, pp. 280–289. *IEEE, Long Beach, Calif.*, 1978. (Authors' summary) **80c:68128** 68C25
- (with Graham, R. L.; Yao, Andrew Chi Chih) Addition chains with multiplicative cost. *Discrete Math.* 23 (1978), no. 2, 115–119. (Joel I. Seiferas) **80d:68051** 68C25 (68E99)
- Graph 2-isomorphism is NP-complete. *Inform. Process. Lett.* 9 (1979), no. 2, 68–72. (R. K. Shyamundar) **80j:68037** 68C25 (03D15, 05C99)
- Yap, Chee K.** (with Miller, Raymond E.) On formulating simultaneity for studying parallelism and synchronization. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 105–113. *ACM, New York*, 1978. (J. Paredaens) **80d:68031** 68B20
- Yap, H. P.** A note on the sets  $A + A$  and  $A - A$ . *Bull. Malaysian Math. Soc.* (2) 1 (1978), 65–66. (A. P. Street) **80c:10051** 10L05 (05B10)
- A generalization of a result of Mann and Olsen. *Bull. Malaysian Math. Soc.* (2) 1 (1978), no. 2, 125–126. (L. C. Egan) **80d:10078** 10L20 (05B10)
- On a conjecture of Ervin Fried. *Namta Math.* 11 (1978), no. 2, 155–163. (E. C. Milner) **80c:05039** 05C20
- Yap, Leonard Y. H.** On convolution of  $L(p, q)$  functions. *Math. Balkanica* 6 (1976), 307–310 (1978). (William M. Self) **80m:43003** 43A15
- (with Quek, T. S.) Multipliers from  $L_p(G)$  to a Lipschitz space. *J. Math. Anal. Appl.* 69 (1979), no. 2, 531–539. (Harald E. Krogstad) **80g:43009** 43A22
- Yaquib, Adil** (with Outcalt, David L.) Commutativity and structure theorems for rings with polynomial constraints. *Math. Japon.* 23 (1978/79), no. 2, 217–226. (Claudio Procesi) **80a:16046** 16A70
- (with Putcha, Mohan S.) Rings with a finite set of nonnilpotents. *Internat. J. Math. Math. Sci.* 2 (1979), no. 1, 121–126. (K. A. Byrd) **80h:16014** 16A44 (16A22)
- (with Outcalt, David L.) A commutativity theorem for rings with constraints involving an additive subgroup. *Math. Japon.* 24 (1979/80), no. 2, 195–202. (Howard E. Bell) **80k:16045** 16A70
- Yaquib, Fawzi M.** Free Post  $L$ -algebras. *Algebra Universalis* 9 (1979), no. 1, 45–53. (Leo Esakia) **80h:06014** 06D25 (03G20)
- Yaquib, Jill C. D. S.** The nonexistence of Möbius planes of Hering class VI2. *Arch. Math. (Basel)* 31 (1978/79), no. 4, 414–416. (M. J. Kallagher) **80j:51006** 51B10
- Yarga, A.** Numerically reliable algorithm to test controllability. *Electron. Lett.* 15 (1979), no. 15, 452–453. (Author's summary) **80d:93022** 93B05
- Yarlagadda, R.** Stabilization of matrices. *Linear Algebra Appl.* 21 (1978), no. 3, 271–284. (Raphael Loewy) **80h:15032** 15A57
- Yasseri, S. F.** (with Lowe, P. G.) Non-linear optimized fibre reinforced plates in bending.

- Math. Proc. Cambridge Philos. Soc.* **84** (1978), no. 3, 539–543. (J. W. Craggs) **80a:73051** 73K10 (00A89)
- Yasskin, Philip B.** (with Ramaswamy, Sriram) Birkhoff theorem for an  $R+R^2$  theory of gravity with torsion. *Phys. Rev. D* (3) **19** (1979), no. 8, 2264–2267. (J. W. Auer) **80a:83034** 83D05 (53B50)
- Yasuda, Kazumori** (with Hirai, Kazumasa) Upper and lower bounds on the solution of the algebraic Riccati equation. *IEEE Trans. Automat. Control* **24** (1979), no. 3, 483–487. (Authors' summary) **80c:93093** 93C99
- Yasuda, Kimihiko** (with Yamamoto, Toshio; Nagasaka, Imao) On the internal resonance in a nonlinear two-degree-of-freedom system (when the natural frequencies are in the ratio 2:3). *Bull. JSME* **22** (1979), no. 171, 1274–1283. (Authors' summary) **80a:34057** 34C15
- Yasue, Kunio** (with Toyoda, Toshiyuki) A new approach to the theory of elementary domains. *Internat. J. Theoret. Phys.* **17** (1978), no. 12, 993–1002. (R. L. Ingraham) **80a:81076** 81E05
- The role of the Onsager-Machlup Lagrangian in the theory of stationary diffusion process. *J. Math. Phys.* **20** (1979), no. 9, 1861–1864. (Burton H. Voorhees) **80a:32012** 82A05 (93E20)
- Yasugi, Mariko** Self-iterating schemes of ordinal diagrams. *Comment. Math. Univ. St. Paul.* **27** (1978/79), no. 1, 11–24. (Jane E. Kister) **80a:03082b** 03F15
- Some properties of ordinal diagrams. *Nagoya Math. J.* **70** (1978), 143–155. (Jane E. Kister) **80a:03082a** 03F15
- Yasui, Munekazu** (with Yoshida, Kaname; Kodama, Shinzo) An algorithm for constructing usable and feasible directions. (Japanese. English summary) *Systems and Control* **22** (1978), no. 8, 495–503. (Authors' summary) **80g:65078** 65K10 (90C30)
- Yasui, Syozo** Stochastic functional Fourier series, Volterra series, and nonlinear systems analysis. *IEEE Trans. Automat. Control* **24** (1979), no. 2, 230–242. (M. P. Mokjačuk) **80g:93029** 93B30
- Yasumoto, Masahiro** Finitely additive measures on  $N$ . *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 3, 81–84. (William Eames) **80i:28003** 28A12
- Yasura, Kameosuke** (with Okuno, Yoichi) Algorithm for mode matching method considering edge condition. *Electron. Comm. Japan* **60** (1977), no. 11, 53–61. (Authors' summary) **80a:78024** 78A45 (65R10)
- Yates, R. E.** (with Shieh, Leang S.; Shih, Chao D.) Some sufficient and some necessary conditions for the stability of multivariable systems. 1978 *IEEE International Symposium on Circuits and Systems* (New York, 1978), pp. 647–651, IEEE, New York, 1978. (Authors' summary) **80a:93117** 93D05
- (with Tsay, Y. T.; Chen, C. F.) A generalization of Bessel's approximation and its application to model reduction. *Internat. J. Electron.* **45** (1978), no. 3, 321–331. (Authors' summary) **80a:93171** 93E11 (94C30)
- (with Shieh, Leang S.; Shih, Chao D.) Some sufficient and some necessary conditions for the stability of multivariable systems. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* **100** (1978), no. 3, 214–218. (M. F. Kirichenko) **80a:93100** 93D05 (34D99)
- Yates, R. G.** (with Brihaye, Y.; Fairlie, D. B.; Nuyts, J.) Properties of the self-dual equations for an  $SU(n)$  gauge theory. *J. Math. Phys.* **19** (1978), no. 12, 2528–2532. (Authors' summary) **80a:81077** 81E15 (22E70, 58A15)
- Yates, Samuel** The mystique of repunits. *Math. Mag.* **51** (1978), no. 1, 22–28. (A. G. Shannon) **80f:10008** 10A25 (10A30)
- Yau, S. S.** (with Tang, Y. S.) Generation of shortest test sequences for detecting individual faults of sequential circuits. *Comput. J.* **22** (1979), no. 2, 169–172. (Authors' summary) **80g:94109** 94C15
- Yau, Shing Tung** (with Schoen, Richard M.) Incompressible minimal surfaces, three-dimensional manifolds with nonnegative scalar curvature, and the positive mass conjecture in general relativity. *Proc. Nat. Acad. Sci. U.S.A.* **75** (1978), no. 6, 2567. (F. J. Flaherty) **80a:53045** 53C20 (58E15, 83C99)
- Harmonic maps between Riemannian manifolds. *Partial differential equations and geometry* (Proc. Conf., Park City, Utah, 1977), pp. 307–311, *Lecture Notes in Pure and Appl. Math.*, 48, Dekker, New York, 1979. (Samuel I. Goldberg) **80g:58025** 58E20 (31C05)
- (with Siu, Yum Tong) Errata to the paper: "Complete Kähler manifolds with nonpositive curvature of faster than quadratic decay" [Ann. of Math. (2) **105** (1977), no. 2, 225–264; MR **55** #10719]. *Ann. of Math. (2)* **109** (1979), no. 3, 621–623. (H. Wu) **80a:32022** 32C10 (53C55, 58E20)
- (with Schoen, Richard M.) On the proof of the positive mass conjecture in general relativity. *Comm. Math. Phys.* **65** (1979), no. 1, 45–76. (J. L. Kazdan) **80j:83024** 83C99 (53C20, 58E20)
- (with Schoen, Richard M.) On the structure of manifolds with positive scalar curvature. *Manuscripta Math.* **28** (1979), no. 1–3, 159–183. (Paul E. Ehrlich) **80a:53064** 53C20 (58E20, 83C99)
- (with Schoen, Richard M.) Complete manifolds with nonnegative scalar curvature and the positive action conjecture in general relativity. *Proc. Nat. Acad. Sci. U.S.A.* **76** (1979), no. 3, 1024–1025. (Mauro Francaviglia) **80a:58034** 58D30 (53C50, 83C99)
- Yau, Stephen Shing Tung** Normal singularities of surfaces. *Algebraic and geometric topology* (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 2, pp. 195–198, Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I., 1978. (Jonathan M. Wahl) **80f:14020** 14J17 (32C40)
- On maximally elliptic singularities. *Trans. Amer. Math. Soc.* **257** (1980), no. 2, 269–329. (Jonathan M. Wahl) **80j:32021** 32C45 (14J17, 32B30)
- Yavin, Yaakov** (with Huisman, W. C.) Numerical studies of the performance of an optimally controlled nonlinear stochastic oscillator. *Comput. Methods Appl. Mech. Engrg.* **21** (1980), no. 2, 171–191. (Authors' summary) **80m:93095** 93E20 (70L05)
- Optimal feedback control laws using random sampling of the observation. *Internat. J. Systems Sci.* **11** (1980), no. 1, 1–16. (Authors' summary) **80j:93146** 93E20
- Yavriyan, A. N.** See Javriyan, A. N.
- Yavriyan, A. N.** See Yavriyan, A. N.
- Ye, Fang Cao** Conjugate points on Grassmann manifolds. (Chinese) *Acta Math. Sinica* **21** (1978), no. 4, 367–374. (Bang-yen Chen) **80a:57055** 57T20 (53C30)
- Ye, Yan Qian** (with Wang, Xian) Nonlinear differential equations arising in the theory of electron beam focusing. (Chinese) *Acta Math. Appl. Sinica* **1** (1978), no. 1, 13–41. (P. F. Hsieh) **80f:34014** 34B05 (34C25)
- Yeagy, R. W.** (with Vaughan, N. H.) Factoring ideals into semiprime ideals. *Canad. J. Math.* **30** (1978), no. 6, 1313–1318. (Norman Eggert) **80a:13023** 13G05 (13A15)
- Semiprime factorizations in unions of Dedekind domains. *J. Reine Angew. Math.* **310** (1979), 182–186. (Anne Grams) **80j:13014** 13F05 (13A15)
- Yean, Tu Nan** See Ruan, Tu Nan
- Yechiall, Uri** (with Mendelson, Haim) Performance analysis of the chaining method for random-access addressing. *Computer performance* (Proc. Internat. Sympos. Computer Performance Modeling, Measurement and Evaluation, IBM Thomas J. Watson Res. Center, Yorktown Heights, N.Y., 1977), pp. 341–361, North-Holland, Amsterdam, 1977. (Authors' summary) **80a:68239** 68H05 (68B15)
- (with Liberman, Varda) On the hotel overbooking problem—an inventory system with stochastic cancellations. *Management Sci.* **24** (1977/78), no. 11, 1117–1126. (Izzet Sahin) **80a:90051** 90B05 (90C39)
- (with Mendelson, Haim; Pliskin, Joseph S.) Optimal storage allocation for serial files. *Comm. ACM* **22** (1979), no. 2, 124–130. (Authors' summary) **80a:68032** 68B15
- (with Mendelson, Haim) Performance measures for ordered lists in random-access files. *J. Assoc. Comput. Mach.* **26** (1979), no. 4, 654–667. (Margaret Chock) **80a:68008** 68H05
- (with Vered, Gior) Optimal structures and maintenance policies for PABX power systems. *Oper. Res.* **27** (1979), no. 1, 37–47. (Authors' summary) **80a:90070** 90B25
- Yee, Jae Hyung** (with Viswanathan, K. S.) Massless fermions coupled to  $N$ -pseudoparticle field: isospin  $\frac{3}{2}$ . (French summary) *Canad. J. Phys.* **56** (1978), no. 11, 1442–1446. (Authors' summary) **80a:81116** 81C45
- Yegorov, K. V.** See Egorov, K. V.
- Yegorov, Yu. D.** See Egorov, Yu. V.
- Yeh, Cheh Chih** Further results on asymptotic behavior of solutions of functional differential equations. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **63** (1977), no. 1–2, 15–18 (1978). (T. Canturia) **80a:34079** 34K15
- (with Murakami, Haruo) Note on asymptotic behavior of solutions of functional differential equations. *Nanta Math.* **10** (1977), no. 2, 131–134. (From the introduction) **80a:34108** 34K15
- (with Chen, Lu San) Oscillatory and asymptotic characterization of the solutions of higher order forced differential equations generated by deviating arguments. (Italian summary) *Rend. Istit. Mat. Univ. Trieste* **9** (1977), no. 1–2, 70–82 (1978). (M. K. Grammatikopoulos) **80a:34099** 34K15
- (with Chen, Lu San) On the comparison theorem for nonhomogeneous second order differential inequalities. *Applicable Anal.* **8** (1978/79), no. 4, 287–290. (K. Schmitt) **80a:34017** 34A40
- Some fixed point theorems in  $L$ -spaces. *Indian J. Pure Appl. Math.* **9** (1978), no. 10, 993–995. (Bal Kishan Dass) **80a:54057** 54H25
- A fixed point theorem in orbitally complete metric spaces. *Publ. Inst. Math. (Beograd) (N.S.)* **24**(38) (1978), 197–199. (S. P. Singh) **80a:54094** 54H25
- (with Chen, Lu San) Asymptotic nature of nonoscillatory solutions of nonlinear deviating differential equations. *Ann. Mat. Pura Appl.* (4) **121** (1979), 199–205. (V. Staikos) **80a:34068** 34K15 (34C10)
- On common fixed-point theorems of continuous mappings. *Indian J. Pure Appl. Math.* **10** (1979), no. 4, 415–420. (S. P. Singh) **80a:54056** 54H25
- (with Murakami, Haruo) Fixed point theorems under generalized contractive mappings. *Indian J. Pure Appl. Math.* **10** (1979), no. 4, 426–430. (J. L. Solomon) **80a:54056** 54H25
- Nonoscillation of nonlinear retarded differential equations. *Publ. Inst. Math. (Beograd) (N.S.)* **25**(39) (1979), 240–244. (Wadi Mahfoud) **80a:34101** 34K15
- Yeh, Fang Bo** (with Lai, Hang Ch'ing) Numerical ranges of the tensor products of elements. *Hokkaido Math. J.* **7** (1978), no. 2, 214–223. (A. T. Dash) **80a:46050** 46H05 (46M05, 47A12)
- Yeh, Hsin Yang** (with Wong, M. K. F.) Invariant operators of  $IU(n)$  and  $IO(n)$  and their eigenvalues. *J. Math. Phys.* **20** (1979), no. 2, 247–250. (Tuong Ton That) **80a:22026** 22E70 (81C40)
- (with Wong, M. K. F.) Explicit evaluation of the representation functions of  $ISO(n)$ . *J. Math. Phys.* **21** (1980), no. 1, 1–5. (Nigel B. Backhouse) **80a:81035** 81C40 (22E70)
- Yeh, J.** Transformation of conditional Wiener integrals under translation and the Cameron-Martin translation theorem. *Tohoku Math. J.* (2) **30** (1978), no. 4, 505–515. (Tack-Wang Lee) **80a:60094** 60J65 (28C20)
- Yeh, Lung Shuen** Existence theorems for optimal control problems characterized by Volterra integral equations. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 8, 1249–1271. (P. S. Kenderov) **80a:49008** 49A34
- Yeh, Pochi** Electromagnetic propagation in birefringent layered media. *J. Opt. Soc. Amer.* **69** (1979), no. 5, 742–756. (G. P. Bava) **80a:78006** 78A25
- Yeh, R. Z.** Measure-injective Borel functions. *Nanta Math.* **10** (1977), no. 2, 110–112. (A. Mukherjee) **80a:60033** 60E05 (26A30)
- Yeh, Yern** (with Rushforth, Craig K.; Tai, Jacob) A state-space formulation of the causal linear prefiltering problem in sampled-data systems. *Inform. Sci.* **14** (1978), no. 1, 75–87. (Tohru Katayama) **80a:93124** 93E11 (94A05)
- Yehudai, Amiran** A new definition for simple precedence grammars. *BIT* **19** (1979), no. 2, 282–284. (Authors' summary) **80a:68100** 68F05
- A note on the pumping lemma for regular languages. *Inform. Process. Lett.* **9** (1979), no. 3, 135–136. (Author's introduction) **80a:68066** 68F10 (68D45)
- Yellott, John L., Jr.** (with Rockwell, Christina) A note on equivalent Thurstone models. *J. Math. Psych.* **19** (1979), no. 1, 65–71. (James B. MacQueen) **80a:92028** 92A25 (60E99)
- Yen, Chi Lin** On an F. E. Browder theorem. *Tamkang J. Math.* **9** (1978), no. 2, 223–227. (K. Goebel) **80j:47075** 47H10
- Yeo, L. T.** (with Teo, K. L.) On the computational methods of optimal control problems. *Internat. J. Systems Sci.* **10** (1979), no. 1, 51–76. (Gerard G. L. Meyer) **80a:93009** 93C99
- Yeo, M. F.** (with Cheung, Y. K.) ★ A practical introduction to finite element analysis. A Pitman International Text. Pitman, London, 1979, v + 180 pp. ISBN 0-273-01083-2, 0-273-01080-8 (Paul Jambor) **80a:65001** 65-01
- Yerokhin, Ye. A.** See Erohin, E. A.
- Yershov, M. P.** See Erlor, M. P.



- Yessing Hansen, Flemming** Generation of symmetry coordinates for crystals using multiplier representations of the space groups. *Phys. Rev. B* (3) **18** (1978), no. 8, 4015-4038. (From the summary) **80d:82059** 82A60 (20C35)
- Yeung, Wai Bong** (with Ng, Wing Chiu) New procedure for summing perturbation theory. *Lett. Nuovo Cimento* (2) **23** (1978), no. 11, 413-418. (From the text) **80d:81024** 81C12 (81G05)
- Yger, Alain** (with Brandt, Richard A.; Ng, Wing Chiu) Finite field equation for asymptotically free  $\phi^4$  theory. *Phys. Rev. D* (3) **19** (1979), no. 2, 503-510. (Authors' summary) **80b:81057** 81D05 (35Q99)
- Yger, Alain** Une généralisation d'un théorème de J. Delsarte. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 9, A497-A499. (Author's summary) **80d:46073** 46F10
- Fonctions définies dans le plan et moyennes en tout point de leurs valeurs aux sommets de deux carrés. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **288** (1979), no. 10, A535-A538. (Author's summary) **80c:46049** 46F10 (32A40)
- Yigane, H.** See **Oigane, H.**
- Yilmaz, Mustafa R.** Multiattribute utility theory: a survey. *Theory and Decision* **9** (1978), no. 4, 317-347. (Mamoru Kaneko) **80d:90013** 90A10
- Yin, Hsing Chun** (with Du, Dong Sheng; Ruan, Tu Nan) General form of effective Lagrangian in path integral quantization formalism. *Nuclear Phys. B* **164** (1980), no. 1, 103-113. (Authors' summary) **80m:81031** 81C35
- Ying, S. J.** (with Liu, V. C.) An extension of McCormack's method for flows with higher-order equations and in different configurations. *Comput. & Fluids* **6** (1978), no. 3, 173-184. (Alberto Valli) **80d:76063** 76N10 (65P05, 76N15)
- Yip, D. Y. N.** (with Tiku, M. L.) A four-moment approximation based on the  $F$  distribution. *Austral. J. Statist.* **20** (1978), no. 3, 257-261. (Authors' summary) **80j:62020** 62E15
- Ylmen, Raimo** (with Blomberg, Hans) Foundations of the polynomial theory for linear systems. *Internat. J. Gen. Systems* **4** (1977/78), no. 4, 231-242. (B. P. Molinari) **80a:93051** 93B25
- Ylvisaker, Donald** (with Diaconis, Persi) Conjugate priors for exponential families. *Ann. Statist.* **7** (1979), no. 2, 269-281. (L. B. Klebanov) **80f:62016** 62E10 (62F15)
- Yoder, Charles F.** Diagrammatic theory of transition of pendulum like systems. *Celestial Mech.* **19** (1979), no. 1, 3-29. (Author's summary) **80b:70036** 70M10 (34A50, 85A05)
- Yoeli, Michael** (with Tzidon, Adi; Berger, Israel) A practical approach to fault detection in combinational networks. *IEEE Trans. Comput.* **27** (1978), no. 10, 968-973. (A. Thaysse) **80a:94071** 94C15
- (with Brzozowski, Janusz A.) On a ternary model of gate networks. *IEEE Trans. Comput.* **28** (1979), no. 3, 178-184. (Tatsuo Higuchi) **80f:94044** 94C30
- Yohai, Victor J.** (with Maronna, Ricardo A.) A bivariate test for the detection of a systematic change in mean. *J. Amer. Statist. Assoc.* **73** (1978), no. 363, 640-645. (N. Giri) **80a:62029** 62F03
- (with Maronna, Ricardo A.) Asymptotic behavior of  $M$ -estimators for the linear model. *Ann. Statist.* **7** (1979), no. 2, 258-268. (B. Ja. Levit) **80c:62025** 62E20 (62F35, 62J05)
- (with Klein, Ruben) Asymptotic behavior of iterative  $M$ -estimators for location. *Bol. Soc. Brasil. Mat.* **10** (1979), no. 1, 27-42. (Rudolph J. Beran) **80j:62039** 62G05 (62E20)
- Yoke, Gary W.** Towards a general comparison of price controls and quantity controls under uncertainty. *Rev. Econom. Stud.* **45** (1978), no. 2, 229-238. (From the introduction) **80c:90021** 90A12
- Yoke, J. M.** A sufficient condition for realizability of constrained graphs. *SIAM J. Appl. Math.* **36** (1979), no. 1, 15-25. (B. R. Myers) **80g:94110** 94C15
- Yokoi, Shigeki** (with Toriwaki, Junichiro; Fukumura, Teruo) Algebraic structure of the operation system of digitized points and its application. I. Formulation and properties of fundamental operations. *Systems-Comput.-Controls* **8** (1977), no. 3, 51-58 (1979). (W. W. Armstrong) **80f:68106** 68G10
- Yokoo, Takeo** (with Ojika, Takeo) A numerical method for periodic solutions of the restricted three-body problem. (Japanese summary) Initial value adjusting method with time-scaling and artificial coupling methods. *Mem. Osaka Kyoiku Univ. III Natur. Sci. Appl. Sci.* **27** (1978/79), no. 1, 57-68. (Authors' summary) **80g:70005** 70F07 (65-01)
- Yokote, Ichiro** A certain derivative in fibred Riemannian spaces, and its applications to vector fields. *Kôdai Math. Sem. Rep.* **29** (1977/78), no. 3, 211-232. (Luis A. Cordero) **80a:53054** 53C20
- Yokoyama, Kan-ichi** Renormalization scheme of a canonical Yang-Mills field theory with invariant gauge-families. *Progr. Theoret. Phys.* **60** (1978), no. 4, 1167-1174. (Author's summary) **80d:81084** 81E10
- Yokoyama, Ryôzô** On the Bahadur representation of sample quantiles for mixing processes. *Tsukuba J. Math.* **2** (1978), 75-90. (C. S. Withers) **80k:60036** 60F15 (60F05, 62G30)
- Yoneya, Tamiaki**  $Z(N)$  topological excitations in Yang-Mills theories: duality and confinement. *Nuclear Phys. B* **144** (1978), no. 1, 195-218. (José M. Cerveró) **80m:81057** 81E10 (53C80)
- Yoneyama, Kanji** (with Nishida, Toshio; Ueshima, Yasumasa) Two-stage tandem queue with two types of customers. *Tech. Rep. Osaka Univ.* **28** (1978), no. 1430-1458, 343-349. (Authors' summary) **80f:60087** 60K25
- Yoo, Juang Y.** (with Joseph, Daniel D.) Stokes flow in a trench between concentric cylinders. *SIAM J. Appl. Math.* **34** (1978), no. 2, 247-285. (Howard Swann) **80d:76033** 76D99 (35P10)
- (with Joseph, Daniel D.; Beavers, G. S.) Higher-order theory of the Weissenberg effect. *J. Fluid Mech.* **92** (1979), no. 3, 529-590 (4 plates). (Jacques Mauss) **80k:76006** 76A05
- Yood, Bertram** (with Tomiuk, Bohdan J.) Topological algebras with dense socle. *J. Funct. Anal.* **28** (1978), no. 2, 254-277. (P. Civin) **80f:46052** 46H05
- Yoon, Jaihan** On semidirect factors of a locally compact group. *J. Korean Math. Soc.* **15** (1978/79), no. 2, 163-165. (Harald Rindler) **80e:22007** 22D05
- Yoon, Okkyung** On complex conformal connections in an almost complex manifold with a torsion tensor. *J. Korean Math. Soc.* **16** (1979/80), no. 1, 71-85. (Koichi Ogiue) **80m:53024** 53B35
- Yor, Marc** Quelques résultats sur certaines mesures extrémales. Applications à la représentation des martingales. *Measure theory applications to stochastic analysis* (Proc. Conf., Res. Inst. Math., Oberwolfach, 1977), pp. 27-36, *Lecture Notes in Math.*, **695**, Springer, Berlin, 1978. (M. P. Erlov) **80k:60066** 60G44 (60H10)
- Grossissement d'une filtration et semi-martingales: théorèmes généraux. *Séminaire de Probabilités, XII* (Univ. Strasbourg, Strasbourg, 1976/1977), pp. 61-69, *Lecture Notes in Math.*, **649**, Springer, Berlin, 1978. (E. Lenglart) **80k:60067** 60G44 (60G48)
- (with Jeulin, T.) Grossissement d'une filtration et semi-martingales: formules explicites. *Séminaire de Probabilités, XII* (Univ. Strasbourg, Strasbourg, 1976/1977), pp. 78-97, *Lecture Notes in Math.*, **649**, Springer, Berlin, 1978. (M. P. Erlov) **80k:60071** 60G44 (60G40)
- (with Dellacherie, Claude; Meyer, Paul-André) Sur certaines propriétés des espaces de Banach  $H^1$  et BMO. *Séminaire de Probabilités, XII* (Univ. Strasbourg, Strasbourg, 1976/1977), pp. 98-113, *Lecture Notes in Math.*, **649**, Springer, Berlin, 1978. (Norihiko Kazamaki) **80k:60072** 60G46
- Sous-espaces denses dans  $L^1$  ou  $H^1$  et représentation des martingales. Avec un appendice de l'auteur et J. de Sam Lazaro. *Séminaire de Probabilités, XII* (Univ. Strasbourg, Strasbourg, 1976/1977), pp. 265-309, *Lecture Notes in Math.*, **649**, Springer, Berlin, 1978. (Ju. M. Kabanov) **80m:60060** 60G44 (60J25)
- (with Meyer, Paul-André) Sur l'extension d'un théorème de Doob à un noyau  $\sigma$ -fini d'après G. Mokobodzki. *Séminaire de Probabilités, XII* (Univ. Strasbourg, Strasbourg, 1976/1977), pp. 482-488, *Lecture Notes in Math.*, **649**, Springer, Berlin, 1978. (P. Gérard) **80j:28011** 28A20
- (with Jeulin, T.) Nouveaux résultats sur le grossissement des tribus. *Ann. Sci. École Norm. Sup.* (4) **11** (1978), no. 3, 429-443. (M. P. Erlov) **80k:60072** 60G44 (60G40)
- Inégalités entre processus minces applications. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 18, A799-A801. (Author's summary) **80k:60067** 60G46 (60H05)
- (with Stricker, Christophe) Calcul stochastique dépendant d'un paramètre. *Z. Wahrsch. Verw. Gebiete* **45** (1978), no. 2, 109-133. (Dominique Lepingle) **80f:60047** 60G44 (60H05)
- (with Brémaud, Pierre) Changes of filtrations and of probability measures. *Z. Wahrsch. Verw. Gebiete* **45** (1978), no. 4, 269-295. (J. Walsh) **80k:60062** 60G44 (60G35, 60H05)
- Fonctions et processus de Bessel. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 16, A817-A819. (Author's summary) **80k:60026** 60E10 (33A40)
- Yorinaga, Masataka** Numerical computation of Carmichael numbers. *Math. J. Okayama Univ.* **20** (1978), no. 2, 151-163. (D. H. Lehmer) **80k:10026** 10A40 (10-04)
- Numerical investigation of sums of the Möbius function. *Math. J. Okayama Univ.* **21** (1979), no. 1, 41-47. (Editors) **80k:10002** 10-04 (10A20)
- Numerical computation of Carmichael numbers. II. *Math. J. Okayama Univ.* **21** (1979), no. 2, 183-205. (D. H. Lehmer) **80k:10002** 10-04 (10A40)
- Yorke, A. C.** Locally uniformly rotund norms and Markushevich bases. *J. Austral. Math. Soc. Ser. A* **27** (1979), no. 3, 371-377. (N. J. Kalton) **80a:46034** 46B20
- Yorke, Ellen D.** (with Yorke, James A.) Metastable chaos: the transition to sustained chaotic behavior in the Lorenz model. *J. Statist. Phys.* **21** (1979), no. 3, 263-277. (François Rondoy) **80f:76023** 76F99 (58F13)
- Yorke, H. W.** (with Różycka, M.; Tscharnuter, W. M.; Winkler, K.-H.) Fragmentation of interstellar clouds: three-dimensional hydrodynamical calculations. *Astronom. and Astrophys.* **83** (1980), no. 1-2, 118-128. (Authors' summary) **80m:85005** 85A20 (65N05)
- Yorke, James A.** (with Alexander, J. C.) Parametrized functions, bifurcation, and vector fields on spheres. (Russian summary) *Problems of the asymptotic theory of nonlinear oscillations* (Russian), pp. 15-17, 275, "Naukova Dumka", Kiev, 1977. (J. K. Hale) **80i:58013** 58C25 (58F14)
- (with Curry, James H.) A transition from Hopf bifurcation to chaos: computer experiments with maps on  $\mathbb{R}^2$ . *The structure of attractors in dynamical systems* (Proc. Conf., North Dakota State Univ., Fargo, N.D., 1977), pp. 48-66, *Lecture Notes in Math.*, **668**, Springer, Berlin, 1978. (Richard C. Swanson) **80d:58050** 58F15 (65L99)
- (with Alexander, J. C.) Calculating bifurcation invariants as elements in the homotopy of the general linear group. *J. Pure Appl. Algebra* **13** (1978), no. 1, 1-8. (Christian Fenske) **80a:58014** 58E07 (47H15, 55Q10)
- (with Chow, Shui Nee; Mallet-Paret, John) Finding zeroes of maps: homotopy methods that are constructive with probability one. *Math. Comp.* **32** (1978), no. 143, 887-899. (Hansgeorg Jögle) **80d:55002** 55M25 (47H10, 65H10, 90C99)
- (with Li, Tien Yien) Ergodic maps on  $[0, 1]$  and nonlinear pseudorandom number generators. *Nonlinear Anal.* **2** (1978), no. 4, 473-481. (L. A. Bunimovich) **80m:58024** 58F11 (65C10)
- (with Chow, Shui Nee; Mallet-Paret, John) Global Hopf bifurcation from a multiple eigenvalue. *Nonlinear Anal.* **2** (1978), no. 6, 753-763. (Christian Fenske) **80a:58015** 58E07 (34C25)
- (with Chow, Shui Nee; Mallet-Paret, John) A homotopy method for locating all zeros of a system of polynomials. *Functional differential equations and approximation of fixed points* (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978), pp. 77-88, *Lecture Notes in Math.*, **730**, Springer, Berlin, 1979. (Ju. G. Borisović) **80k:58012** 58C15 (47H17, 55M20, 65H10)
- (with Kaplan, James L.) Chaotic behavior of multidimensional difference equations. *Functional differential equations and approximation of fixed points* (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978), pp. 204-227, *Lecture Notes in Math.*, **730**, Springer, Berlin, 1979. (Leo Jonker) **80k:58074** 58F13 (39A10)
- (with Kaplan, James L.) Numerical solution of a generalized eigenvalue problem for even mappings. *Functional differential equations and approximation of fixed points* (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978), pp. 228-237, *Lecture Notes in Math.*, **730**, Springer, Berlin, 1979. (Ju. G. Borisović) **80k:47078** 47H17 (55M20, 65H15)
- (with Li, Tien Yien) Path following approaches for solving nonlinear equations: homotopy, continuous Newton and projection. *Functional differential equations and approximation of fixed points* (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978), pp. 257-264, *Lecture Notes in Math.*, **730**, Springer, Berlin, 1979. (From the introduction) **80k:65034** 65H05
- (with Kaplan, James L.) Preturbulence: a regime observed in a fluid flow model of Lorenz. *Comm. Math. Phys.* **67** (1979), no. 2, 93-108. (Richard Cushman) **80f:58028** 58F13 (58F15)

- (with Yorke, Ellen D.) Metastable chaos: the transition to sustained chaotic behavior in the Lorenz model. *J. Statist. Phys.* 21 (1979), no. 3, 263-277. (François Rondy) **80f:76823** 76F99 (58F13)
- (with Kaplan, James L.) Nonassociative, real algebras and quadratic differential equations. *Nonlinear Anal.* 3 (1979), no. 1, 49-51 (1978). (H. Röhrli) **80d:58060** 58F30 (12H05, 17A40, 34A99)
- (with Kaplan, James L.; Sorg, M.) Solutions of  $x'(t) = f(x(t), x(t-L))$  have limits when  $f$  is an order relation. *Nonlinear Anal.* 3 (1979), no. 1, 53-58 (1978). (S. G. Deo) **80b:34088** 34K15
- (with Pianigiani, Giulio) Expanding maps on sets which are almost invariant. Decay and chaos. *Trans. Amer. Math. Soc.* 252 (1979), 351-366. (L. A. Bunimovich) **80i:58030** 58F11 (28D15, 34C35, 58F12)
- Yorozu, S.** (with Kitahara, Haruo) On the Čech bicomplex associated with foliated structures. (French summary) *Ann. Inst. Fourier (Grenoble)* 28 (1978), no. 3, viii, 217-224. (J. C. Thomas) **80c:57016a** 57R30
- (with Kitahara, Haruo) Errata: "On the Čech bicomplex associated with foliated structures" (Ann. Inst. Fourier (Grenoble) 28 (1978), no. 3, 217-224). *Ann. Inst. Fourier (Grenoble)* 29 (1979), no. 2, 104e errata. (Editors) **80c:57016b** 57R30
- Yoshida, Hideo** (with Kawai, Toshiharu) de Sitter gauge theory of gravitation. *Progr. Theoret. Phys.* 62 (1979), no. 1, 266-277. (M. Carmeli) **80b:83016** 83C40 (53C80)
- (with Kawai, Toshiharu) Special relativistic limit of gauge theory of gravitation. *Progr. Theoret. Phys.* 62 (1979), no. 3, 793-801. (Kenneth Dunn) **80m:83040** 83D05
- Yoshida, Kameo** (with Yasui, Munekazu; Kodama, Shinzo) An algorithm for constructing usable and feasible directions. (Japanese. English summary) *Systems and Control* 22 (1978), no. 8, 495-503. (Authors' summary) **80g:65078** 65K10 (90C30)
- Yoshida, Katsunaki** (with Kuribayashi, Akikazu) On the non-hyperelliptic compact Riemann surfaces defined by  $Y^4 = X(X-1)(X-t)$ . *Bull. Fac. Sci. Engrg. Chuo Univ.* 21 (1978), 13-27. (R. F. Lax) **80g:14030b** 14H35 (14H05)
- Yoshida, Kiyoshi** Sur le problème de Cauchy pour des équations faiblement hyperboliques. *J. Math. Soc. Japan* 30 (1978), no. 3, 553-570. (J. Kopáček) **80a:35072** 35L15
- Yoshida, Mamoru** (with Izumi, Hideo) On Finsler spaces of perpendicular scalar curvature. *Tensor (N.S.)* 32 (1978), no. 2, 219-224. (S. Kawaguchi) **80d:53016** 53B40
- Yoshida, Mitsuyoshi** See Kodama, Akito, **80c:01002**
- Yoshida, Norio** (with Naito, Manabu) Oscillation theorems for semilinear elliptic differential operators. *Proc. Roy. Soc. Edinburgh Sect. A* 82 (1978/79), no. 1-2, 135-151. (W. Allegretto) **80i:35007** 35B05
- An oscillation theorem for characteristic initial value problems for nonlinear hyperbolic equations. *Proc. Amer. Math. Soc.* 76 (1979), no. 1, 95-100. (E. S. Noussair) **80i:35008** 35B05
- (with Naito, Mamoru) Oscillation theorems for linear ultrahyperbolic operators. *Utilitas Math.* 15 (1979), 143-159. (M. S. P. Eastham) **80c:35007** 35B05
- Yoshida, Noriyoshi** (with Masuyama, Hiroshi; Ae, Tadashi) On the realization of hazardless asynchronous sequential circuits. *Systems-Comput.-Controls* 8 (1977), no. 3, 59-66 (1979). (Jan Grabowski) **80d:94034** 94C10 (68D20)
- (with Masuyama, Hiroshi) On the realization of a fault-tolerant asynchronous sequential circuit protected against multi-faults. *Systems-Comput.-Controls* 8 (1977), no. 3, 67-76 (1979). (Jan Grabowski) **80d:94035** 94C10 (68D20)
- Yoshida, Tomoyoshi** On  $S^1$  actions on cohomology complex projective spaces. (Japanese) *Sigaku* 29 (1977), no. 2, 154-164. (T. Nagano) **80k:57077** 57S25
- Yoshida, Tomoyuki** On the Hall-Higman and Shult theorems. *Hokkaido Math. J.* 7 (1978), no. 2, 336-338. (J. L. Alperin) **80c:20026** 20D10 (20C20)
- Yoshihara, Hisao** On plane rational curves. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 4, 152-155. (D. Gallart) **80f:14016** 14H20
- Yoshihara, Ken-ichi** Note on multidimensional empirical processes for  $\phi$ -mixing random vectors. *J. Multivariate Anal.* 8 (1978), no. 4, 584-588. (Endre Csáki) **80c:60051** 60F17 (62G99)
- Moment inequalities for mixing sequences. *Kodai Math. J.* 1 (1978), no. 2, 316-328. (F. Móricz) **80f:60033** 60F15 (60F17)
- A weak convergence theorem for functionals of sums of martingale differences. *Yokohama Math. J.* 26 (1978), no. 2, 101-107. (C. C. Heyde) **80c:60036** 60F17 (60G42)
- Yoshikaki, Toshiaki** (with Yoshikawa, Hirosaku) Some notes on Bazilevič functions. *J. London Math. Soc.* (2) 20 (1979), no. 1, 79-85. (L. A. Aksent'ev) **80i:30028** 30C45
- Yoshikawa, Atsushi** Abstract aspects of asymptotic analysis. *J. Math. Soc. Japan* 31 (1979), no. 3, 513-533. (S. Łojasiewicz) **80j:58005** 58C06 (41A60)
- Yoshikawa, Hirosaku** (with Yoshikaki, Toshiaki) Some notes on Bazilevič functions. *J. London Math. Soc.* (2) 20 (1979), no. 1, 79-85. (L. A. Aksent'ev) **80i:30028** 30C45
- Yoshikawa, Tsuneo** Optimal control of large-scale systems—the study of decentralized control systems. (Japanese) *Systems and Control* 22 (1978), no. 11, 645-654. (Tadao Murata) **80f:93017** 93A15 (93E10)
- Condition for existence of solutions of linear equations with arbitrary vectors and its relations to controllability. (Japanese) *Systems and Control* 23 (1979), no. 10, 602-603. (Mamoru Kaneko) **80k:15004** 15A06 (93B05)
- Yoshimura, Tetz** (with Nouri-Moghadam, M.) Application of Altman's contractor techniques to nonlinear integral equations for Green's functions of augmented quantum field theory. *J. Math. Phys.* 20 (1979), no. 1, 20-22. (Charles A. Nelson) **80c:81070** 81E10 (45H05)
- Yoshimura, Toshiro** (with Konishi, K.; Kiyozumi, R.; Soeda, Takashi) Identification of unknown parameters in linear discrete-time systems by a modified extended Kalman filter. *Internat. J. Systems Sci.* 11 (1980), no. 1, 97-105. (Authors' summary) **80j:93127** 93E12
- Yoshimura, Etsuo** (with Suzuki, Masahiko) On the topological types of singularities of Brieskorn-Pham type. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 25* (1978), 37-43. (P. Orlík) **80f:32009** 32C40 (14B05)
- (with Watanabe, Kimio) On the geometric genus and the inner modality of quasihomogeneous isolated singularities. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 25* (1978), 45-53. (H. B. Laufer) **80g:14032** 14J17
- (with Ohyanagi, Shigeaki) A criterion for 2-dimensional normal singularities to be weakly elliptic. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 26* (1979), 5-7. (H. B. Laufer) **80k:32016** 32C40
- (with Suzuki, Masahiko) Topological types of quasihomogeneous singularities in  $\mathbb{C}$ . *Topology* 18 (1979), no. 2, 113-116. (H. B. Laufer) **80k:32017** 32C40
- Yoshino, Kunio** Analytic continuation of arithmetic holomorphic functions on a half-plane. *Tokyo J. Math.* 2 (1979), no. 1, 121-128. (V. Ganapathy Iyer) **80b:30005** 30B40 (32A99, 46F15)
- Yoshizawa, Mitsuo** On 2p-fold transitive permutation groups. *Tokyo J. Math.* 1 (1978), no. 2, 263-267. (Peter Rowlinson) **80b:20002** 20B20
- On infinite four-transitive permutation groups. *J. London Math. Soc.* (2) 19 (1979), no. 3, 437-438. (Wolfgang Knap) **80k:20004** 20B22
- Remarks on multiply transitive permutation groups. *Osaka J. Math.* 16 (1979), no. 1, 31-34. (Peter Rowlinson) **80c:20006** 20B20 (20B10)
- Yosida, Kei** (with Yamada, Kōsaku) Orthogonality catastrophe for a system of interacting electrons. *Progr. Theoret. Phys.* 60 (1978), no. 2, 353-364. (Panayotis Tsimigras) **80g:81082** 81G35
- Yoshimura, Zen-ichi** (with Yanagida, Syun-ichi) Ring spectra with coefficients in  $V(1)$  and  $V(2)$ . I. *Japan. J. Math. (N.S.)* 3 (1977), no. 1, 191-222. (P. S. Landweber) **80h:55005** 55N20 (55N22)
- Ring spectra with coefficients in  $V(1)$  and  $V(2)$ . II. *Japan. J. Math. (N.S.)* 3 (1977), no. 2, 297-312. (P. S. Landweber) **80h:55005b** 55N20 (55N22)
- Yost, David T.** Best approximation and intersections of balls in Banach spaces. *Bull. Austral. Math. Soc.* 20 (1979), no. 2, 285-300. (Sheldon Axler) **80m:46019** 46B20 (41A65)
- (with Robertson, A. Guyan) Chebyshev subspaces of operator algebras. *J. London Math. Soc.* (2) 19 (1979), no. 3, 523-531. (Robert S. Doran) **80j:46097** 46L05
- Yosida, Danté C.** Generalized image restoration by the method of alternating orthogonal projections. Special issue on the mathematical foundations of system theory. *IEEE Trans. Circuits and Systems* 25 (1978), no. 9, 694-702. (Seihaku Higuchi) **80c:94001** 94A05 (46C99, 68G10)
- (with Gnani, G.) Notes on  $n$ -dimensional system theory. *IEEE Trans. Circuits and Systems* 26 (1979), no. 2, 105-111. (Marwan Simaan) **80b:93038** 93B10
- Younes, Yves** (with Grandmont, Jean-Michel; Laroque, Guy) Equilibrium with quantity rationing and recontracting. *J. Econom. Theory* 19 (1978), no. 1, 84-102. (Ronald W. Shephard) **80a:90022** 90A14
- Young, A. D.** See Robinson, Abraham, **80b:01039c**
- Young, D. H.** (with Burr, P. C.) The power of the exponential scores test for an ordinary renewal process against trend alternatives. *Comm. Statist. A—Theory Methods* 7 (1978), no. 5, 461-473. (Z. Šidák) **80c:62070** 62M10 (62G10)
- (with Hashemi-Parast, S. M.) Distribution free slippage tests for populations following a Lehmann model. *J. Statist. Comput. Simulation* 8 (1978/79), no. 34, 237-251. (Authors' summary) **80i:62048** 62G10
- (with Al-Saadi, S. D.; Scrimshaw, D. F.) Tests for independence of exponential variables. *J. Statist. Comput. Simulation* 9 (1979), no. 3, 217-233. (Authors' summary) **80i:62019** 62F04 (62G10)
- Young, Dennis I.** (with Rogers, Gerald S.) On testing a multivariate linear hypothesis when the covariance matrix and its inverse have the same pattern. *J. Amer. Statist. Assoc.* 73 (1978), no. 361, 203-207. (C. G. Khatri) **80c:62075** 62H15 (62H10)
- Young, Donald F.** (with Underwood, Robert G.) Null controllability of nonlinear functional-differential equations. *SIAM J. Control Optim.* 17 (1979), no. 6, 753-772. (D. H. Chyung) **80m:93018** 93B05
- Young, H. P.** On permutations and permutation polytopes. Polyhedral combinatorics. *Math. Programming Stud.* No. 8 (1978), 128-140. (G. N. Kopylov) **80a:05142** 05C48 (05C50)
- (with Balinski, M. L.) Criteria for proportional representation. *Oper. Res.* 27 (1979), no. 1, 80-95. (Maurice Salles) **80c:90014** 90A08 (90A07, 90A20)
- (with Balinski, M. L.) The Webster method of apportionment. *Proc. Nat. Acad. Sci. U.S.A.* 77 (1980), no. 1, part 1, 1-4. (Authors' summary) **80j:90013** 90A08 (92A20)
- Young, Ian T.** Further consideration of sample and feature size. *IEEE Trans. Inform. Theory* 24 (1978), no. 6, 773-775. (V. D. Dimitrov) **80a:68110** 68G10 (94A15)
- (with van Otterloo, Peter J.) A distribution-free geometric upper bound for the probability of error of a minimum distance classifier. *Pattern Recognition* 10 (1978), no. 4, 281-286. (Authors' summary) **80d:68121** 68G10 (62H30)
- Young, K. David** (with Utkin, V. I.) Methods for constructing discontinuity planes in multidimensional variable structure systems. *Automat. i Telemekh.* 1978, no. 10, 72-77. (Russian. English summary); translated as *Automat. Remote Control* 39 (1978), no. 10, part 1, 1466-1470 (1979). (Authors' summary) **80d:93039** 93C15
- Young, Kenneth** (with Brandt, Richard A.) Electric-magnetic duality as a secondary symmetry. *Nuclear Phys. B* 162 (1980), no. 1, 168-188. (H. Rund) **80k:81208** 81L05 (81E10)
- Young, Kiang Chuen** (with Cannon, John J.; McKay, John) The nonabelian simple groups  $G$ ,  $|G| < 10^5$ —presentations. *Comm. Algebra* 7 (1979), no. 13, 1397-1406. (Authors' summary) **80c:20023** 20D08
- (with McKay, John) The nonabelian simple groups  $G$ ,  $|G| < 10^5$ —minimal generating pairs. *Math. Comp.* 33 (1979), no. 146, 812-814. (W. J. Wong) **80d:20018** 20D05 (20F05)
- Young, Lai Sang** A closing lemma on the interval. *Invent. Math.* 54 (1979), no. 2, 179-187. (S. Ju. Pilugin) **80k:58084** 58F20
- Young, N. J.** Norms of matrix powers. *Comment. Math. Univ. Carolin.* 19 (1978), no. 3, 415-430. (Robert Grone) **80g:15013** 15A24
- Norms of certain rational functions of a matrix and Schur's criterion for polynomials. *Comment. Math. Univ. Carolin.* 19 (1978), no. 4, 673-688. (Author's summary) **80d:15021** 15A42 (12D10, 47A30)
- Analytic programmes in matrix algebras. *Proc. London Math. Soc.* (3) 36 (1978), no. 2, 226-242. (V. Pták) **80g:15027a** 15A60 (47A30)
- Linear fractional transforms of companion matrices. *Glasgow Math. J.* 20 (1979), no. 2, 129-132. (I. Enescu) **80j:15001** 15A04
- An identity which implies Colln's theorem on the zeros of a polynomial. *J. Math. Anal. Appl.* 70 (1979), no. 1, 240-248. (J. W. Schmidt) **80c:65053** 65H05
- Norms of powers of matrices with constrained spectra. *Linear Algebra Appl.* 23 (1979), 227-244. (V. Pták) **80g:15027b** 15A60 (47A30)
- Young, Paul** (with Shay, Margaret) Characterizing the orders changed by program



- translators. *Pacific J. Math.* 76 (1978), no. 2, 485-490. (Cristian Calude) **80a:03053**  
03D20 (68B05)
- Young, Ralph H. Quantum mechanics based on position. *Found. Phys.* 10 (1980), no. 1-2, 33-56. (Author's summary) **80m:81011** 81B05
- Young, Robert M. On a completeness theorem of Paley and Wiener. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 349-350. (V. Ganapathy Iyer) **80a:42007** 42A38 (30B60, 46E99)
- Young, Wo Sang Weighted norm inequalities for multipliers. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 1*, pp. 133-139. *Proc. Sympos. Pure Math., XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979.* (Douglas Kurtz) **80m:42018** 42A45
- Younger, D. H. (with Lucchesi, Claudio L.) A minimax theorem for directed graphs. *J. London Math. Soc.* (2) 17 (1978), no. 3, 369-374. (Jean H. Bevis) **80e:05062** 05C20
- Youngson, M. A. Equivalent norms on Banach Jordan algebras. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 2, 261-269. (J. D. Maitland Wright) **80i:46049** 46K99 (17C10, 17C65)
- Hermitian operators on Banach Jordan algebras. *Proc. Edinburgh Math. Soc.* (2) 22 (1979), no. 2, 169-180. (F. F. Bonsall) **80j:46090** 46K99 (17C65, 47B15)
- Younis, Rahman Interpolation by a finite Blaschke product. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 451-452. (D. Protas) **80k:30035** 30D50 (30C15, 30E05)
- Yoursgrau, W. The enigmatic role of variational principles in theoretical physics. *Proceedings of the Symposium on the Foundations of Modern Physics (Loma-Koli, 1977)*, pp. 139-168. *Publ. Univ. Joensuu, Ser. B1, 14, Univ. Joensuu, Joensuu, 1978.* (Vadim Komkov) **80j:49043** 49H05 (70H05, 81-03)
- (with v. Borzeszkowski, H.; Treder, Hans-Jürgen) Gravitational field equations of fourth order and supersymmetry. (German summary) *Ann. Physik* (7) 35 (1978), no. 6, 471-480. (R. Behari) **80a:83003** 83C05 (53B30)
- (with Mercier, André; Treder, Hans-Jürgen) ★On general relativity. An analysis of the fundamentals of the theory of general relativity and gravitation. *Akademie-Verlag, Berlin, 1979.* 154 pp. (C. B. Collins) **80a:83028** 83C99 (53C80)
- (with von Borzeszkowski, H.-H.; Treder, Hans-Jürgen) On singularities in electrodynamics and gravitational theory. *Astronom. Nachr.* 300 (1979), no. 2, 57-62. (Richard Sigal) **80c:83008** 83C10 (53A40)
- (with von Borzeszkowski, H.-H.) Equivalence principle, gravitational collapse, and the classical particle problem. *J. Phys. A* 12 (1979), no. 3, 361-365. (H. Treder) **80f:83042** 83D05
- Yu, Chia Yung See Yu, Jia Rong
- Yu, Chie Y. (with Tzeng, Kenneth K.) Characterization theorems for extending Goppa codes to cyclic codes. *IEEE Trans. Inform. Theory* 25 (1979), no. 2, 246-250. (Authors' summary) **80i:94018** 94B05 (94B15)
- Yu, Chung Ling Generalized coagulation function theorems for solutions of first-order elliptic systems on the plane. *Trans. Amer. Math. Soc.* 244 (1978), 1-34. (E. M. Saak) **80d:35055** 35J55 (30G20)
- Yu, Jia Rong Sur la croissance et la répartition des valeurs des séries de Dirichlet qui ne convergent que dans un demi-plan. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 19, A891-A893. (M. E. Noble) **80i:30009** 30B50
- Yu, Kun Rui (with Wang, Yuan; Zhu, Yao Chen) A transfer theorem for linear forms. (Chinese) *Acta Math. Sinica* 22 (1979), no. 2, 237-240. (Jau-Shyong Shue) **80k:10027** 10F10
- Yu, P. L. (with Seiford, L.) Potential solutions of linear systems: the multi-criteria multiple constraint levels program. *J. Math. Anal. Appl.* 69 (1979), no. 2, 283-303. (K. G. Murty) **80i:90078** 90C05
- Second-order game problem: decision dynamics in gaming phenomena. *J. Optim. Theory Appl.* 27 (1979), no. 1, 147-166. (From the summary) **80c:90182** 90D35
- (with Gupta, Rajendra K.; Srinivasan, V.) Optimal state-dependent pricing policies for a class of stochastic multiunit service systems. *Naval Res. Logist. Quart.* 26 (1979), no. 2, 257-283. (B. W. Stuck) **80c:90066** 90B22
- Yu, P. M. V. (with Bouillon, T. L.; Watkins, T. A.) The use of prior information in linear regression. *Comm. Statist. A—Theory Methods* 7 (1978), no. 1, 81-95. (R. Zmyslony) **80d:62053** 62J05
- Yu, Yun Lin An intrinsic proof of the Gauss-Bonnet formula. (Chinese) *Acta Math. Sinica* 20 (1977), no. 1, 49-60. (Wu-Hsiung Huang) **80a:53069** 53C20 (53C05)
- Yu, Zu Rong (with Chen, Jin Quan; Wang, Fan; Gao, Mei Juan) The relation between the permutation group and the unitary group. (Chinese) *Kexue Tongbao* 1978, no. 5, 291-294. (Takayuki Nono) **80a:22024** 22E70
- Yuan, Hsi Shih Subvarieties of codimension  $\geq 2$ . *Bull. Inst. Math. Acad. Sinica* 6 (1978), no. 1, 189-196. (H. B. Laufer) **80f:32005** 32C25
- The configuration of singular varieties. *Bull. Inst. Math. Acad. Sinica* 7 (1979), no. 4, 419-429. (Lawrence Brenton) **80m:32014** 32C42 (32C40)
- Yuan Tu Nan See Yuan, Tu Nan
- Yudin, A. D. See Judin, A. D.
- Yu, D. K. P. (with Aranha, J. A.; Mei, C. C.) Some properties of a hybrid element method for water waves. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 11, 1627-1641. (Muri M. Gupta) **80m:76015** 76B15 (65N30)
- Yui, Min Yi (with Han, Ji Ye) A new method for the  $m \times n$  flow-shop sequencing problem. (Chinese. English summary) *Kexue Tongbao* 24 (1979), no. 18, 821-824. (Authors' summary) **80m:90060** 90B35
- Yuen, Horace P. (with Shapiro, Jeffrey H.) Optical communication with two-photon coherent states. I. Quantum-state propagation and quantum-noise reduction. *IEEE Trans. Inform. Theory* 24 (1978), no. 6, 657-668. (Carl W. Helstrom) **80f:94005a** 94A05 (81K05)
- (with Shapiro, Jeffrey H.; Machado Mata, Jesus A.) Optical communication with two-photon coherent states. II. Photoemissive detection and structured receiver performance. *IEEE Trans. Inform. Theory* 25 (1979), no. 2, 179-192. (Carl W. Helstrom) **80f:94005b** 94A05 (81K05)
- Yuge, Y. (with Murase, C.) A renormalisation group approach for two-dimensional percolating systems: honeycomb bond lattice and Kagomé lattice. *J. Phys. A* 12 (1979), no. 9, 1541-1546. (R. Piziak) **80g:82042** 82A67
- Yul, Noriko On the  $p$ -divisible groups arising from Fermat curves. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 4, 191-194. (N. M. Glazunov) **80k:14047** 14L05
- Correction: "Explicit form of the modular equation" (J. Reine Angew. Math. 299/300 (1978), 185-200). *J. Reine Angew. Math.* 302 (1978), 70. (Editors) **80a:10032** 10D05 (14K07)
- A note on formal groups and zeta functions. *J. Reine Angew. Math.* 303/304 (1978), 159-169. (Reinhard Bölling) **80c:14029** 14L05 (12A70, 14G25)
- Elliptic curves and canonical subgroups of formal groups. *J. Reine Angew. Math.* 303/304 (1978), 319-331. (Reinhard Bölling) **80c:14027** 14K07 (14G20, 14L05)
- Formal groups and some arithmetic properties of elliptic curves. *Algebraic geometry (Proc. Summer Meeting, Univ. Copenhagen, Copenhagen, 1978)*, pp. 630-658. *Lecture Notes in Math.* 732. Springer, Berlin, 1979. (Neal Koblitz) **80m:14027** 14K07 (14L05)
- Yuille, A. L. Yang-Mills instantons in self-dual spacetimes. *Phys. Lett. B* 81 (1979), no. 3-4, 321-324. (Author's summary) **80c:81074** 81E10 (58G10)
- Yukami, Tsuyoshi A note on a formalized arithmetic with function symbols ' and +. *Tsukuba J. Math.* 2 (1978), 69-73. (A. Kino) **80g:03058** 03F30
- Yun, David Y. Y. (with Gustavson, Fred G.) Fast algorithms for rational Hermite approximation and solution of Toeplitz systems. *IEEE Trans. Circuits and Systems* 26 (1979), no. 9, 750-755. (Authors' summary) **80a:68040** 68C25 (94B15, 94C10)
- Uniform bounds for a class of algebraic mappings. *SIAM J. Comput.* 8 (1979), no. 3, 348-356. (Author's summary) **80c:68129** 68C25 (94A12)
- Yun, Kwan Koo A note on some perturbation theorems for price dynamics in an exchange economy. *Internat. Econom. Rev.* 20 (1979), no. 2, 359-365. (Hans Keiding) **80j:90040** 90A14 (90A16)
- On the existence of a unique and stable market equilibrium. *J. Econom. Theory* 20 (1979), no. 1, 118-123. (J. M. Gaffney) **80c:90025** 90A14
- Yun, Suk Koo Unified SU(6) gauge theory of the strong, weak, and electromagnetic interactions. *Phys. Rev. D* (3) 18 (1978), no. 9, 3472-3475. (M. Hongoh) **80j:81082** 81G20
- Yurtseven, H. Ömer (with Askar, Murat; Derin, Haluk) On joint detection and estimation of Gauss-Markov processes. *Internat. J. Control* 30 (1979), no. 6, 1031-1042. (Jan H. Van Schuppen) **80m:93080** 93E10 (62M07)
- Yushchenko, E. L. See Juschenko, K. L.
- Yushkevich, A. A. See Juskevich, A. A.
- Yutani, Hiroshi Categoricity in the theory of BCK-algebras. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 1, 133-135. (U. Wybraniec-Skardowska) **80a:03084** 03G25 (03C35, 06D99)
- Congruences on the products of BCK-algebras. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 1, 169-176. (J. Michael Dean) **80a:03085** 03G25 (06D99)
- Coequalizer in the category of BCK-algebras. *Math. Sem. Notes Kobe Univ.* 6 (1978), no. 2, 187-188. (V. Topenčarov) **80b:18003** 18A30 (03G25)
- Coequalizer in the category of BCK-algebras. II. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 1, 143-144. (V. Topenčarov) **80b:18014** 18E10 (03G25, 06D99)
- Yu Tsu-rong See Yu, Zu Rong
- Yural, G. Corrigendum: "A simple proof of Strassen's result" (Inform. Process. Lett. 7 (1978), no. 6, 285-286). *Inform. Process. Lett.* 8 (1979), no. 5, 278. (Editors) **80c:68035** 68C25
- Yvon, J. P. (with Bamberger, A.; Jaffre, J.) Punctual control of a vibrating string: numerical analysis. *Comput. Math. Appl.* 4 (1978), no. 2, 113-138. (Vadim Komkov) **80a:73024** 73D30 (00A89)
- (with Bamberger, A.; Sorine, M.) Analyse et contrôle d'un réseau de transport de gaz. *Computing methods in applied sciences and engineering (Proc. Third Internat. Sympos., Versailles, 1977)*, 11, pp. 347-359. *Lecture Notes in Phys.* 91. Springer, Berlin, 1979. (Authors' introduction) **80a:82039** 82A70 (93C99)
- Zaenen, A. C. Kernel operators. *Linear spaces and approximation (Proc. Conf., Math. Res. Inst., Oberwolfach, 1977)*, pp. 23-31. *Internat. Ser. Numer. Math.* 40. Birkhäuser, Basel, 1978. (S. Newberger) **80a:47045** 47B38
- (with Claas, W. J.) Orlicz lattices. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 1 (1978), 77-93. (W. A. J. Luxemburg) **80b:46010** 46A40 (46B30)
- Zabczyński, Jerzy A semigroup approach to boundary value control. *Control of distributed parameter systems (Proc. Second IFAC Sympos., Coventry, 1977)*, pp. 99-107. IFAC, Düsseldorf, 1978. (Andrzej W. Olbrot) **80f:93055** 93C99
- (with Cowan, Richard) An optimal selection problem associated with the Poisson process. (Russian summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 3, 606-614. (S. M. Samuels) **80c:60059** 60G40
- Zabell, Sandy Continuous versions of regular conditional distributions. *Ann. Probab.* 7 (1979), no. 1, 159-165. (Albert Tortrat) **80f:60020** 60E05
- (with Bahadur, R. R.) Large deviations of the sample mean in general vector spaces. *Ann. Probab.* 7 (1979), no. 4, 587-621. (P. Révész) **80f:60031** 60F10 (60B12)
- Zabetto, L. E. Controllability of nonstationary systems with delay. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 109-117, 315. *Irkutsk. Gos. Univ., Irkutsk*, 1976. (Author's summary) **80j:93030** 93B05
- (with Fedulov, L. V.) A method for improving the admissible variants of jobs defined by a netlike graph. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* 1978, no. 2, 17-19, 93. (N. B. Lebedinskaja) **80a:90069** 90B10 (93C99)
- Uniqueness of Pontryagin's extremals in noninvariant systems with aftereffect. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 4, 304-306, 380. (V. B. Smirnova) **80g:49028** 49B10 (93C10)
- Zabolockaja, A. F. The asymptotic behavior of the  $s$ -step method of steepest descent in Hilbert space. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 1, 228-232, 271. (A. A. Fonarev) **80d:49027** 49D10 (65K10)
- Zabolotnyi, A. M. (with Varlavskij, V. L.; Seredinski, F.) Homogeneous games with an associated exchange process. *Izv. Akad. Nauk SSSR Tekh. Kibernet.* 1977, no. 6, 132-134 (Russian); translated as *Engrg. Cybernetics* 15 (1977), no. 6, 99-101 (1978). (Authors' summary) **80b:90169** 90D30 (68A05)
- Zabrejko, P. P. (with Smicikh, S. V.) On the problem of calculating the index of a zero singular point of completely continuous vector fields with positive operators. (Russian) *Kvalitative i approximate methods for the investigation of operator equations*, No. 2 (Russian), pp. 52-69. *Jaroslavl. Gos. Univ., Yaroslavl, 1977.* (Ulrich Kosel) **80m:47063** 47H15 (58E05)

- (with Smickih, S. V.) A theorem of M. G. Krein and M. A. Rutman. (Russian) *Funktsional. Anal. i Prilozhen.* 13 (1979), no. 3, 81–82. (A. V. Buhvalov) **80j:47050** 47B55
- (with Isakov, N. M.) Reduction principle for the method of successive approximations and invariant manifolds. (Russian) *Sibirsk. Mat. Zh.* 20 (1979), no. 3, 539–547, 692. (Ju. E. Glukhikh) **80j:58050** 58F10 (47H12)
- See also Qualitative and approximate methods for the investigation of operator equations. **80j:47002** and Qualitative and approximate methods for the investigation of operator equations. **80j:47002**
- Zabrodskii, V. A. (with Ivačenko, P. A.) Method of constructing boundaries of domains of operation of an economic-industrial system. (Russian) *Automat. Sistemy Upravlenija i Pribojy* *Automat. No.* 49 (1979), 80–86, 4. (Authors' summary) **80h:93081** 93E20
- Zabrodskiy, A. (with Cooke, George E.; Harper, John R.) Torsion free mod  $p$   $H$ -spaces of low rank. *Topology* 18 (1979), no. 4, 349–359. (Albert O. Shar) **80k:55032** 55P45 (55P60)
- Zabusky, Norman J. Contour dynamics for the Euler equations in two dimensions. *J. Comput. Phys.* 30 (1979), no. 1, 96–106. (W. F. Ames) **80j:76016** 76C05
- Zachar, Z. The solvability of the equivalence problem for deterministic frontier-to-root tree transducers. *Acta Cybernet.* 4 (1978/79), no. 2, 167–177. (From the introduction) **80h:68045** 68C30 (68D15)
- Zacharias, Klam On the numerical treatment of wave-envelope equations. *Theory of nonlinear operators (Proc. Fifth Internat. Summer School, Central Inst. Math. Mech. Acad. Sci. GDR, Berlin, 1977)*, pp. 293–300, *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1978, 6, Akademie-Verlag, Berlin, 1978. (Vladimir L. Savčev) **80j:82023** 82A45 (65N99)
- (with Gajewski, Herbert) On the convergence of Fourier's method for nonlinear wave-envelope equations. (German and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 1, 37–41. (R. Glassey) **80e:35055** 35Q20 (65P05)
- Zacharias, Andreas Reversible orthogonalization. *Math. Balkanica* 6 (1976), 311–313 (1978). (O. P. Kapoor) **80i:46021** 46C05
- Zacher, Giovanni The lattice of subgroups of the symmetric group. (Italian. English summary) *Rend. Istit. Mat. Univ. Trieste* 9 (1977), no. 1–2, 122–126 (1978). (J. Wiegold) **80e:20043** 20E15 (20B35)
- Zachmann, David W. Nonlinear analysis of a twisted axially loaded elastic rod. *Quart. Appl. Math.* 37 (1979/80), no. 1, 67–72. (Vadim Komkov) **80i:73018** 73C50 (34A34)
- Zachmannsgen, E. C. (with Baouendi, M. S.) Unique continuation theorems for solutions of partial differential equations and inequalities. *Équations aux dérivées partielles (Proc. Conf., Saint-Jean-de-Monts, 1977)*, pp. 9–15, *Lecture Notes in Math.*, 660, Springer, Berlin, 1978. (Jorge Hounie) **80d:35007** 35A10
- (with Baouendi, M. S.) Unique continuation of solutions of partial differential equations and inequalities from manifolds of any dimension. *Duke Math. J.* 45 (1978), no. 1, 1–13. (H. O. Cordes) **80i:35005** 35A05 (58G15)
- (with Baouendi, M. S.; Treves, F.) Flat solutions and singular solutions of homogeneous linear partial differential equations with analytic coefficients. *Duke Math. J.* 46 (1979), no. 2, 409–440. (Alexander A. Pankov) **80h:35034** 35H05 (35A07, 58G15)
- Zachow, Ernst-Wilhelm (with Rauhut, Burkhard; Schmitz, Norbert) ★Spieltheorie. Eine Einführung in die mathematische Theorie strategischer Spiele. Leitfaden der Angewandten Mathematik und Mechanik, 49. B. G. Teubner, Stuttgart, 1979. 400 pp. ISBN 3-519-02351-2 (J. Rosenmüller) **80j:90001** 90–01 (90D99)
- Expected utility in two-person games. *Math. Oper. Res.* 4 (1979), no. 2, 186–195. (Norbert Schmitz) **80g:90013** 90A10 (90D30)
- Zadeva, N. G. (with Šerbat, A. I.) Solution of a boundary value problem for a system of nonlinear equations by the grid method. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 1, 24–28, 138. (Jaroslav Jelen) **80k:65082** 65N10
- Zadach, M. I. Remark on the number of connectivity components of certain sets of systems that are elliptic in the sense of Douglas and Nirenberg. (Russian) *Mat. Fiz. No.* 24 (1978), 89–91, 123. (Jan Bochenek) **80j:35036** 35G99 (58G10)
- Tagi-Zade, A. T. See Tagi-Zade, A. T.
- Abdulla-Zade, H. F. See Abdulla-Zade, H. F.
- Aida-Zade, K. R. See Aida-Zade, K. R.
- Akbar-Zadeh, Hassan See Akbar-Zadeh, Hassan
- Bijan-Zadeh, Mohammad H. See Bijan-Zadeh, Mohammad H.
- Zadereš, P. J. Approximation of conjugate functions of two variables by Fourier and Fejér sums. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 5* (1978), 40 pp. (V. N. Temjakov) **80i:42004** 42A10
- Zadereš, P. V. Approximation of conjugate functions by Fejér sums. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 10* (1978), 874–878, 955. (M. Tomić) **80h:42019** 42B05
- Zafarani, Jafar On compact subsets of quotient spaces. *Proceedings of the Eighth National Mathematics Conference (Arya-Mehr Univ. Tech., Tehran, 1977)*, pp. 346–349, *Arya-Mehr Univ. Tech., Tehran, 1977*. (T. Husain) **80e:46003** 46A06
- The strict topology and topological measure theory for completely regular spaces. *Proceedings of the Seventh National Mathematics Conference (Dept. Math., Azarabadegan Univ., Tabriz, 1976)*, pp. 420–435, *Azarabadegan Univ., Tabriz, 1977*. (A. H. Stone) **80d:28019** 28A33 (46E10)
- Zafar, Minhu A multilinear interpolation theorem. *Studia Math.* 62 (1978), no. 2, 107–124. (Colin Bennett) **80e:46119** 46M35 (46E99)
- On the symbolic calculus in homogeneous Banach algebras. *Israel J. Math.* 32 (1979), no. 2–3, 183–192. (Colin C. Graham) **80g:43007** 43A15 (46J10)
- Zăgărescu, M. The incomplete beta-function in the theory of the Veneziano-function. (Romanian summary) *An. Univ. Timișoara Ser. Științ. Fiz.-Chim.* 14 (1976), no. 2, 21–28 (1978). (A. O. Barut) **80e:81097** 81G20 (22E45, 33A30)
- Theta functions as solutions of the Schrödinger equation. (Romanian summary) *An. Univ. Timișoara Ser. Științ. Fiz.-Chim.* 15 (1977), no. 2, 11–19 (1978). (K. Kumar) **80e:81038a** 81C99 (14K25)
- Energy spectrum and statistical sum of a system of  $4k$  particles. (Romanian summary) *An. Univ. Timișoara Ser. Științ. Fiz.-Chim.* 15 (1977), no. 2, 21–31 (1978). (K. Kumar) **80e:81038b** 81C99 (10D25)
- Zaghloul, Mona Elwakilad (with Bryant, Peter R.) Error bounds on dynamic solutions of nonlinear networks when using approximate element characteristics. 1978 *IEEE International Symposium on Circuits and Systems (New York, 1978)*, pp. 831–835, *IEEE, New York, 1978*. (Zdeněk Ertinger) **80f:94034** 94C05
- (with Bryant, Peter R.) Error bounds on solutions of nonlinear networks when using approximate element characteristics. *IEEE Trans. Circuits and Systems* 27 (1980), no. 1, 20–29. (Authors' summary) **80m:94081** 94C05
- Zagirov, N. S. (with Agahov, S. A.) Approximation of the function sign  $x$  in the uniform and the integral metric by rational fractions. (Russian) *Mat. Zametki* 23 (1978), no. 6, 825–838. (Bl. Sendov) **80e:41010** 41A20
- Zagirova, F. Ja. Some difference equations that arise in the theory of cubature formulas. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent) No.* 51 (1978), 38–43, 226. (Author's summary) **80e:65068** 65D32
- Zagonov, V. P. (with Arsenin, V. Ja.) A class of inverse problems of the propagation of radio waves. (Russian) *Problems in mathematical physics and numerical mathematics (Russian)*, pp. 13–24, 323, "Nauka", Moscow, 1977. (Authors' summary) **80e:78011** 78A40
- (with Arsenin, V. Ja.; Trahoniotskaja, R. A.) Numerical solution of convolution-type integral equations of the first kind on nonuniform grids. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No.* 141 (1978), 26 pp. (Authors' summary) **80e:65123** 65R20 (45L10)
- Zagrebnev, V. A. (with Klemm, A.) On Dicke-type Hamiltonians with hidden variables. *Phys. A* 92 (1978), no. 3–4, 599–615. (Czesław Jodrzycki) **80e:82007** 82A05
- (with Pastur, L. A.) Singular interaction potentials in classical statistical mechanics. (Russian. English summary) *Theoret. Mat. Fiz.* 36 (1978), no. 3, 352–372. (Marko V. Jarić) **80h:82032** 82A30 (46N05)
- (with Brankov, I. G.; Tončev, N. S.) On a class of exactly soluble statistical mechanical models with nonpolynomial interactions. *J. Statist. Phys.* 20 (1979), no. 3, 317–330. (Authors' summary) **80h:82026** 82A30 (47D45)
- Zagustin, Elena A. (with Kalaba, Robert E.; Ikeda, George) Solution of the Falkner-Skan equation by quasilinearization. *Numerical methods in laminar and turbulent flow (Proc. First Internat. Conf., Univ. College Swansea, Swansea, 1978)*, pp. 379–385, *Halsted, New York, 1978*. (Silvio Nocilla) **80j:76017** 76D10
- (with Kalaba, Robert E.; Meier, George) An initial value method for orthogonal polynomials. *Comput. Math. Appl.* 4 (1978), no. 2, 189–197. (V. L. Makarov) **80e:65060** 65D99 (65L05)
- (with Kalaba, Robert E.) Estimation of parameters for a beam on an elastic foundation with large deflections and built in at both ends. *Comput. Math. Appl.* 4 (1978), no. 3, 257–263. (From the text) **80h:73048** 73K05 (00A89)
- (with Kalaba, Robert E.) A matrix stability criterion which does not involve forming the characteristic polynomial. *J. Franklin Inst.* 306 (1978), no. 4, 303–308. (Robert J. Mulholland) **80h:93135** 93D15
- (with Kalaba, Robert E.) An initial-value method for the determinantal equations of vibrations and flutter. *J. Optim. Theory Appl.* 28 (1979), no. 2, 157–162. (Authors' summary) **80e:65088** 65F15 (73D30)
- Zahar, Elie See Lakatos, Imre, **80k:00018**
- Zahar, R. V. M. Recurrence techniques for a differential eigenvalue problem. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1978)*, pp. 479–485, *Congress. Numer., XXII, Utilitas Math., Winnipeg, Man., 1979*. (R. R. D. Kemp) **80h:34031** 34B25 (34A50, 65L15)
- Zaharevič, M. I. The behavior of trajectories and the ergodic hypothesis for quadratic mappings of a simplex. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 6(204), 207–208. (D. Newton) **80k:58070** 58F11 (28D99, 92A15)
- Zaharin, O. M. The distribution of the time up to the accumulation of a profit of a given size in a discrete nonstationary Markov system. (Russian) *Application of mathematical methods in economic investigations and planning (Russian)*, pp. 9–17, *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev, 1978*. (Gh. Oprea) **80m:60082** 60J27 (60K30)
- Complex randomized semi-Markov processes. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 6, 94–97. (B. Dimitrov) **80i:60125** 60K15
- Enlargement and decomposition of homogeneous Markov processes. (Russian) *Ukrain. Mat. Zh.* 30 (1978), no. 5, 602–610, 716. (Serban Grigorescu) **80d:60095** 60J27 (60J10)
- An ergodic theorem for single-component randomized semi-Markov processes. (Russian) *Ukrain. Mat. Zh.* 30 (1978), no. 6, 809–811, 862. (Gh. Oprea) **80h:60110** 60K15
- (with Borozdin, O. P.; Ežov, I. I.) Estimation of the efficiency of the functioning of a class of regenerative systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 3* (1979), 215–218, 240. (Ștefan P. Niculescu) **80k:60104** 60K15
- Investigation of a discrete semi-Markov system with independent increments of profits and losses. (Russian. English summary) *Elektronnoe Modelirovanie No. 1* (1980), 100–101, 112. (Authors' summary) **80m:60091** 60K15
- Zahar-Iltik, M. H. A vector double sweep method and simplex geometry. (Russian) *Funktsional. Anal. i Prilozhen.* 12 (1978), no. 3, 78–79. (E. G. Djakovon) **80e:65161** 65L05 (34A45)
- Dissipativity conditions and a matrix Weyl limit point. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 3(207), 195. (F. Neuman) **80i:34013** 34A30 (34B20)
- Zaharjan, V. S. Segment variation of a potential of Green type. (Russian. Armenian summary) *Akad. Nauk Arman. SSR Dokl.* 66 (1978), no. 4, 212–215. (W. H. J. Fuchi) **80d:30033** 30D50 (31A15)
- Zaharov, A. Ju. Some results of comparison of the effectiveness of the solution of systems of ordinary differential equations. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No.* 125 (1979), 34 pp. (Author's summary) **80h:65065** 65L05
- Zaharov, A. V. (with Ignat'ev, Ju. G.) Radial plasma oscillations in the Schwarzschild field. (Russian) *Gravitacija i Teor. Otinosiel'nosti* 102 (1977), 96–107. (M. Drăganu) **80f:82038** 82A45 (83C99)
- Influence of collisionless particles on the growth of gravitational perturbations in an isotropic universe. *Ž. Èksp. Teoret. Fiz.* 77 (1979), no. 2, 434–450 (Russian); translated as *Soviet Phys. JETP* 50 (1979), no. 2, 221–228. (Author's summary) **80k:83056** 83F05
- Zaharov, E. V. (with Eremin, Ju. A.) A method for solving axially symmetric problems of



- electromagnetic wave diffraction on axisymmetric bodies. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 5, 1344–1348, 1360. (Authors' summary) **80j:78009** 78A45
- Zakharov, G. K. On the contraction method for a class of admissible controls. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 2(206), 197–198. (E. G. Albrecht) **80a:93020** 93B40
- Zakharov, Ju. N. (with Janenko, N. N.; Okunov, V. V.; Sokin, Ju. I.; Panichin, A. V.) Two iteration schemes for the solution of a stationary system of Navier-Stokes equations. (Russian) *Complex analysis and its applications* (Russian), pp. 638–652, 672, "Nauka", Moscow, 1978. (Muri M. Gupta) **80j:65038** 65P05 (76D05)
- Zakharov, N. A. (with Kustov, E. F.; Steczko, G.) Application of unitary groups for determining tensor components in crystals and selection principles for phase transitions. *Phys. Status Solidi (B)* 91 (1979), no. 1, 43–57. (P. M. van den Broek) **80a:82033** 82A60 (20C35, 22E70)
- Zakharov, V. E. (with Belavin, A. A.) Yang-Mills equations as inverse scattering problem. *Mathematical problems in theoretical physics* (Proc. Internat. Conf., Univ. Rome, Rome, 1977), pp. 229–234, *Lecture Notes in Phys.*, 80, Springer, Berlin, 1978. (C. S. Sharma) **80b:81069** 81E10 (58E20, 58F07, 58G25)
- (with Mikhailov, A. V.) Relativistically invariant two-dimensional models of field theory which are integrable by means of the inverse scattering problem method. *Ž. Eksp. Teoret. Fiz.* 74 (1978), no. 6, 1953–1973 (Russian); translated as *Soviet Phys. JETP* 47 (1978), no. 6, 1017–1027 (1979). (Authors' summary) **80a:81115** 81F99 (53C30)
- (with Belinskii, V. A.) Integration of the Einstein equations by means of the inverse scattering problem technique and construction of exact soliton solutions. *Ž. Eksp. Teoret. Fiz.* 75 (1978), no. 6, 1955–1971 (Russian); translated as *Soviet Phys. JETP* 48 (1978), no. 6, 985–994. (A. F. da F. Teixeira) **80a:83009** 83C15 (35C05, 81M05)
- (with Belinskii, V. A.) Stationary gravitational solitons with axial symmetry. *Ž. Eksp. Teoret. Fiz.* 77 (1979), no. 1, 3–19 (Russian); translated as *Soviet Phys. JETP* 50 (1979), no. 1, 1–9. (Authors' summary) **80a:83005** 83C10 (76B25, 78A45)
- (with Tahtadjan, L. A.) Equivalence of a nonlinear Schrödinger equation and a Heisenberg ferromagnet equation. (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 1, 26–35. (Authors' summary) **80d:82026** 82A05
- Zakharov, V. I. (with Šifman, M. A.; Vainštein, A. I.) Instantons in nonperturbative QCD vacuum. *Nuclear Phys. B* 165 (1980), no. 1, 45–54. (Authors' summary) **80a:81094** 81G05
- Zakharov, V. K. Construction of all locally compact and all locally compact paracompact extensions. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 6(204), 209. (Aleksander Blaszczyk) **80a:54012** 54C20
- Zakharov, V. N. (with Pospelov, D. A.; Haczakii, V. E.) ★ Steuerungssysteme. Aufgabenstellung, Projektierung, Realisierung. Translated from the Russian by Günter Müller. Edited by Herbert Ehrlich. Elektronisches Rechnen und Regeln, Sonderband, 26. Akademie-Verlag, Berlin, 1979. x+442 pp. (Editors) **80d:93019** 93A99 (90A05)
- Zakharov, V. V. (with Presler, V. T.) The influence of the nonlinearity of a function on the effectiveness of the estimate of its gradient. (Russian) Adaptation problems in technical systems. *Problemy Slušai. Poiska* No. 7 (1978), 149–158, 319. (Authors' summary) **80a:65072** 65K10
- Zakharova, E. N. Radically semisimple classes and strong  $\mathfrak{g}$ -semisimplicity of locally finite PI-algebras. (Russian) Ring-theoretical constructions. *Mat. Issled.* No. 49 (1979), 68–79, 162. (Ju. N. Mal'cev) **80a:16024** 16A38 (16A21)
- Zakher, Neyamat On generalized polars of the product of abstract homogeneous polynomials. *Pacific J. Math.* 74 (1978), no. 2, 535–557. (A. Evyatar (Gutwirth)) **80a:12019** 12D10
- Zaher, Raphael S. (with Sussmann, Héctor J.) A critique of applied catastrophe theory in the behavioral sciences. Applications of catastrophe theory in the behavioral and life sciences. *Behavioral Sci.* 23 (1978), no. 5, 383–389. (Editors) **80a:58018** 58C28
- (with Sussmann, Héctor J.) Catastrophe theory as applied to the social and biological sciences: a critique. Mathematical methods in the social sciences, III. *Synthese* 37 (1978), no. 2, 117–216. (I. Stewart) **80a:58001** 58-02 (00A69, 58C28, 92-02)
- Zahn, Peter ★ Ein konstruktiver Weg zur Masstheorie und Funktionalanalysis. *Wissenschaftliche Buchgesellschaft, Darmstadt*, 1978. 350 pp. (loose errata). ISBN 3-534-07767-9 (Editors) **80a:03060** 03F65 (28A99, 46-02)
- ★ Beweisen im Mathematik-Unterricht. Didaktische Anwendungen der Lehre vom logischen Schliessen. *Wissenschaftliche Buchgesellschaft, Darmstadt*, 1979. 233 pp. ISBN 3-534-07721-0 (From the introduction) **80a:03002** 03-01
- Zakowski, S. Plane shear waves in viscoelastic fluids as motions with proportional stretch history. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* 30 (1978), no. 6, 791–800. (Authors' summary) **80j:76007** 76A10
- Zakradskii, Milos (with Frolík, Zdeněk; Pacht, Jan K.) Examples of uniform measures. *Proceedings of the Conference Topology and Measure, I* (Zinnowitz, 1974), Part 1, pp. 139–152, *Ernst-Moritz-Arndt Univ., Greifswald*, 1978. (Authors' introduction) **80a:28019** 28C15
- Zakusko, V. A. (with Ivanov, A. V.; Rozenfel'd, M. Z.; Faradzev, I. A.) An algorithm for checking the canonicity of a partially augmented adjacency matrix of a graph. (Russian) *Algorithmic studies in combinatorics* (Russian), pp. 19–25, 185 (errata insert), "Nauka", Moscow, 1978. (Authors' summary) **80a:05082** 05C50 (05C25, 68E10)
- (with Faradzev, I. A.) Algorithms for checking the canonicity of incidence systems. (Russian) *Algorithmic studies in combinatorics* (Russian), pp. 126–129, 187, "Nauka", Moscow, 1978. (Rudolf Mathon) **80a:05046** 05B20
- Zakiev, A. A. Holomorphically induced representations of Lie groups with an abelian normal subgroup. (Russian) *Trudy Moskov. Mat. Obšč.* 40 (1979), 47–82. (J. Szmidt) **80a:22025** 22E45
- Zakiev, D. I. Groups with complemented infinite abelian normal subgroups. (Russian) *Group-theoretical studies* (Russian), pp. 15–34, 157, "Naukova Dumka", Kiev, 1978. (Richard E. Phillips) **80j:20033** 20E34
- Zakiev, G. A. ★ Algebraische Probleme der mathematischen und theoretischen Physik. Translated from the Russian and edited by H.-J. Hoehnke. Studien zur Algebra und ihre Anwendungen, 2. Akademie-Verlag, Berlin, 1979. x+154 pp. (Editors) **80a:81002** 81-02 (03G12, 22-02)
- Zakiev, G. Ju. An integral estimate of the deviation of sets in cross-sections. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 5, 972–988, 1187. (E. Hertel) **80a:52012** 52A40 (52A22)
- Zakiev, M. A. (with Dinic, E. A.) Linear ordering and generation of trees. (Russian) *Algorithmic studies in combinatorics* (Russian), pp. 85–99, 186, "Nauka", Moscow, 1978. (Authors' summary) **80a:05048** 05C05
- (with Dinic, E. A.) Generation of marked trees and separable networks. (Russian) *Algorithmic studies in combinatorics* (Russian), pp. 100–107, 186, "Nauka", Moscow, 1978. (V. M. Kurechik) **80a:05041** 05C30 (94C15)
- A canonical form and a linear ordering of certain tree-like graphs. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 2, 120–124. (J. Bošk) **80a:05076** 05C05
- A Hamiltonian isomorphism of graphs. (Russian) *Mat. Zametki* 25 (1979), no. 2, 299–306, 319. (L. S. Mel'nikov) **80a:05083** 05C25 (05C45)
- Zakiev, V. A. The Huygens principle for certain equations with singularities. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 1, 28–31. (Alexander Doktor) **80j:35018** 35G10
- Zakiev, Vladimir A. Estimates for the probability of fault-free operation of redundant systems with repair. (Russian) *Serdica* 3 (1977), no. 4, 322–326. (A. A. Pervozvanski) **80a:90057** 90B25
- Zaldman, Samuel Almost automorphic solutions of some abstract evolution equations. II. (Italian summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 111 (1977), no. 2, 260–272 (1978). (Sadakazu Aizawa) **80a:34044** 34G10
- Some inequalities for Kohn-Nirenberg pseudo-differential operators. *Ann. Sci. Math. Québec* 2 (1978), no. 1, 143–164. (F. Cardoso) **80a:35107** 35S05 (47G05)
- Zalkin, P. N. (with Nefedov, V. N.) Solution of some lexicographic problems of interpretation. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* 1979, no. 1, 5–13, 69. (I. Marugiac) **80a:90106** 90C30
- Zaljubauer, A. Ž. Lagrangian codes. (Russian) Coding theory and the optimization of complex systems (Russian), pp. 130–137, 240–241, "Nauka" Kazah. SSR, Alma-Ata, 1977. (V. A. Zinov'ev) **80a:94030** 94B15
- The comparison of Lagrange codes with a class of residue codes. (Russian) *Theoretical and applied problems of mathematics and mechanics* (Russian), pp. 84–88, 240, "Nauka" Kazah. SSR, Alma-Ata, 1979. (Authors' summary) **80a:94067** 94B35
- Zajac, E. E. Dupuit-Marshall consumer's surplus, utility, and revealed preference. *J. Econ. Theory* 20 (1979), no. 2, 260–270. (Trout Rader) **80a:90019** 90A10
- Zajac, Michal Continuity of the spectrum of norm-normal matrices. (Russian summary) *Math. Slovaca* 28 (1978), no. 3, 317–319. (Bryan E. Cain) **80a:15029** 15A60 (47A10)
- Zajackowski, Wojciech Riemann invariants interaction in MHD double waves. *Demonstratio Math.* 12 (1979), no. 3, 543–563. (E. G. Broadbent) **80a:76003** 76W05
- Zajick, Luděk On the points of multivaluedness of metric projections in separable Banach spaces. *Comment. Math. Univ. Carolin.* 19 (1978), no. 3, 513–523. (Ivan Singer) **80a:41010** 41A65 (46B99)
- An elementary proof of the one-dimensional density theorem. *Amer. Math. Monthly* 86 (1979), no. 4, 297–298. (Dieter Hoffmann) **80a:28004** 28A15
- On the differentiation of convex functions in finite and infinite dimensional spaces. *Czechoslovak Math. J.* 29(104) (1979), no. 3, 340–348. (Jean-Paul Penot) **80a:46063** 46G05 (26A27, 52A05)
- Zak, J. Lattice representations in solids. *Phys. Rev. B* (3) 20 (1979), no. 6, 2228–2237. (Authors' summary) **80i:82027** 82A60
- Zak, Ju. O. Algorithms for nonlinear pseudo-Boolean programming. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 5, 35–45, 219 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 5, 29–40. (Authors' summary) **80a:90087** 90C10
- (with Kir'jan, N. L.) Stochastic dynamic models and optimal selection of buffer size in process flow design. *Automatika* 1978, no. 2, 60–70, 94 (Russian. English summary); translated as *Soviet Automat. Control* 11 (1978), no. 2, 49–55 (1979). (D. M. Sudakov) **80a:93096** 93E25
- Zak, Michail Dynamics of liquid films and thin jets. *SIAM J. Appl. Math.* 37 (1979), no. 2, 276–289. (Authors' summary) **80j:76018** 76D25 (35Q99)
- Zák, Stanislav A Turing machine space hierarchy. *Kybernetika (Prague)* 15 (1979), no. 2, 100–121. (Joel I. Seiferas) **80a:68040** 68C40 (03D10, 03D15)
- Zak, Yu. A. See Zak, Ju. O.
- Zakharov, A. V. See Zakharov, A. V.
- Zakharov, N. A. See Zakharov, N. A.
- Zakharov, V. E. See Zakharov, V. E.
- Zakharov, V. I. See Zakharov, V. I.
- Zaklan, V. Computation of the abscissa of stability by repeated use of the Routh test. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 604–607. (Giuseppe Conte) **80j:93108** 93D99
- Zakirov, F. K. (with Gainullin, M. N.) On the theory of the oscillation of the solutions of the difference equation  $\Delta(r(n)\Delta^{m-1}y(n)) = f(n, y(n), y(n+1), \dots, y(n+m))$ . I. (Russian) *Differentsial'nye Uravneniya* (Ryazan) No. 11 (1978), 47–59. (Wolfgang Hahn) **80a:39002** 39A10 (39A12)
- Zakirov, Š. Quality control plans based on two quality levels. (Russian. Uzbek summary) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1978, no. 5, 14–20. (K. Sarkadi) **80a:62092a** 62N10
- Quality control plans with two levels for attributes with continuous distribution. (Russian. Uzbek summary) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1978, no. 6, 23–25. (K. Sarkadi) **80a:62092b** 62N10
- Zakis, Ju. To a great scientist from the citizens of Riga. (Russian) *Latvian PSR Zinlty. Akad. Vēstis* 1978, no. 8(373), 130–131. (Editors) **80a:01040** 01A70
- Zakowski, Wojciech (with Stankiewicz, Ewa) Some basic properties of the  $(Z, Q)$ -systems. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 6, 557–561. (Authors' summary) **80a:68070** 68D35
- (with Stankiewicz, Ewa) The  $(Z, Q)$ -systems. *Demonstratio Math.* 11 (1978), no. 2, 557–565. (M. Tetrušvili) **80a:68071** 68D35 (03D05, 68C30)
- Zakradskii, M. V. (with Askarov, E. R.) Approximate construction of conformal mapping functions for simply connected domains. (Russian) *Sakharov. SSR Mech. Akad. Gametol. Centr. Šrom.* 18 (1978), no. 1 Čisl. Rešenija Granichnyh Zadach, 5–19. (V. V. Salavov) **80a:30066** 30C30
- Zakrevskii, A. D. See Karelin, A. V.; et al., **80a:68112**
- Zakrevskii, S. (with Love, A.) Topology of textures in the planar phase of superfluid  $^3\text{He}$ . *J. Phys. A* 12 (1979), no. 7, L151–L155. (M. K. F. Wong) **80a:81009** 81J05 (57T20)
- Zaka, Abraham A-subalgebras of  $A[x]$ . *J. Algebra* 56 (1979), no. 2, 287–314. (J. W. Brewer) **80a:13019** 13F20

- Zaks, Joseph** Non-Hamiltonian simple 3-polytopes having just two types of faces. *Discrete Math.* 29 (1980), no. 1, 87-101. (From the summary) **80m:05079** 05C45
- Zaks, S.** (with Richards, Dana S.) Generating trees and other combinatorial objects lexicographically. *SIAM J. Comput.* 8 (1979), no. 1, 73-81. (Fabrizio Luccio) **80f:06078** 68E10 (05C05)
- Zakulko, O. K.** The stability of limit distributions of sums of weighted random variables. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist.* No. 19 (1978), 67-71, 158. (Friedrich Liese) **80b:60051** 60F99
- Zalc, A.** (with Arigue, M.; Isambert, E.; Perrin, M. J.) Some remarks on bicommutability. *Fund. Math.* 101 (1978), no. 3, 207-226. (W. Marek) **80j:03019a** 03B30
- See also Marek, Wiktor, **80j:03019b**
- Zalcman, Marian** Repairable cyclic systems with spares. (Polish. Russian and English summaries) *Arch. Automat. Telemech.* 23 (1978), no. 3, 331-344. (Roman Słowiński) **80a:90075** 90B25 (62N05)
- saiz Zaldo, F.** See Saiz Zaldo, F.
- Zalaski, Steven T.** Fully multidimensional flux-corrected transport algorithms for fluids. *J. Comput. Phys.* 31 (1979), no. 3, 335-362. (Author's summary) **80f:76048** 76X05
- Zaleski, A. E.** (with Suprunenko, I. D.) Classification of finite irreducible linear groups of rank 4 over a field of characteristic  $p > 5$ . (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1978, no. 6, 9-15, 138. (A. A. Mahnev) **80g:20059** 20G40
- (with Konjuh, V. C.) ★Алгебра и алгебраическая геометрия в работах математиков Белоруссии. (Russian) [Algebra and algebraic geometry in the works of the mathematicians of Belorussia] "Nauka i Tehnika", Minsk, 1979. 80 pp. (J. S. Joel) **80i:01014** 01A65 (01A74, 14-03, 20-03)
- (with Benediktović, I. I.) Almost standard identities of matrix algebras. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 3, 201-204, 283. (V. A. Artamonov) **80i:16023** 16A38
- Zalik, R. A.** Functions of bounded variation with respect to a Tchebycheff system. *J. Approx. Theory* 23 (1978), no. 4, 318-323. (Jack Williams) **80f:26006** 26A45
- Zalkind, David** Order-level inventory systems with independent stochastic leadtimes. *Management Sci.* 24 (1977/78), no. 13, 1384-1392. (İzzet Sahin) **80a:90056** 90B05
- Zalkind, Julie Herman** (with Peterson, David W.) A review of direct sufficient conditions in optimal control theory. *Internat. J. Control* 28 (1978), no. 4, 589-610. (Authors' summary) **80a:49021** 49B05
- Zamachovskii, M. P.** (with Želtjakova, Z. N.; Sdvizkov, O. A.) Semiquadraternionic elliptic and pseudoelliptic spaces. (Russian) *Geometry, No. 6* (Russian), pp. 31-40, Leningrad. Gos. Ped. Inst., Leningrad, 1977. (D. B. Persic) **80g:53039** 53C35 (15A33)
- Zamaler, Z. Ž.** A difference analogue of the operator  $d^{2m}/dx^{2m}$ . (Russian) *Direct and inverse problems for partial differential equations and their applications* (Russian), pp. 97-108, 186, "Fizmatgiz", Tashkent, 1978. (Author's summary) **80e:65027** 65D25
- (with Salibov, G. N.; Šaripov, T. H.) Approximate integration of smooth functions. (Russian) *Mathematical analysis and related mathematical questions* (Russian), pp. 37-60, 351, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (Authors' summary) **80m:41020** 41A55 (65D32)
- Zambaldze, L. G.** Some relations between the dimensions of normal spaces and their subspaces of a special kind. (Russian. Georgian and English summaries) *Sakharth. SSR Mecn. Akad. Moambe* 89 (1978), no. 1, 41-44. (D. Adnadjević) **80a:54068** 54F45
- Zambickii, D. K.** See Mathematical modeling of economic systems, **80m:90004**
- Zambrano, Oscar** (with Laudenbach, François) Disjonction à paramètres dans une variété de dimension 3,  $P^2$ -irréductible. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 5, A331-A334. (Authors' summary) **80b:57028** 57R40
- Zame, Alan** (with Chen, Robert) On discounted subfair primitive casino. *Z. Wahrsch. Verw. Gebiete* 49 (1979), no. 3, 257-266. (E.-A. Weiss, Jr.) **80j:60064** 60G40 (62C05)
- Zames, G.** On the metric complexity of causal linear systems:  $\epsilon$ -entropy and  $\epsilon$ -dimension for continuous time. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 222-230. (Shunsuke Ihara) **80g:41020** 41A46 (94A15)
- Zamir, Shmuel** (with Mertens, Jean-François; Samuel-Cahn, Ester) Necessary and sufficient conditions for recurrence and transience of Markov chains, in terms of inequalities. *J. Appl. Probab.* 15 (1978), no. 4, 848-851. (Richard Madsen) **80a:60068** 60J10
- (with Tulken, Henry) Surplus-sharing local games in dynamic exchange processes. *Rev. Econom. Stud.* 46 (1979), no. 2, 305-313. (Y. C. Ho) **80j:90018** 90A08 (90A16)
- Zamiralo, V.** (with Righi, R.; Venturi, G.) A nonabelian gauge theory in a nonlinear gauge. (Italian and Russian summaries) *Nuovo Cimento A* (11) 47 (1978), no. 4, 518-528. (Authors' summary) **80d:81092** 81E15 (22E70)
- Zamiatin, A. P.** A nonabelian variety of groups has an undecidable elementary theory. (Russian) *Algebra i Logika* 17 (1978), no. 1, 20-27, 121. (V. N. Remesennikov) **80c:03045** 03D35 (03C05, 20A10)
- Prevarieties of associative rings whose elementary theory is decidable. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 6, 1266-1282, 1437. (V. N. Latyšev) **80i:16049** 16A99 (03B25, 08B99)
- Zamiatin, V. N.** The Čebyšev center in hyperspaces of continuous functions. (Russian) *Functional analysis*, No. 12 (Russian), pp. 56-68, *Ul'janovsk. Gos. Ped. Inst., Ul'janovsk*, 1979. (C. C. White) **80m:46023** 46E15
- Zamolodchikov, Alexander B.** See Zamolodchikov, Aleksander B.
- Zamolodchikov, Alexey B.** See Zamolodchikov, Alexei B.
- Zamolodchikov, Aleksander B.** (with Zamolodchikov, Alexei B.) Factorized S-matrices in two dimensions as the exact solutions of certain relativistic quantum field theory models. *Ann. Physics* 120 (1979), no. 2, 253-291. (Porter W. Johnson) **80j:81050** 81E10 (81F15, 81M05)
- $Z_2$ -symmetric factorized S-matrix in two space-time dimensions. *Comm. Math. Phys.* 69 (1979), no. 2, 165-178. (Author's summary) **80b:81068** 81F15
- Zamolodchikov, Alexei B.** (with Zamolodchikov, Aleksander B.) Factorized S-matrices in two dimensions as the exact solutions of certain relativistic quantum field theory models. *Ann. Physics* 120 (1979), no. 2, 253-291. (Porter W. Johnson) **80j:81050** 81E10 (81F15, 81M05)
- Iacomba Zamora, Ernesto A.** See Iacomba Zamora, Ernesto A.
- Zamorano, Nelson** (with Matzner, Richard A.; Sandberg, Vernon D.) Instability of the Cauchy horizon of Reissner-Nordström black holes. *Phys. Rev. D* (3) 19 (1979), no. 10, 2821-2826. (Authors' summary) **80f:83048** 83D05
- Zamorzaev, A. M.** (with Galjarskii, È. I.; Palistrant, A. F.) ★Цвета симметрии, ее обобщения и приложения. (Russian) [Color symmetry, its generalizations and applications] "Siniica", Kishinev, 1978. 275 pp. (J. C. Fisher) **80j:51013** 51F15 (20H15, 52A25, 82A60)
- Zamorzaeva, E. A.** Classification of regular tilings of the plane for similarity symmetry groups. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 2, 276-279. (J. C. Fisher) **80j:51014** 51F15 (20H15)
- Zamožik, J.** (with Medek, Václav) Über den Umriß der konvexen Flächen. *Vorträge am der Tagung Geometrie und Anwendungen* (Gaussig, 1977), pp. 73-76, *Weiterbildungszentrum Math. Kybernet. Rechenz.*, 28, Tech. Univ. Dresden, Dresden, 1978. (Leo Boček) **80b:52004** 52A15 (05C99, 51N20)
- al-Zanaidi, M. A.** See Al-Zanaidi, M. A.
- Zanakis, Stelios H.** Heuristic 0-1 linear programming: an experimental comparison of three methods. *Management Sci.* 24 (1977/78), no. 1, 91-104. (Eitan Zemel) **80b:90102** 90C10
- Zančeva, F. N.** A problem of optimal distribution of handyman repair enterprises in a complex domestic technology. (Russian) *Coding theory and the optimization of complex systems* (Russian), pp. 150-155, 241-242, "Nauka" Kazah. SSR, Alma-Ata, 1977. (Author's summary) **80c:90074** 90B25
- An algorithm of the approximation-combinatorial method via several approximating problems for the solution of a distribution problem. (Russian) *Theoretical and applied problems in mathematics and mechanics* (Russian), pp. 148-153, 310-311, "Nauka" Kazah. SSR, Alma-Ata, 1977. (Author's summary) **80b:90103** 90C11
- Zanco, Clemente** Some remarks on densifying mappings. (Italian summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 111 (1977), no. 2, 342-350 (1978). (Silvio Masà) **80a:54095** 54H25
- Zandron, O.** (with Abecasis, C.; Laura, R.) Solution of Kemmer's equation for particles of spin one in a Coulombian potential. *Math. Notae* 26 (1977/78), 99-106. (F. R. Halpern) **80f:81016** 81C05
- Zanelli, V.** (with Fantini, W.) Nonlinear duality and problems of the calculus of variations. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* 26 (1977), no. 1, 91-100 (1978). (Rolf Klötzler) **80a:49076** 49F99
- Zanfir, Ștefan** Betti-type formulas in multipolar linear elasticity. (Romanian. English summary) *Stud. Cerc. Mat.* 31 (1979), no. 1, 113-117. (M. Mișicu) **80g:73010** 73B25 (35Q99)
- Zang, Israel** A new arc algorithm for unconstrained optimization. *Math. Programming* 15 (1978), no. 1, 36-52. (Klaus Lommatzsch) **80a:90115** 90C25 (65K05)
- Zang, Thomas** (with Haidvogel, Dale B.) The accurate solution of Poisson's equation by expansion in Chebyshev polynomials. *J. Comput. Phys.* 30 (1979), no. 2, 167-180. (Authors' summary) **80c:65223** 65N99 (65F10)
- Zanghitori, Luisa** On a reduced Cauchy problem in a half-space for linear differential operators with constant coefficients. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 2, 460-469. (V.-V. Olariu) **80i:35037** 35E15
- Zangwill, W. I.** (with Garcia, C. B.) On univalence and P-matrices. *Linear Algebra Appl.* 24 (1979), 239-250. (J. Abraham) **80d:15022** 15A48 (58C15)
- (with Garcia, C. B.) Determining all solutions to certain systems of nonlinear equations. *Math. Oper. Res.* 4 (1979), no. 1, 1-14. (S. R. Mohan) **80i:65054** 65H10 (with Garcia, C. B.) Finding all solutions to polynomial systems and other systems of equations. *Math. Programming* 16 (1979), no. 2, 159-176. (Kurt Georg) **80f:65067** 65H10 (58C15, 90C33)
- Zanichelli, Maria Camilla** A class of pseudodifferential operators. (Italian. English summary) *Atti Sem. Mat. Fis. Univ. Modena* 26 (1977), no. 1, 70-90 (1978). (A. S. Dynin) **80j:47055** 47G05 (35S05)
- Zankel, Hubert** See Few body systems and nuclear forces, **80m:81083a** and Few body systems and nuclear forces, **80m:81083b**
- Zanolin, Fabio** (with Contessa, Maria) On a question of Josef Novák about convergence spaces. (Italian summary) *Rend. Sem. Mat. Univ. Padova* 58 (1977), 155-161 (1978). (Piotr Antosik) **80k:54001** 54A20 (54A05)
- (with Invernizzi, Sergio) On the existence and uniqueness of periodic solutions of differential delay equations. *Math. Z.* 163 (1978), no. 1, 25-37. (István Györi) **80j:34095** 34K15
- Zanovello, Renato** Integrals of Anger, Weber and Airy-Hardy functions. (Italian) *Rend. Sem. Mat. Univ. Padova* 58 (1977), 275-285 (1978). (M. E. Muldoon) **80j:33030** 33A70 (33A40)
- On a definite integral of the product of two Struve functions. (Italian) *Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* 112 (1978), no. 1-2, 63-81. (From the summary) **80a:65055** 65D30
- Zanzotto, Pio Andrea** (with Antonini, Rita Giuliano) Sur la représentation intégrale de certaines fonctionnelles monotones. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 2, 584-596. (N. Dinculeanu) **80i:28015** 28A25
- Zaporovannyi, Ju. I.** See Problems of quantum physics, **80m:81068**
- Zaplatala, V. I.** (with Tkalič, V. S.) A variational principle for one-dimensional dissipative systems. (Russian) *Asymptotic methods in systems theory* (Russian), pp. 147-154, *Irkutsk. Gos. Univ., Irkutsk*, 1977. (Editors) **80m:70024** 70H99 (49H05)
- Zapletal, Josef** Tolerance relation on a special type of lattice. (Czech. English and Russian summaries) *Knižnice Odborn. Véd. Spisů Vysoké. Učení Tech. v Brně A* 12 (1976), 185-196 (1978). (F. Šik) **80b:06006** 06B10
- Zaporowski, Eugeniusz** Basic properties of the category of abstract objects. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. No. 30* (1979), 235-242. (Aleksander Albicki) **80i:18003** 18A05
- Zappa, Anna** The center of an algebra of operators. *Colloq. Math.* 39 (1978), no. 2, 343-349. (Olusola Akinyele) **80d:43005** 43A22
- Zapreer, A. S.** The possibility of determining the values of certain functionals of a diffracting object that is situated in a standard magnetic field. (Russian) *Akad. Nauk SSSR Sibirsk. Otdel. Vychisl. Centr Preprint No. 64* (1977), 25 pp. (J. R. Schulenberg) **80k:78027** 78A45 (65F05)
- Zapryanov, Z. D.** (with Kalicova-Kurteva, P. G.) Formation and initial stage of development of the boundary layer for flow around a parabolic cylinder at an angle of



- attack. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zased. Priložna Mat.* 12 (1976), no. 3, 185-196 (1978). (From the summary) **80a:76027** 76D10 (35Q99)
- (with Maždrakova, E. L.) The solution of a boundary value problem in the theory of jets. (Bulgarian. Russian and English summaries) *Teoret. Prilož. Meh.* 9 (1978), no. 3, 50-55, 4, 8. (Editors) **80a:76029** 76D25 (35Q99)
- Zarech, Andrzej** (with Roguski, Stanisław) Inner models, ordinal definability and the axiom of power set. *Logic Colloquium '77* (Proc. Conf., Wrocław, 1977), pp. 211-220, *Studies in Logic and Foundations of Math.*, 96, North-Holland, Amsterdam, 1978. (John W. Dawson, Jr.) **80b:03079** 03E45
- Zaragoza, C.** (with Tejerina, A. F.) Systematic development of thermodynamics. (Spanish. English summary) *Rev. Real Acad. Cienc. Exact. Fis. Natur. Madrid* 72 (1978), no. 1, 97-121. (N. D. Sengupta) **80f:80001** 80-01
- Zarantonello, Sergio E.** A representation of  $H^p$ -functions with  $0 < p < \infty$ . *Pacific J. Math.* 79 (1978), no. 1, 271-282. (V. Kabaia) **80g:30023** 30D55 (30E20, 47B35)
- The extension of  $H^p$ -functions from certain hypersurfaces of a polydisc. *Proc. Amer. Math. Soc.* 78 (1980), no. 4, 519-524. (P. S. Chee) **80i:32010** 32A35
- Zarati, Said** ★Défaut de stabilité d'opérations cohomologiques. *Publications Mathématiques d'Orsay* 78, 7. Université de Paris-Sud, Département de Mathématique, Orsay, 1978. iii + 61 pp. (Tetsuya Aikawa) **80j:55023** 55S10
- Zarcone, M.** (with Ferrante, G.; Nuzzo, S.) Parametric excitation of charge density fluctuations in classical and quantum electron-hole plasmas. (Italian and Russian summaries) *Nuovo Cimento B* (11) 50 (1979), no. 1, 37-63. (From the summary) **80a:82039** 82A45
- Żardecki, Dariusz** A computational method for an analysis of differential equations and functionals with change in model order. (Polish. Russian and English summaries) *Arch. Automat. Telemekh.* 23 (1978), no. 3, 289-300. (Author's summary) **80c:65160** 65L05
- Zarembo, D.** On orthogonal families in the plane. *Houston J. Math.* 4 (1978), no. 1, 129-136. (E. P. Rozycki) **80g:54040** 54F50
- Zarembo, L. S.** On the existence of value in the Varaiya-Lin sense in differential games of pursuit and evasion. *J. Optim. Theory Appl.* 29 (1979), no. 1, 135-145. (G. J. Olsder) **80c:90120** 90D25
- Zaret, David** Absolute space and conventionalism. *British J. Philos. Sci.* 30 (1979), no. 3, 211-226. (Andrzej Trautman) **80m:03023** 03A05 (00A69, 53B05, 83A05)
- Zarhin, Ju. G.** Abelian varieties,  $l$ -adic representations and  $SL_2$ . (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 2, 294-308, 479. (J. W. S. Cassels) **80i:14017** 14K15 (10D35)
- Žarhin, V. V.** Lattice of subspaces of Fourier ultrahyperfunctions. (Russian) *Mat. Sb. (N.S.)* 109(151) (1979), no. 1, 129-145, 166. (M. Z. Berkolaiko) **80b:46059** 46F15
- Zaripov, R. G.** On the definition of simultaneity in special relativity theory. (Russian) *Gravitacija i Teor. Otnositel'nosti* No. 14-15 (1978), 60-69. (Z. Janković) **80d:83007** 83A05 (51B20)
- Žarkik, V. A.** A priority queueing system with a mixed load. (Russian) *Modelling and control in evolving systems* (Russian), pp. 27-36, 257. "Nauka", Moscow, 1978. (T. Rolski) **80m:60102** 60K25
- Žarkov, A. V.** On the question of the existence of a positive solution to the Lur'e equations. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 3, 134-136, 159. (Author's summary) **80a:49045** 49B99
- Žarkynbaev, S.** On a differential game with a quadratic quality criterion when the functions of the phase coordinates satisfy a constraint in the form of an equality. (Russian) *Coding theory and the optimization of complex systems* (Russian), pp. 137-144, 241. "Nauka" Kazah. SSR, Alma-Ata, 1977. (A. I. Subbotin) **80b:90176a** 90D25
- On a differential game with an auxiliary integral constraint. (Russian) *Coding theory and the optimization of complex systems* (Russian), pp. 145-150, 241. "Nauka" Kazah. SSR, Alma-Ata, 1977. (A. I. Subbotin) **80b:90176b** 90D25
- Zarnadze, D. N.** Approximate compactness in some locally convex spaces. (Russian) *Sakharin. SSR Mecl. Akad. Gamotol. Cenr. Smr.* 18 (1978), no. 1 *Čisl. Relenija Graničnyh Zadač*, 48-58. (Theodore S. Bolis) **80j:46006** 46A12
- Zarook, Hédi** (with Sayari, Abdelhamid; Billiet, Yves) Complete list of subgroups and changes of standard setting of two-dimensional space groups. *Acta Cryst. Sect. A* 34 (1978), no. 4, 553-555. (Authors' summary) **80c:20069** 20H15
- (with Billiet, Yves; Sayari, Abdelhamid) L'association des familles de Wyckoff dans les changements de repère conventionnel des groupes spatiaux et les passages aux sous-groupes spatiaux. (English summary) *Acta Cryst. Sect. A* 34 (1978), no. 5, 811-819. (Authors' summary) **80b:20062** 20H15
- Zarrow, Robert** On Earle's mod  $n$  relative Teichmüller spaces. *Canad. Math. Bull.* 21 (1978), no. 3, 355-360. (Jane Gilman) **80a:32019** 32G15 (30F10, 57S25)
- Orientation reversing square roots of involutions. *Illinois J. Math.* 23 (1979), no. 1, 71-81. (M. L. Marx) **80k:57003a** 57M12 (57R45)
- Orientation reversing maps of surfaces. *Illinois J. Math.* 23 (1979), no. 1, 82-92. (M. L. Marx) **80k:57003b** 57M12 (57R45)
- (with Nicholls, P.) Convex fundamental regions for Fuchsian groups. II. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 2, 295-300. (Ch. Pommerenke) **80i:30065** 30F35
- Zartman, James F.** Another way of diagramming switching circuits. *Notre Dame J. Formal Logic* 20 (1979), no. 2, 301-308. (Editors) **80g:94097** 94C10
- Zarhin, A. G.** (with Tiunčik, M. F.) Some problems of mechanics with discontinuous boundary conditions and a nonsmooth boundary. (Russian) *Differencial'nye Uravnenija* 14 (1978), no. 9, 1632-1637, 1723. (Authors' summary) **80c:35093** 35Q20
- The rate of convergence of projection methods for linear equations. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 1048-1053, 1085. (S. Burýšek) **80f:65067** 65J10 (47A50)
- Zarubina, M. M.** (with Lumel'skij, Ja. P.) Estimation of the a priori distribution of the number of defective articles. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1977, no. 5, 106-124 (Russian); translated as *Engng. Cybernetics* 15 (1977), no. 5, 62-67 (1978). (S. Blumenthal) **80a:62168** 62N10
- Zarzer, E. A.** (with Wacker, Hansjörg; Zulehner, W.) Optimal stepsize control for the globalized Newton method. *Continuation methods* (Proc. Sympos., Johannes Kepler Univ., Linz, 1977), pp. 249-276, Academic Press, New York, 1978. (Hansgeorg Jeggle) **80k:65044** 65H05
- Approximation der Lösung von Operatorgleichungen und Extrapolation. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T455-T457. (Erich Bohl) **80a:65116** 65J05 (65B05)
- Zas'ko, Ju. N.** Connection of limit cyclic functions with higher transcendental functions. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 38 (1979), 114-119, 166. (J. S. Joel) **80j:33011** 33A40
- Zaslavskii, A. E.** A multidimensional Markov renewal theorem and an infinite system of particles of a countable set of types. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist.* No. 18 (1978), 45-56, 180. (A. M. Zaharin) **80d:60121** 60K15
- Zaslavskii, A. Ju.** On the decomposition of invariant operators. (Russian) *Funktsional. Anal. i Priložen.* 13 (1979), no. 1, 69. (N. Popa) **80g:47044** 47B55 (46A40)
- Description of some classes of support sets. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 2, 270-277, 458. (S. Kutateladze) **80f:47092** 47H99 (46A40)
- Zaslavskii, G. M.** (with Berman, G. P.) The stochastic instability of a nonlinear quantum oscillator. (Russian) *Dokl. Akad. Nauk SSSR* 240 (1978), no. 5, 1082-1085. (Authors' introduction) **80g:82002** 82A05
- Zassenhaus, Hans** On the maximal Abelian subrings of the classical Lie algebras. Preliminary report. *Lie theories and their applications* (Proc. Ann. Sem. Canad. Math. Congr., Queen's Univ., Kingston, Ont., 1977), pp. 348-382, *Queen's Papers in Pure and Appl. Math.*, 48, Queen's Univ., Kingston, Ont., 1978. (Ernest Stitzinger) **80g:17002** 17B05
- When is the unit group of a Dedekind order soluble? *Comm. Algebra* 6 (1978), no. 16, 1621-1627. (M. M. Murač) **80c:16009** 16A25
- Zastěra, Bohumil** A nondeterministic dynamic element. (Czech. English and Russian summaries) *Knižnice Odborn. Věd. Spis Vysoké. Učeni Tech. v Brně A* 12 (1976), 197-211 (1978). (Jiří Adámek) **80c:93015** 93A13
- Zastrow, U.** (with Panagiotopoulos, P. D.) An integral "equation" approach to the unilateral contact problem. *Z. Angew. Math. Mech.* 59 (1979), no. 8, 392-393. (M. O. Bašilevičiūtė) **80k:73073** 73T05 (49A29)
- Zatuhil, V. S.** Adaptive control of semi-Markov processes. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 2, 207-213, 224 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 2, 165-172 (1979). (Lennart Ljung) **80c:93153** 93E20
- Zauderer, Erich** Asymptotic decomposition of partial differential equations. *SIAM J. Appl. Math.* 35 (1978), no. 3, 575-592. (W. Allegretto) **80c:35022** 35C20 (35Q20)
- Žautykov, A. O.** (with Amerbaev, V. M.) Algorithms of modular arithmetic with noncoprime bases. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1978, no. 5, 11-17, 92. (Vladimir Sleinikov) **80b:68010** 68B05 (68C05)
- Algorithms for the realization of operations of modular arithmetic with quadratic bases. (Russian. Kazakh summary) *Vestnik Akad. Nauk Kazah. SSR* 1978, no. 12, 34-38. (From the text) **80f:68014** 68B05
- Zavada, A. P.** (with Koževnikova, G. P.) On the problem of recognizing the equivalence of expressions. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* No. 18 (1978), 28 pp. (Authors' summary) **80f:68047** 68C25 (68C05)
- Zavalishin, S. T.** A method of optimal synthesis in the presence of unknown perturbations. (Russian) *Trudy Inst. Mat. i Meh. Ural. Nauch. Cenr. Akad. Nauk SSSR* No. 32 *Nekotorye Sposoby Anal. Konstruktsionnaja Impul'snyh Regulirovok* (1979), 45-70, 99. (Authors' summary) **80k:93060** 93C99 (49A99)
- Zavarin, O. M.** (with Godlevskij, V. S.) Application of nonparametric estimates for the computation of multidimensional integrals. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 5, 1118-1126, 1355. (I. Văduva) **80m:65005** 65C05
- Zave, Pamela** (with Rheinboldt, Werner C.) Design of an adaptive, parallel finite-element system. *ACM Trans. Math. Software* 5 (1979), no. 1, 1-17. (Authors' summary) **80c:65213** 65N30 (65-04)
- Zav'jalov, O. I.** (with Anikin, S. A.) Short-distance expansion for products of current-like operators. *Mathematical problems in theoretical physics* (Proc. Internat. Conf., Univ. Rome, Rome, 1977), pp. 390-394, *Lecture Notes in Phys.*, 80, Springer, Berlin, 1978. (F. Rocca) **80i:81107** 81G25
- (with Anikin, S. A.) Short-distance and light-cone expansions for products of currents. *Ann. Physics* 116 (1978), no. 1, 135-166. (Martin Costabel) **80i:81078** 81E15 (05C99, 81C30)
- Zavorin, A. N.** Solution of rigid systems of ordinary differential equations by series of steps. (Russian) *Lato. Mat. Ezegodnik* No. 22 (1978), 123-132, 282. (Author's summary) **80a:65162** 65L05
- The stable iterative realization of certain implicit integration methods. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 1, 121-128, 269. (Author's summary) **80c:65161** 65L05 (65D30)
- Zavriev, S. K.** The combined penalty function and stochastic gradient method for finding the maximin. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 2, 329-342, 555. (Authors' summary) **80b:93173** 93E20 (49B99)
- Ždanov, Ju. K.** (with Žuravlev, V. F.) On certain properties of the finite rotations of a rigid body in the presence of a nonholonomic constraint. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* 13 (1978), no. 1, 9-14 (Russian); translated as *Mech. Solids* 13 (1978), no. 1, 6-11. (Gh. Silaș) **80b:70007** 70E05 (70F25)
- Ždanok, A. I.** (with Rastrigin, L. A.) The dynamics of the dual-alternative choice in adaptation problems. (Russian) *Avtomat. i Vychisl. Tehn. (Riga)* 1978, no. 4, 51-54, 93. (Authors' summary) **80c:93075** 93C40
- Relaxation of stochastic optimization algorithms in the absence of noise. (Russian) *Adaptation problems in technical systems. Problemy Shčala. Poiska* No. 7 (1978), 106-122, 318. (A. A. Pervozvanskij) **80g:90090a** 90C15
- Relaxation of stochastic optimization algorithms in the presence of noise. (Russian) *Adaptation problems in technical systems. Problemy Shčala. Poiska* No. 7 (1978), 123-134, 318. (A. A. Pervozvanskij) **80g:90090b** 90C15
- Ždanok, T. A.** A probabilistic analogue of the Hahn-Banach theorem and its application to the investigation of random operator equations. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1979, no. 1, 6-9, 77. (H. Salehi) **80f:60060** 60H25 (46B99)
- Ždanov, A. I.** (with Kacjuba, O. A.) Specifics of applying the method of least squares to estimation of linear difference operators in identification problems. *Avtomat. i Telemekh.* 1979, no. 8, 86-92 (Russian); translated as *Automat. Remote Control* 40 (1979), no. 8, part 1, 1169-1175 (1980). (Authors' summary) **80m:93027** 93B30
- Ždanov, V. I.** (with Pyragas, K. A.; Aleksandrov, A. N.; Pyragas, L. E.) Some nonlinear

- effects in the relativistic two-body problem. *Astrophys. and Space Sci.* 57 (1978), no. 2, 303-320. (Authors' summary) **80c:83020** 83C35 (34C15)
- Zdanov, V. S.** (with Saksonov, E. A.) Conditions of existence of steady-state modes in cyclic queueing systems. *Automat. i Telemekh.* 1979, no. 2, 29-38 (Russian); translated as *Automat. Remote Control* 40 (1979), no. 2, part 1, 176-184. (K. Balagopal) **80m:60103** 60K25
- Zdenenko, Ju. I.** (with Gavriljuk, I. P.; Elenin, G. G.; Zmitrenko, N. V.; Makarov, V. L.; San'ko, I. M.) A difference scheme with an exact spectrum for a quasilinear heat equation. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 97* (1979), 26 pp. (Authors' summary) **80m:65066** 65N05 (80A20)
- Zecca, Pietro** (with Stefani, G.) Properties of convex sets with application to differential theory of multivalued functions. *Nonlinear Anal.* 2 (1978), no. 5, 583-595. (Luccio Boccardo) **80i:49035** 49E15 (46G99)
- (with Zezza, Pierluigi) Nonlinear boundary value problems in Banach spaces for multivalued differential equations on a noncompact interval. *Nonlinear Anal.* 3 (1979), no. 3, 347-352. (C. Corduneanu) **80h:34084** 34G99 (34A60, 34B15)
- Zech, Karl-Adolf** The inner information flow of nondeterministic automata. (German and Russian summaries) *Elektron. Informatsionsserbar. Kybernet.* 14 (1978), no. 11, 565-573. (A. Adam) **80f:68066** 68D25 (68D37)
- Zeckendorf, E.** Points d'entree dans une suite recurrente de facteurs  $p$  premiers impairs successifs. (English summary) *Bull. Soc. Roy. Sci. Liege* 47 (1978), no. 5-8, 153-156. (L. Carlitz) **80d:10023** 10A35
- Zegalar, S. I.** (with Dyn'kin, V. N.) Transmission of information by convolution codes with error detection. (Russian) *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. A, pp. 165-169. Reidel, Dordrecht, 1978. (Authors' summary) **80g:94057** 94B10
- Zegers, Frits E.** (with ten Berge, Jos. M. F.) A series of lower bounds to the reliability of a test. *Psychometrika* 43 (1978), no. 4, 575-579. (Authors' summary) **80f:62094** 62P15
- Zeh, H. D.** Quantum theory and time asymmetry. *Found. Phys.* 9 (1979), no. 11-12, 803-818. (Lawrence Sklar) **80c:81008** 81B05
- Zehnder, E.** (with Lojasiewicz, S. Jr.) An inverse function theorem in Fréchet-spaces. *J. Funct. Anal.* 33 (1979), no. 2, 165-174. (Marian Fabian) **80k:58014** 58C15 (47H99)
- Zehnwirth, Benjamin** Credibility and the Dirichlet process. *Scand. Actuar. J. No. 1* (1979), 13-23. (H. L. Seal) **80j:62097** 62P05
- zho-Zeld, E.** See Abo-Zeld, E.
- Zeldner, Eberhard** ★ Vorlesungen über nichtlineare Funktionalanalysis. III. Variationsmethoden und Optimierung. With English and Russian summaries. Teubner Texte zur Mathematik. BSB B. G. Teubner Verlagsgesellschaft, Leipzig, 1977. 239 pp. (Jean Mawhin) **80g:49001** 49-02 (46G99, 47Hxx)
- (with Beyer, Klaus) Existenz- und Eindeutigkeitsbeweise für Gezeitenwellen mit allgemeinen Wirbelverteilungen. *Math. Nachr.* 88 (1979), 227-254. (Authors' summary) **80h:86091** 86A05 (30E25)
- (with Schumann, Rainer) The finite difference method for quasilinear elliptic equations of order 2m. *Numer. Funct. Anal. Optim.* 1 (1979), no. 2, 161-194. (Sean McKee) **80d:65107** 65N10
- Zeifman, A. I.** Stability of the Erlang model. (Russian) *Differentsial'nye Uravneniya (Ryazan)* No. 11 (1978), 60-65. (Author's summary) **80c:60128** 60K25
- The stability of the solutions of a differential equation in a Banach space. (Russian) *Differentsial'nye Uravneniya (Ryazan)* No. 14 (1978), 66-68. (M. Bertolino) **80d:34089** 34G10
- Zeigler, Bernard P.** On necessary and sufficient conditions for group selection efficacy. *Theoret. Population Biol.* 13 (1978), no. 3, 356-364. (T. G. Hallam) **80g:92034** 92A15 (92A10)
- Zeilberger, Doron** Solutions of exponential growth to systems of partial differential equations. *J. Differential Equations* 31 (1979), no. 3, 287-295. (J. Christina) **80c:35030** 35E20 (32A15, 58G07)
- el Zein, Fouad** See El Zein, Fouad
- Zeidler, Herbert** Die Sache mit den Möbius-Bändern. Wie ich Vertretungstunden gestaltete—ein Erlebnisbericht. *Praxis Math.* 21 (1979), no. 7, 193-202. (H. B. Griffiths) **80j:00014** 00A25 (57-01, 57N05)
- Zelitin, David** An inequality for a class of polynomials. *Fibonacci Quart.* 16 (1978), no. 2, 128-129, 146, 151. (J. Matkowski) **80a:26004** 26D05 (26C05, 39A05)
- Zelitsman, R. K.** See Zeytounian, Radoslaw Kh.
- Zeluzko, Wieslaw** Concerning algebras of functions with restricted growth. Special issue dedicated to Wladyslaw Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 1 (1978), 381-384. (J. P. Ferrier) **80k:46024** 46E10
- Concerning nonremovable ideals in commutative  $m$ -convex algebras. *Demonstratio Math.* 11 (1978), no. 1, 239-245. (M. Rajagopalan) **80i:46041** 46J05 (46H10)
- An axiomatic approach to joint spectra. *I. Studia Math.* 64 (1979), no. 3, 249-261. (Robin Harte) **80h:46076** 46J05 (46H05, 47A10)
- Zelitskaya, L. V.** Perturbation of Ando's elements in a problem of a rotational motion of a solid. (Russian. English summary) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* 1979, no. 4, 8-14. (Author's summary) **80c:70033** 70M05
- Zel'dik, E. I.** (with Erlov, L. V.) Investigation of the stability of equilibrium of three-dimensional deformable bodies. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 1, 47-50. (From the text) **80c:73040** 73H99 (34D99)
- Zel'dovitch, Ja. B.** One-dimensional motion of collisionless particles in gasdynamic approximation. *Phys. Fluids* 22 (1979), no. 1, 103-104. (Jan Lerche) **80d:82053** 82A45 (85A05)
- Zelen, M.** (with Lagakos, S. W.; Sommer, C. J.) Semi-Markov models for partially censored data. *Biometrika* 65 (1978), no. 2, 311-317. (Rashid Ahmad) **80a:62052** 62G05
- Zelenov, V. B.** (with Aleksandrov, V. M.) The method of homogeneous solutions in mixed problems of pure shear. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* 32 (1979), no. 3, 18-25, 89. (Authors' summary) **80i:73006** 73C35
- Zelensko, L. B.** Asymptotic distribution of eigenvalues in a gap in the continuous spectrum of a multidimensional Schrödinger operator with perturbed periodic potential. (Russian) *Numerical methods and programming*, No. 1 (Russian), pp. 152-181, 201, Saratov. Gos. Univ., Saratov, 1977. (Author's summary) **80g:35096** 35P20 (47A70)
- Železa, S. D.** On the problem of isomorphism of a partially ordered semigroup. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Priložna Mat.* 12 (1976), no. 2, 195-206 (1978). (T. Saitō) **80f:06017** 06F05 (20M05)
- Representation of partially right-ordered semigroups that are defined by inequalities. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Priložna Mat.* 12 (1976), no. 2, 207-214 (1978). (T. Saitō) **80i:06015** 06F05 (20N05)
- Zelevinskii, V. G.** Microscopic derivation of a quantum Hamiltonian for adiabatic collective motion. *Nuclear Phys. A* 337 (1980), no. 1, 40-76. (Author's summary) **80m:81122** 81H05 (81G35)
- Zelkina, L. F.** Multidimensional synthesis and turnpike theorems in optimal control problems. (Russian) *Probabilistic control problems in economics (Russian)*, pp. 33-114. "Nauka", Moscow, 1977. (From the text) **80b:93105** 93C99 (90C08)
- Zelkina, Bohdan** The lattice of all subtrees of a tree. (Russian summary) *Math. Slovaca* 27 (1977), no. 3, 277-286. (Author's review) **80f:05023** 05C05 (06B99)
- Dot-compositions of graphs. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 1169-1176. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (J. Sedláček) **80c:05117** 05C99
- Strongly connected digraphs in which each edge is contained in exactly two cycles. (Russian summary) *Acta Cybernet.* 4 (1978/79), no. 2, 203-205. (D. P. Geller) **80g:05040** 05C20 (94C15)
- (with Chajda, Ivan) Metrics and tolerances. *Arch. Math. (Brno)* 14 (1978), no. 4, 193-200. (William Lindgren) **80c:54070** 54H12
- On a problem of R. Häggkvist concerning edge-colourings of graphs. (Russian summary) *Časopis Pěst. Mat.* 103 (1978), no. 3, 289-290. (Charles M. Grinstead) **80a:05099** 05C15 (05C38)
- A remark on the Čebyšev property. (Russian summary) *Math. Slovaca* 28 (1978), no. 3, 311-316. (H. Gupta) **80k:05004** 05A05
- Zelins'kii, Ju. B.** Application of a local degree to the study of quasi-interior mappings. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 3, 299-308, 427. (Ju. G. Borisovič) **80b:58011** 58C10 (30C60, 54C10, 55M25)
- Zeljzkov, I.** (with Sivarova, A.) Low-frequency surface waves in a cylindrical nonisothermal plasma column. *Czechoslovak J. Phys. B* 29 (1979), no. 10, 1091-1103. (E. G. Broadbent) **80j:76054** 76X05
- Zeller, Karl** (with Meyer-König, W.) Über die Größenordnung der Koeffizienten von Potenzreihenentwicklungen. Special issue dedicated to Wladyslaw Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 1 (1978), 221-233. (Kazuo Ishiguro) **80b:30003** 30B10
- See also Multivariate approximation theory, **80k:65006**
- Zellini, Paolo** On the optimal computation of a set of symmetric and persymmetric bilinear forms. *Linear Algebra Appl.* 23 (1979), 101-119. (J. D. P. Donnelly) **80g:15002** 15A03
- Zellner, Arnold** (with Press, S. James) Posterior distribution for the multiple correlation coefficient with fixed regressors. *J. Econometrics* 8 (1978), no. 3, 307-321. (From the introduction) **80k:62042** 62H20 (62F15)
- Statistical analysis of econometric models. With comments by David A. Belsley, Edwin Kuh, Carl F. Christ, Peter M. Robinson and Thomas J. Rothenberg and a rejoinder by the author. *J. Amer. Statist. Assoc.* 74 (1979), no. 367, 628-651. (Jerry A. Hausman) **80m:62108** 62P20 (62M10)
- Zelman, M. B.** (with Volodin, A. G.) Resonance interaction of Tollmien-Schlichting waves in a boundary layer. (Russian) *Čisl. Metody Meh. Splōn. Sredy* 9 (1978), no. 1. *Mat. Modelirovanie*, 31-38. (From the text) **80g:76032** 76N05
- Zelmanov, E. I.** Radical extensions of PI-algebras. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 6, 1392-1394, 1439. (V. N. Latyev) **80i:16025** 16A38
- An example of a finitely generated primary ring. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 2, 423, 461. (V. A. Artamonov) **80c:16010** 16A12
- Zelmanowitz, Julius M.** Semisimple rings of quotients. *Bull. Austral. Math. Soc.* 19 (1978), no. 1, 97-115. (Darrell R. Turnidge) **80a:16008** 16A08
- (with Gustafson, William H.) On matrix equivalence and matrix equations. *Linear Algebra Appl.* 27 (1979), 219-224. (S. Lajos) **80c:15011** 15A24
- Zelnerovik, V. A.** Integrals of Newtonian equations and nonstationary one-dimensional exact solutions for models of magnetizable fluids with internal angular momentum. *Magnit. Gidrodinamika* No. 1 (1978), 3-12 (Russian); translated as *Magnetohydrodynamics* 14 (1978), no. 1, 1-9. **80c:76064** 76W05 (35Q99)
- One-dimensional nonstationary waves in magnetic fluids with intrinsic angular momentum. *Magnit. Gidrodinamika* No. 1 (1979), 3-8 (Russian); translated as *Magnetohydrodynamics* 15 (1979), no. 1, 1-5. (Editors) **80m:76084** 76W05
- Zelow, R.** See Lundquist, R. Zelow
- Zeltjakova, Z. N.** (with Zamahovskii, M. P.; Sdvizkov, O. A.) Semiquadraternionic elliptic and pseudoelliptic spaces. (Russian) *Geometry*, No. 6 (Russian), pp. 31-40. Leningrad. Gos. Ped. Inst., Leningrad, 1977. (D. B. Persic) **80g:53039** 53C35 (15A33)
- Zelvenskii, I. G.** The maximal extension without simple ramification of a local field. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 6, 1385-1400, 1440. (Helmut Koch) **80d:12010** 12B15
- Zeman, J. Jay** Generalized normal logic. *J. Philos. Logic* 7 (1978), no. 2, 225-243. (From the text) **80j:03035** 03B45 (03G10)
- Normal, Sasaki, and classical implications. *J. Philos. Logic* 8 (1979), no. 2, 243-245. (Leo Esakia) **80f:03028** 03B60 (03G10)
- Two basic pure-implicational systems. *Notre Dame J. Formal Logic* 20 (1979), no. 3, 674-684. (Charles F. Kielkopf) **80c:03036** 03B45
- Normal implications, bounded posets, and the existence of meets. *Notre Dame J. Formal Logic* 20 (1979), no. 3, 685-688. (I. Petrescu) **80m:03048** 03B45 (03G10, 06A12)
- Quantum logic with implication. *Notre Dame J. Formal Logic* 20 (1979), no. 4, 723-728. (Henner Kröger) **80c:03099** 03G12 (03B45, 06C15, 81B10)
- Zeman, Jiří** Eine Bemerkung zur WK-B-Methode. (Czech and Russian summaries) *Sb. Práci Přírodověd. Fak. Unio. Palackého v Olomouci Mat.* 57 (1978), 61-68. (W. Wasow) **80m:34056** 34E20
- Zeman, Marvin** On the generalized Levi condition for partial differential operators with double characteristics. *Comm. Partial Differential Equations* 3 (1978), no. 11, 1041-1052. (Ju. V. Kostarčuk) **80f:35005** 35A30



- The Levi-Lax condition for partial differential equations with real characteristics of constant multiplicity. *Israel J. Math.* 31 (1978), no. 1, 57-77. (Rémi Vaillancourt) **80b:35097** 35L30
- Zemack, Jaroslav A simple proof of the Weierstrass-Stone theorem. *Comment. Math. Prace Mat.* 20 (1977/78), no. 2, 495-497 (loose errata). (Eggert Briem) **80c:46062** 46J10
- (with Aupetit, Bernard) On the spectral radius in real Banach algebras. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 12, 969-973 (1979). (Sandy Grabiner) **80c:46034** 46J05 (46H05)
- Idempotents in Banach algebras. *Bull. London Math. Soc.* 11 (1979), no. 2, 177-183. (G. Maltese) **80b:46073** 46H20
- Zemlian, Armen H. Nonlinear, resistive, countably infinite electrical networks. *Applicable Anal.* 8 (1978/79), no. 2, 185-192. (Author's summary) **80c:94025** 94C15
- The composition representation of time-varying systems with Banach-space-valued distributional signals. Special issue on the mathematical foundations of system theory. *IEEE Trans. Circuits and Systems* 25 (1978), no. 9, 793-799. (B. Pondělíček) **80c:93079** 93C50
- Two-level periodic marketing networks without market news. *J. Math. Anal. Appl.* 68 (1979), no. 2, 509-525. (Anjan Mukherji) **80b:90031** 90A14
- Zemby, Ivan Admissible operations in categories of algebras. (Russian summary) *Math. Slovaca* 27 (1977), no. 3, 209-212. (H. Gonsior) **80f:18006** 18C10
- Zemlakov, S. D. (with Rutkovskii, V. Ju.) Conditions for the functioning of a multi-dimensional self-adjusting control system with a reference model at persistent parametric disturbances. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 2, 301-304. (Andrzej Gościński) **80b:93146** 93D99
- Zemljakov, N. S. (with Danielian, E. A.) On the asymptotics of the queue length of the  $M_1/G_1/1$  queue in heavy traffic. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 66 (1978), no. 4, 193-196. (T. Rolaki) **80d:60128** 60K25
- Zemroch, P. J. (with Mardia, K.)  $\star$ Tables of the  $F$ - and related distributions with algorithms. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York*, 1978. x + 256 pp. ISBN 0-12-471140-5 (From the preface) **80c:62076** 62Q05
- (with Bailey, R. A.; Preece, D. A.) Totally symmetric Latin squares and cubes. *Utilitas Math.* 14 (1978), 161-170. (David A. Drake) **80c:05032** 05B15
- Zecke, Peter Zur Parametrisierung reeller Exponentialsummen durch lineare Differentialgleichungen mit Parameterrestriktionen. (English summary) *Numerische Methoden der Approximationstheorie, Band 4 (Meeting, Math. Forschungsinstitut, Oberwolfach, 1977)*, pp. 320-344. *Internat. Schriftenreihe Numer. Math.*, 42, Birkhäuser, Basel, 1978. (Author's summary) **80d:65013** 65B10 (41A30)
- Zeng, Xian Wu An existence and uniqueness theorem for limit cycles of the Liénard equation. (Chinese. English summary) *Acta Math. Sinica* 21 (1978), no. 3, 263-269. (Author's summary) **80c:34036** 34C05
- Zenisek, Alexander Some notes to curved triangular finite  $C^1$ -elements. (Czech and Russian summaries) *Knižnice Odborné. Vyd. Spisů Vysoké. Učební Tech. v Brně A* 10 (1976), 83-93 (1978). (Rolf Rannacher) **80b:65141** 65N30 (73K10)
- Approximation in the finite element method. II. The use of finite element method and finite difference method in geophysics. (Proc. Summer School, Liblice, 1977), pp. 81-94. *Česk. Akad. Věd, Prague*, 1978. (R. A. Nicolaides) **80i:65127b** 65N30 (65-02)
- Zenkevich, N. K. (with Petrojan, L. A.) Differential games with discrete progression of information receiving by one of the players. (Russian) *Control of dynamical systems* (Russian), pp. 78-90, 314. *Leningrad. Univ., Leningrad*, 1978. (Authors' summary) **80c:90154** 90D26
- Zesławski, Marian Selected properties of certain Boolean functions of several variables. (Polish. English, French, German and Russian summaries) *Rozprawy Elektrotech.* 25 (1979), no. 4, 1047-1059. (Author's summary) **80c:94058** 94C10
- where Zen'kovit, S. Ja. See Seker-Zen'kovit, S. Ja.
- Zenar, Philip See Proceedings: Topology Conference, **80i:54001a**; Proceedings: Topology Conference, **80i:54001b**; Proceedings: Topology Conference, **80i:54002a** and Proceedings: Topology Conference, **80i:54002b**
- Zemes, Ch. (with Oberlechner, G.; Umezawa, M.) The boson transformations and the soliton solutions of the sine-Gordon equation. *Lett. Nuovo Cimento* (2) 23 (1978), no. 18, 641-649. (A. Rouet) **80c:81090** 81E99 (35Q20)
- Zemskhov, A. A. Characteristic properties of best quadrature formulas. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 1, 49-68, 204. (A. Ram) **80i:41022** 41A55
- do hqok Z'ep See Do Hqok Z'ep
- Zengjia, P. K. A boundary value problem for some nonlinear hyperbolic differential equations. (Russian. Georgian and English summaries) *Sukharth. SSR Mecl. Akad. Moambe* 89 (1978), no. 2, 305-308. (V. Djurković) **80b:35106** 35L70
- where Zerar, A. See Mozen Zerar, A.
- Zerbe, Gary O. On Fieller's theorem and the general linear model. *Amer. Statist.* 32 (1978), no. 3, 103-105. (From the introduction) **80c:62018** 62F25 (62J05)
- Randomization analysis of the completely randomized design extended to growth and response curves. *J. Amer. Statist. Assoc.* 74 (1979), no. 365, 215-221. (C. G. Khatri) **80c:62062** 62J02
- Zerlind, S. (with Cognola, G.; Soldati, R.; Vanzo, L.) Classical nonabelian gauge theories in the space of reference frames. *J. Math. Phys.* 20 (1979), no. 12, 2613-2618. (M. Carmeli) **80b:81008** 81E10
- Zerlind, T. Š. (with Gogoladze, L. D.) Conjugate functions of several variables. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruzin. SSR* 94 (1979), no. 3, 541-544. (R. L. Cooke) **80c:42020** 42B05
- Strong differentiability of indefinite integrals in  $R^n$ . (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruzin. SSR* 95 (1979), no. 1, 33-36. (Theodore S. Bolin) **80c:28005** 28A15
- Zerger, Monte The magic of pi. *J. Recreational Math.* 12 (1979/80), no. 1, 21-23. (Editors) **80c:10013** 10A30
- Zerling, David On the existence of dense analytic subgroups. *Proc. Amer. Math. Soc.* 72 (1978), no. 3, 566-570. (M. Rajagopalan) **80i:22023** 22E20 (22A10)
- Dense subgroups of Lie groups. II. *Trans. Amer. Math. Soc.* 246 (1978), 419-428. (Dong Hoon Lee) **80a:22009** 22E15
- Zernike, Ernst See Gratian-Guinness, I. **80g:01019**
- Zerou, A. E. Solutions of a system of singular differential equations that are partially solved with respect to the derivatives. (Russian) *Mat. Zametki* 24 (1978), no. 3, 349-357, 446. (I. Kiguradze) **80d:34006** 34A10 (34C10)
- Zessin, Hans (with Nguyen, Xuan-Xanh) Integral and differential characterizations of the Gibbs process. *Math. Nachr.* 88 (1979), 105-115. (Olav Kallenberg) **80c:6001a** 60G55 (60K35, 82A05)
- See also Matthes, Klaus; et al. **80i:6001b**
- Zettl, A. (with Evans, W. D.) Dirichlet and separation results for Schrödinger-type operators. *Proc. Roy. Soc. Edinburgh Sect. A* 80 (1978), no. 1-2, 151-162. (Boris Pavlov) **80i:35136** 35P05
- (with Evans, W. D.) Norm inequalities involving derivatives. *Proc. Roy. Soc. Edinburgh Sect. A* 82 (1978/79), no. 1-2, 51-70. (E. F. Beckenbach) **80g:26021** 26D10
- (with Everitt, W. N.) Products of differential expressions without smoothness assumptions. *Quaestiones Math.* 3 (1978/79), no. 1, 67-82. (J. B. Butler, Jr.) **80c:34018** 34B25 (47E05)
- (with Kwong, Man Kam) An extension of the Hardy-Littlewood inequality. *Proc. Amer. Math. Soc.* 77 (1979), no. 1, 117-118. (V. V. Peller) **80c:26014** 26D15
- Zeuge, Jörn Die Schmiegäume an die Veronesemannigfaltigkeiten. *Mitt. Math. Gesellsch. Hamburg* 10, no. 5, 391-393 (1977). (O.-H. Keller) **80c:14026** 14M10
- Zimmer, Gustav See Pawlowitch, Alex. **80g:01029**
- Zevin, A. A. (with Padva, I. G.) Inversion of the Laplace transform in problems of hereditary elasticity theory. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* 32 (1979), no. 1, 50-61, 83. (Vadim Komkov) **80i:73026** 73C99 (44A10)
- Ževlakov, K. A. (with Stin'ko, A. M.; Šestakov, I. P.; Širov, A. I.)  $\star$ Кольца, близкие к ассоциативным. (Russian) [Rings that are nearly associative] Современная Алгебра. [Monographs in Modern Algebra] "Nauka", Moscow, 1978. 431 pp. (Harry F. Smith) **80i:17002** 17-02 (17Cxx, 17Dxx)
- Zeytounian, Radvadour Kh. The theory of three-dimensional vortex flows of ideal fluids. (Russian) *Čisl. Metody Meh. Splain. Sredy* 8 (1977), no. 5, 71-101. (From the text) **80i:76016** 76C05 (35Q99)
- Application of Lagrangian invariants to the calculation of three-dimensional rotational flows of a perfect fluid. *Sixth International Conference on Numerical Methods in Fluid Dynamics (Proc. Conf., Tbilisi, 1978)*, pp. 594-599. *Lecture Notes in Phys.*, 90, Springer, Berlin, 1979. (D. Schultz) **80c:76011** 76C99 (49H05)
- (with Guiraud, Jean-Pierre) Séparation d'une nappe tourbillonnaire sur une surface régulière à grand nombre de Reynolds. (English summary) *J. Mécanique* 18 (1979), no. 3, 423-431. (A. Pozzi) **80i:76037** 76N99
- (with Guiraud, Jean-Pierre) Note sur un mécanisme d'instabilité pour le coeur d'une nappe tourbillonnaire enroulée. (English summary) *Rech. Aéropat.* 1979, no. 2, 85-88. (W. O. Criminale, Jr.) **80c:76024** 76E99 (35Q99)
- Zetser, A. P. See All-Union Symposium: Artificial Intelligence and the Automation of Investigations in Mathematics, **80d:68116**
- Zezza, Pierluigi An equivalence theorem for nonlinear operator equations and an extension of Leray-Schauder's continuation theorem. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 3, 545-551. (Norman Dancer) **80c:47009** 47H15
- (with Zecca, Pietro) Nonlinear boundary value problems in Banach spaces for multivalued differential equations on a noncompact interval. *Nonlinear Anal.* 3 (1979), no. 3, 347-352. (C. Corduneanu) **80b:34004** 34C99 (34A60, 34B15)
- Žgent, V. S. A boundary layer for I. N. Vekua's equation for the equilibrium of a thin plate. (Russian) *Complex analysis and its applications (Russian)*, pp. 228-236, 667. "Nauka", Moscow, 1978. (Author's summary) **80c:73053** 73K10
- Zhang, Fu Ji Eigenvalue network and molecular orbital. *Sci. Sinica* 22 (1979), no. 10, 1160-1168. (P. J. Roberts) **80m:81112** 81G55
- Zhang, Gong Qing (with Jiang, Bo Ju) Fixed point index of set-valued mappings and multiplicity of solutions of elliptic equations with discontinuous nonlinearities. (Chinese. English summary) *Acta Math. Sinica* 21 (1978), no. 1, 26-43. (Authors' summary) **80c:47069** 47H10 (35J60)
- (with Jiang, Bo Ju) Multiple solutions for asymptotic linear operators. (Chinese) *Kexue Tongbao* 23 (1978), no. 6, 340-343, 339. (J. S. W. Wong) **80c:47081** 47H15 (58E07)
- Zhang, Guang Hou Common Borel directions of meromorphic functions and their successive derivatives or integrals. I. (Chinese) *Acta Math. Sinica* 20 (1977), no. 2, 73-98. (Zbl 357:30020) **80d:30022a** 30D30
- Common Borel directions of meromorphic functions and their successive derivatives or integrals. II. (Chinese) *Acta Math. Sinica* 20 (1977), no. 3, 157-177. (Zbl 357:30021) **80d:30022b** 30D30
- Common Borel directions of meromorphic functions and their successive derivatives or integrals. III. (Chinese) *Acta Math. Sinica* 20 (1977), no. 4, 237-247. (Zbl 371:30028) **80d:30022c** 30D30
- The length of an asymptotic path of an entire function. *Sci. Sinica* 22 (1979), no. 9, 991-999. (O. P. Juneja) **80m:30037** 30D35 (30D15)
- Zhang, Li Ning (with Zou, Zhen Long; Huang, Peng; Zhang, Yuan Zhong; Li, Gen Dao; An, Ying; Chen, Shi; Wu, Yong Shi; He, Zuo Xiu; Guo, Han Ying) Some researches on gauge theories of gravitation. *Sci. Sinica* 22 (1979), no. 6, 628-636. (Kenneth Dunn) **80c:83033** 83C45
- Zhang, Qian Er (with Lin, Lian Tang; Wang, Nan Qin) Graphical method of Hückel matrix. *Sci. Sinica* 22 (1979), no. 10, 1169-1184. (P. J. Roberts) **80m:81113** 81G55
- Zhang, Qing Yong (with Guo, Da Jun) Uniqueness of the solution of a nonlinear integral equation in nuclear physics. (Chinese. English summary) *Kexue Tongbao* 24 (1979), no. 15, 678-681. (J. S. W. Wong) **80c:45006** 45G10
- Zhang, Qing Yu Almost complex homogeneous manifolds. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 1, 69-99. (H. Wu) **80c:53060** 53C15 (32M10, 53C30)
- Zhang, Tong (with Xiao, Ling) Interactions of elementary waves in one-dimensional adiabatic flow. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 5, 596-619. (Authors' summary) **80c:76058** 76L05 (35L67)
- Zhang, Wei Tao (with Gu, Yong Geng; Ji, Xin Hua) An integral identity for mean curvature. (Chinese. English summary) *Acta Math. Sinica* 21 (1978), no. 3, 247-252. (H. Wu) **80j:58034** 35J15 (46E35)

- Zhang, Xu Ding** (with Cheng, M. T.; Shen, Xie Chang; Zhou, Min Qiang) Finite Walsh transform in  $\mathbb{R}^n$  and applications to picture bandwidth compression. (Chinese. English summary) *Beijing Daxue Xuebao No. 1* (1978), 26–50. (From the summary) **80g:94002** 94A05 (44A15, 94A11)
- Zhang, Yao Ting** Generalized correlation coefficients and their applications. (Chinese) *Acta Math. Appl. Sinica* 1 (1978), no. 4, 312–320. (Pi-Erh Lin) **80f:62058** 62H20
- Zhang, Yuan Zhong** (with Zou, Zhen Long; Huang, Peng; Li, Gen Dao; An, Ying; Chen, Shi; Wu, Yong Shi; He, Zuo Xiu; Zhang, Li Ning; Guo, Han Ying) Some researches on gauge theories of gravitation. *Sci. Sinica* 22 (1979), no. 6, 628–636. (Kenneth Dunn) **80k:83033** 83C45
- Zhao, Bao Heng** (with Yan, Mu Lin; Guo, Han Ying) Renormalization of a gravitational field with torsion. (Chinese. English summary) *Kexue Tongbao* 24 (1979), no. 13, 587–591. (Hsin-Yang Yeh) **80j:83019** 83C45 (53C80, 81E15)
- Zhbanov, Yu. K.** See **Zhdanov, Ju. K.**
- Zhdanov, A. I.** See **Zhdanov, A. I.**
- Zhdanov, V. I.** See **Zhdanov, V. I.**
- Zhdanov, V. S.** See **Zhdanov, V. S.**
- Zheleznovich, V. A.** See **Zheleznovich, V. A.**
- Zheljazzkov, I.** See **Zeljazzkov, I.**
- Zhirabok, A. N.** See **Zhirabok, A. N.**
- Zhiror, M. V.** See **Zhiror, M. V.**
- Zhitetskiy, L. S.** See **Ziteckii, L. S.**
- Zhitomirsky, V.** See **Zhitomirskii, V.**
- Zhivkov, N. V.** See **Zivkov, N. V.**
- Zhitovota, T. M.** See **Zivotova, T. M.**
- Zhoritskiy, A. B.** See **Zharitskii, A. B.**
- Zhou, Bi Fang** (with Su, Ding Qiang; Wang, Ya Nan; Lu, Sheng Dong) An algorithm for finding the extreme values of a function of many variables and its application in the automatic design of astronomical optical systems. *Chinese Astronom. J.* 4 (1980), no. 1, 84–89. (Authors' summary) **80k:78033** 78A55 (85A99)
- Zhou, Guang Zhao** (with Du, Dong Sheng; Ruan, Tu Nan) The pure gauge fields on a coset space. *Sci. Sinica* 22 (1979), no. 1, 37–52. (William H. Klink) **80k:81063** 81E15 (53C10)
- (with Dai, Yuan Ben) Soliton-soliton scattering and the semi-classical approximation for the problem of scattering in three-dimensional space. *Sci. Sinica* 22 (1979), no. 3, 281–294. (Authors' summary) **80k:81097** 81F20 (35Q99)
- Zhou, Guo Cheng** (with Jiang, Shou Ping; Liu, Wei Min; Fei, Zhi Hao) Graph theory of enzyme kinetics. I. Steady-state reaction systems. *Sci. Sinica* 22 (1979), no. 3, 341–358. (Authors' summary) **80c:92007** 92A09 (80A05)
- Zhou, Min Qiang** (with Cheng, M. T.; Shen, Xie Chang; Zhang, Xu Ding) Finite Walsh transform in  $\mathbb{R}^n$  and applications to picture bandwidth compression. (Chinese. English summary) *Beijing Daxue Xuebao No. 1* (1978), 26–50. (From the summary) **80g:94002** 94A05 (44A15, 94A11)
- Zhou, Yu Rong** A comparison theorem for ordinary differential equations and its application. (Chinese. English summary) *Acta Math. Sinica* 21 (1978), no. 4, 313–326. (From the summary) **80c:34021** 34C11
- Zhu, Xi Quan** (with Bao, Cheng Guang) Effect of the bound state poles on  $N$ -body scattering amplitudes. (Chinese. English summary) *Kexue Tongbao* 24 (1979), no. 17, 778–781. (Authors' summary) **80k:81047** 81F10
- Zhu, Yao Chen** (with Wang, Yuan; Yu, Kun Rui) A transfer theorem for linear forms. (Chinese) *Acta Math. Sinica* 22 (1979), no. 2, 237–240. (Jau-Shyong Shiue) **80k:10027** 10F10
- Zhuang, Qi Tai** Sequences of filling circles and Borel directions of meromorphic functions. (Chinese) *Kexue Tongbao* 24 (1979), no. 7, 289–291. (Chung-Chun Yang) **80k:30029** 30D35
- Sur les suites de cercles de remplissage et les directions de Borel des fonctions méromorphes. *Sci. Sinica* 22 (1979), no. 5, 493–511. (L. R. Sons) **80m:30038** 30D35
- Zukov, V. P.** See **Zukov, V. P.**
- Zhuravlev, S. G.** See **Zharavlev, S. G.**
- Zhuravlev, V. F.** See **Zharavlev, V. F.**
- Zhurbenko, I. G.** See **Zharbenko, I. G.**
- Ziber, A. V.** (with Šabat, A. B.) The Klein-Gordon equation with nontrivial group. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 5, 1103–1107. (V. E. Korepin) **80k:35060** 35Q20 (58A15)
- Zilman, Israel Bernard** Some characterizations of the  $n$ -dimensional Peano derivative. *Studia Math.* 63 (1978), no. 1, 89–110. (Norman J. Weiss) **80j:26009** 26B05 (43A85)
- Zibolen, E.** Regularized asymptotic solutions of singularly perturbed problems in the case of a matrix of simple structure and general form. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst. No. 357* (1978), 39–42. (Snezana Hristova) **80k:34086** 34E05
- Zidarois, Cornelia** Stability properties for the functional equation occurring in the study of random decision systems with complete connections. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 5, 821–827. (R. Theodorescu) **80b:60079** 60G99 (90C40)
- Zidarov, D. P.** A direct solution of the inverse gravimetric problem at a given law of the density-trap method. *C. R. Acad. Bulgare Sci.* 31 (1978), no. 9, 1115–1118. (From the text) **80f:86005** 86A30
- Partially regulated solutions of overdetermined systems of linear equations used in geophysics. *C. R. Acad. Bulgare Sci.* 31 (1978), no. 10, 1285–1288. (C. G. Cullen) **80g:65044** 65F20 (15A06)
- New approach to the solution of the integral equation of the first kind. *Inverse and improperly posed problems in differential equations* (Proc. Conf., Math. Numer. Methods, Halle, 1979), pp. 271–288. *Math. Research, 1*, Akademie-Verlag, Berlin, 1979. (Christopher T. H. Baker) **80f:65150** 65R20 (45L10)
- Zidenberg-Spiridonov, H.** (with Semadeni, Zbigniew) Functions on categories of ordered topological spaces. *Categorical topology* (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978), pp. 358–370. *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (Bernard L. Madison) **80m:54016** 54B30 (18B30, 54F05)
- Zitkov, N. P.** (with Andruševskii, N. M.; Šedrin, B. M.) Optimal approximation of functions by a finite number of their Fourier coefficients. (Russian) *Ž. Vyšš. Mat. i Mat. Fiz.* 18 (1978), no. 6, 1595–1599, 1631. (Gheorghe Coman) **80f:42062** 42A10 (65D15)
- Ziebur, Allen D.** New directions in linear differential equations. *SIAM Rev.* 21 (1979), no. 1, 57–70. (Authors' summary) **80d:34011** 34A30 (34D10, 65Lxx)
- Ziegler, F.** (with Scheidl, W.) Interaction of a pulsed Rayleigh surface wave and a rigid cylindrical inclusion. *Modern problems in elastic wave propagation* (Proc. IUTAM Sympos., Northwestern Univ., Evanston, Ill., 1977), pp. 145–169. Wiley, New York, 1978. (R. L. Richardson) **80f:73030** 73D15 (35C10, 86A15)
- (with Rammerstorfer, F. G.; Steiner, H.; Grossmayer, A.) Plötzliche Veränderung von Randbedingungen eines Biegebalkens. (English summary) *Acta Mech.* 33 (1979), no. 3, 147–162. (Authors' summary) **80g:73046** 73K05
- Ziegler, James R.** See *Golden age of theoretical ecology: 1923–1940*, **80c:01021**
- Ziegler, Martin** Definable bases of monotone systems. *Logic Colloquium '77* (Proc. Conf., Wrocław, 1977), pp. 297–311. *Studies in Logic and Foundations of Math.*, 96, North-Holland, Amsterdam, 1978. (Peter Schmitt) **80b:03048** 03C85
- (with Prestel, Alexander) Model-theoretic methods in the theory of topological fields. *J. Reine Angew. Math.* 299(300) (1978), 318–341. (G. Cherlin) **80f:54034** 54H13 (03C60, 12J99)
- (with Shelah, Saharon) Algebraically closed groups of large cardinality. *J. Symbolic Logic* 44 (1979), no. 4, 522–532. (Paul C. Eklof) **80j:03048** 03C60 (20A15)
- Ziegler, Viktor** See *Fiz. Marek*, **80f:60001**
- Ziegler, Zlir** Complete monotonicity properties of certain approximation operators. *J. Approx. Theory* 23 (1978), no. 3, 287–295. (V. Veselinov) **80k:41009** 41A36
- (with Amir, Dan) Expansions of generalized completely convex functions. *SIAM J. Math. Anal.* 10 (1979), no. 3, 643–654. (R. P. Boas, Jr.) **80f:26009** 26A51 (34B25, 46E15)
- Ziele, Martin** (with Gregorius, Hans-Rolf) Iterations of continuous mappings on metric spaces. Asymptotic stability and Lyapunov functions. *Internat. J. Systems Sci.* 10 (1979), no. 8, 855–862. (Wolfgang Hahn) **80k:54010** 54C05 (54E35, 54H99)
- Zielińska, Alicja** (with Zyskowska, Krystyna) On estimation of the eighth coefficient of bounded univalent functions with real coefficients. *Demonstratio Math.* 12 (1979), no. 1, 231–246. (A. W. Goodman) **80i:30032** 30C50
- Zielinski, Adam** On inversion of complex matrices. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 10, 1563–1566. (Authors' summary) **80g:65031** 65F05 (15A09)
- Zielinski, Ryszard** A randomized Kiefer-Wolfowitz procedure. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians* (Tech. Univ. Prague, Prague, 1974), Vol. B, pp. 577–582. *Academia, Prague*, 1978. (V. Fabian) **80g:62067** 62L20
- A stopping rule for sequential estimation processes. Two existence theorems. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 5, 441–444. (Nitis Mukhopadhyay) **80k:62128** 62L12
- ★Generatory liczb losowych. (Polish) [Random number generators]
- Programowanie i testowanie na maszynach cyfrowych. [Programming and testing on digital computers] Second edition. *Seria: Informatyka*. [Series: Informatics]
- Wydawnictwa Naukowo-Techniczne (WNT), Warsaw, 1979. 157 pp. ISBN 83-204-0126-7 (Tomaš Havránek) **80f:65009** 65C10 (62E25, 68J99)
- See also **Silvey, S. D.**, **80b:62001**
- Zielke, Gerhard** Zur historischen Entwicklung von verallgemeinerten inversen Matrizen. *Wiss. Z. Martin-Luther-Univ. Halle-Wittenberg Math.-Natur. Reihe* 27 (1978), no. 4, 109–118. (Thomas Hawkins) **80m:01032** 01A60 (15-03)
- Motivation und Darstellung von verallgemeinerten Matrixinversen. *Beiträge Numer. Math.* 7 (1979), 177–218. (W. Niethammer) **80f:65043** 65F20
- Zielke, Roland** Einige Eigenschaften schwacher Tschebyscheff-Systeme. *J. Approx. Theory* 25 (1979), no. 4, 384–392. (Hans Strauss) **80f:41020** 41A50
- Zielonka, Wojciech** A direct proof of the equivalence of free categorial grammars and simple phrase structure grammars. *Studia Logica* 37 (1978), no. 1, 41–57. (Hans Reichel) **80a:68096** 68F05
- Ziemba, W. T.** (with Kallberg, Jerry) On the robustness of the Arrow-Pratt risk aversion measure. *Econom. Lett.* 2 (1979), no. 1, 21–26. (Authors' summary) **80c:90005** 90A05
- (with Everitt, R.) Two-period stochastic programs with simple recourse. *Oper. Res.* 27 (1979), no. 3, 485–502. (I. M. Stancu-Minasian) **80h:90106** 90C15
- Ziemer, William P.** The Dirichlet problem for Euler-Lagrange equations on arbitrary domains. *J. London Math. Soc.* (2) 19 (1979), no. 3, 481–487. (T. Zolezzi) **80k:49004** 49A21 (35J60)
- le hyu Zien** See **Le Hyu Zien**
- Zienkiewicz, O. C.** (with Kelly, D. W.; Bettess, P.) The Sommerfeld (radiation) condition of infinite domains and its modelling in numerical procedures. *Computing methods in applied sciences and engineering* (Proc. Third Internat. Sympos., Versailles, 1977), I, pp. 169–203. *Lecture Notes in Math.*, 704, Springer, Berlin, 1979. (M. N. L. Narasimhan) **80h:76042** 76Q05
- (with Kelly, D. W.; Bettess, P.) Marriage à la mode—the best of both worlds (finite elements and boundary integrals). *Energy methods in finite element analysis*, pp. 81–107. Wiley, Chichester, 1979. (From the introduction) **80c:65107** 65N30 (73Cxx, 76Bxx)
- (with Taylor, Robert L.) Complementary energy with penalty functions in finite element analysis. *Energy methods in finite element analysis*, pp. 153–174. Wiley, Chichester, 1979. (Ranbir S. Sandhu) **80f:73063** 73K25 (65N30)
- (with Winnicki, L. A.) Plastic (or viscoplastic) behaviour of axisymmetric bodies subjected to nonsymmetric loading—semi-analytical finite element solution. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 9, 1399–1412. (Petr Procházka) **80h:73033** 73E99 (65N30)
- See also *Energy methods in finite element analysis*, **80d:73100**
- Zieschang, Heiner** (with Peczynski, Norbert) On coverings of Seifert 3-manifolds. *Arch. Math. (Basel)* 31 (1978/79), no. 4, 382–386. (Hugh M. Hilden) **80k:57011** 57N10
- (with Zimmermann, Bruno) Endliche Gruppen von Abbildungsklassen gefaseter 3-Mannigfaltigkeiten. *Math. Ann.* 240 (1979), no. 1, 41–62. (Gerhard X. Ritter) **80k:57025** 57N65 (57N10)
- (with Gramberg, Edelgard) Order reduced Reidemeister-Schreier subgroup presentations and applications. *Math. Z.* 168 (1979), no. 1, 53–70. (K. Appel) **80k:20034** 20E99 (20H10)
- bui kuang Zieu** See **Bui Kuang Zieu**



- Złewski, Stanley (with Corcoran, John) Identity logics. *Notre Dame J. Formal Logic* 20 (1979), no. 4, 777-784. (Michael Byrd) 80b:03017 03B20
- Zigangrov, K. Sh. Optimum zero rate data transmission through binary symmetric channel with feedback. *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* 7 (1978), no. 3, 183-198. (Author's summary) 80c:93025 93A99 (94A40)
- Zilno, G. Chirality invariance and "chiral" fields. *Tachyons, monopoles, and related topics (Proc. First Session, Interdisciplinary Sem., Erice, 1976)*, pp. 261-265, North-Holland, Amsterdam, 1978. (Editors) 80b:01052 81D05 (35A30)
- On the theoretical reliability of a three-temporal Lorentz transformation. *Lett. Nuovo Cimento* (2) 24 (1979), no. 6, 171-174. 80a:83013 83C10 (51B20)
- Zijm, W. H. M. Bounding functions for Markov decision processes in relation to the spectral radius. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 3, pp. 461-472, *Operations Research Verfahren*, 33, Hain, Meisenheim, 1979. (Author's summary) 80j:90112 90C40
- (with Dik, J. J.) Two inequalities for Poisson probabilities. *Nederl. Akad. Wetensch. Indag. Math.* 41 (1979), no. 1, 87-94. (H. J. Godwin) 80f:60024 60E15
- Žikov, V. V. (with Levitan, B. M.) ★Почти-периодические функции и дифференциальные уравнения. (Russian) [Almost-periodic functions and differential equations] *Moskov. Gos. Univ., Moscow*, 1978. 204 pp. (Boris Basit) 80d:42010 42A75 (34D20, 47H05)
- A criterion of pointwise stabilization for second-order parabolic equations with almost periodic coefficients. (Russian) *Mat. Sb. (N.S.)* 110(152) (1979), no. 2, 304-318, 320. (Z. Schuss) 80m:35036 35K10 (35B40)
- Zil'berman, A. A. A property of closed convex polygons in two-dimensional spaces of constant curvature. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 1(188), 18-24. (V. T. Fomenko) 80c:53076 53C45
- Zil'berman, I. A. (with Volynskii, E. I.) On the choice of penalty coefficient in iterative methods of linear programming. (Russian) *Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 3, 32-37 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 3, 27-33. (Robert A. Abrams) 80f:90084 90C05
- Zil'berstein, A. M. (with Natković, Ju. S.) Use of a noise classifier in detection of a signal in noise. *Automatika* 1979, no. 1, 11-16, 78 (Russian. English summary); translated as *Soviet Automat. Control* 12 (1979), no. 1, 8-12. (Authors' summary) 80j:94008 94A12
- Zilcha, Itzhak (with Cass, David; Okuno, Masahiro) The role of money in supporting the Pareto optimality of competitive equilibrium in consumption-loan type models. *J. Econom. Theory* 20 (1979), no. 1, 41-80. (Hans Keiding) 80f:90026 90A14 (90A16)
- Žilvič, L. I. Conditions for the existence of limit cycles in a differential equation system. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 6, 495-498, 571-572. (E. S. Čičkin) 80b:34037 34C05
- Žilinskas, Antanas On one-dimensional multimodal minimization. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 393-402, Reidel, Dordrecht, 1978. (Author's summary) 80d:65084 65K10
- Ziller, W. (with D'Atri, J. E.) Naturally reductive metrics and Einstein metrics on compact Lie groups. *Mem. Amer. Math. Soc.* 18 (1979), no. 215, iii+72 pp. (Rolf Sulanke) 80i:53023 53C30 (17B20, 53C25)
- Zilli, Marisa Venturini See Venturini Zilli, Marisa
- Zimakov, N. P. (with Mironov, A. V.) Regular representations and normability of topological algebras over a semifield. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 6, 9-10. (G. L. Litvinov) 80b:46056 46H15
- Ziman, John M. ★Models of disorder. The theoretical physics of homogeneously disordered systems. *Cambridge University Press, Cambridge-New York*, 1979. xiii+525 pp. ISBN 0-521-21784-9, 0-521-29280-8 (E. E. Tareeva) 80m:82001 82-02 (82A42)
- Zimmerman, A. H. (with Pimentel, B. M.) A note on the energy moments. *J. Phys. A* 13 (1980), no. 2, 757-760. (Authors' summary) 80b:81072 81D99 (82A15)
- (with Ruggiero, J. C.; Villani, A.) Some comments on the application of analytic regularisation to the Casimir forces. *J. Phys. A* 13 (1980), no. 2, 761-766. (Authors' summary) 80b:81214 81L05 (82A15)
- Zimmer, Horst G. Quasifunctions on elliptic curves over local fields. *J. Reine Angew. Math.* 307/308 (1979), 221-246. (J. W. S. Cassels) 80g:14024 14G25 (10B10, 10B40, 14K07)
- Zimmer, Robert J. Ergodic actions and stochastic processes on groups and homogeneous spaces. *The structure of attractors in dynamical systems (Proc. Conf., North Dakota State Univ., Fargo, N.D., 1977)*, pp. 253-264, *Lecture Notes in Math.*, 668, Springer, Berlin, 1978. (Yves Guivarch) 80b:28030 28D15 (22D40, 60G10)
- Uniform subgroups and ergodic actions of exponential Lie groups. *Pacific J. Math.* 78 (1978), no. 1, 267-272. (S. G. Dani) 80c:22012 22D40 (28D15)
- (with Moore, Calvin C.) Groups admitting ergodic actions with generalized discrete spectrum. *Invent. Math.* 51 (1979), no. 2, 171-188. (S. G. Dani) 80m:22008 22D40 (28D15)
- An analogue of the Mostow-Margulis rigidity theorems for ergodic actions of semisimple Lie groups. *Bull. Amer. Math. Soc. (N.S.)* 2 (1980), no. 1, 168-170. (S. G. Dani) 80m:22016 22E40 (28D15)
- Zimmer, William J. (with Tai, Yung Chiu) An optimality of Beattie's continuous sampling plan. *J. Nat. Chiao Tung Univ.* 6 (1979), 61-69. (W. Uhlmann) 80b:62073 62N10 (62L10)
- Zimmerli, Alain Formule sommatoire pour la transformation de Fourier sphérique. *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 12, A543-A545. (Author's summary) 80b:10042 10D40 (22E46)
- Zimmerman, Donald W. A simple duality principle in test theory. *J. Math. Psych.* 20 (1979), no. 3, 256-262. (Author's summary) 80m:62104 62P15
- Zimmerman, H.-J. See Gál, Tomáš 80b:90103
- Zimmerman, Karel See Zimmermann, Karel
- Zimmerman, Robert L. (with Farhooosh, Hamid) Killing horizons and dragging of the inertial frame about a uniformly accelerating particle. *Phys. Rev. D* (3) 21 (1980), no. 2, 317-327. (Andrew King) 80m:83020 83C50
- Zimmermann, Bruno (with Zieschang, Heiner) Endliche Gruppen von Abbildungsklassen gefaseter 3-Mannigfaltigkeiten. *Math. Ann.* 240 (1979), no. 1, 41-62. (Gerhard X. Ritter) 80b:57025 57N65 (57N10)
- Periodische Homöomorphismen Seifertscher Faserräume. *Math. Z.* 166 (1979), no. 3, 289-297. (W. D. Neumann) 80i:57027 57S17
- Zimmermann, H.-J. (with Hamacher, H.; Leberling, H.) Sensitivity analysis in fuzzy linear programming. *Fuzzy Sets and Systems* 1 (1978), no. 4, 269-281. (Klaus Tammer) 80a:90089 90C05 (90C31)
- Zimmermann, Karel (with Vlach, Milan) On an important jubilee in the life of František Nožička. (Czech) *Ekonom.-Mat. Obzor* 14 (1978), no. 3, 331-332. (Editors) 80b:01027 01A70
- (with Teschke, Lothar) Extremale Algebren und verallgemeinerte Konvexitätsräume. (English and Czech summaries) *Ekonom.-Mat. Obzor* 15 (1979), no. 1, 74-84. (Robert E. Jamison) 80b:52003 52A01 (51M30, 90C25)
- A generalization of convex functions. (Czech summary) *Ekonom.-Mat. Obzor* 15 (1979), no. 2, 147-158. (J. E. Valentine) 80g:52002 52A01 (26B25, 54F05, 90C25)
- Linearität und Verallgemeinerungen der Konvexität. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 1, 17-25. (A. Göpfert) 80b:90121 90C25 (90C05, 90C48)
- Zimmermann, Uwe (with Burkard, Rainer E.) The solution of algebraic assignment and transportation problems. *Optimization and operations research (Proc. Workshop, Univ. Bonn, Bonn, 1977)*, pp. 55-65, *Lecture Notes in Econom. and Math. Systems*, 157, Springer, Berlin, 1978. (G. Šerkýns) 80b:90096 90C10
- Threshold methods for Boolean optimization problems with separable objectives. *Optimization techniques (Proc. 8th IFIP Conf., Würzburg, 1977)*, Part 2, pp. 289-298, *Lecture Notes in Control and Information Sci.*, 7, Springer, Berlin, 1978. (Korolian Gilezan) 80a:90102 90C10
- Zimmermann-Huisgen, Birge On Fuchs' problem 76. *J. Reine Angew. Math.* 309 (1979), 86-91. (E. A. Walker) 80b:20076 20K25
- Rings whose right modules are direct sums of indecomposable modules. *Proc. Amer. Math. Soc.* 77 (1979), no. 2, 191-197. (Darrell R. Turnidge) 80b:16041 16A64
- Zinčenko, A. I. See Zinčenko, O. I.
- Zinčenko, I. L. Reduction to normal form of a system of differential equations by means of an analytic transformation. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 3, 136-138, 159. (E. Barvinok) 80c:34045 34C20 (34D10)
- Zinčenko, N. M. On the p-variation of Gaussian random fields. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist.* No. 19 (1978), 72-76, 158. (D. Surgailis) 80a:60044 60G15 (60G17)
- The local growth of random fields with independent increments. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 1, 184-191. (D. A. Darling) 80d:60071 60G60 (60J30)
- Zinčenko, O. I. Correctness of equations with nondifferentiable operators. (Russian) *Mat. Fiz. No. 24* (1978), 91-93, 123. (Editors) 80b:47090 47H15
- Zinde, V. M. Studies of homomorphisms of Artin groups. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 4, 199-200. (From the text) 80j:20039 20F34 (32C40)
- Zinger, A. A. A characterization of the multivariate normal law by the independence of linear statistics. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 2, 381-385. (E. Lukacs) 80i:62041 62H05 (60E05)
- Zinger, M. Ja. Formulation of the problem of V-approximation (a new reading of P. L. Čebyšev's works on questions of the uniform approximation of functions). (Russian) *Uniform approximations and the moment problem (Russian)*, pp. 26-56, 149, *Akad. Nauk SSSR, Dal'nevostochn. Nauch. Centr, Vladivostok*, 1977. (Author's summary) 80b:41002 41-XX (65Dxx)
- Zingl, Harald F. K. See Few body systems and nuclear forces, 80m:81083a and Few body systems and nuclear forces, 80m:81083b
- Zini, Eliahu Approximation et surjectivité d'opérateurs de type monotone. (English summary) *Ann. Mat. Pura Appl.* (4) 117 (1978), 1-39. (J. Kolomyj) 80b:47071 47H05
- Surjectivité dans les espaces en dualité. *Publ. Res. Inst. Math. Sci.* 15 (1979), no. 1, 1-45. (Jacques Robert) 80d:47082 47H05 (35R99)
- Zink, Thomas Über die Anzahl der Spitzen einiger arithmetischer Untergruppen unitärer Gruppen. *Math. Nachr.* 89 (1979), 315-320. (A. A. Bondarenko) 80b:22028 22E40 (10C30)
- Zinn, Joel (with Kuelbs, James) Some stability results for vector valued random variables. *Ann. Probab.* 7 (1979), no. 1, 75-84. (Gilles Pisier) 80b:60014 60B12 (60F15)
- Zinn-Justin, J. Perturbation series at large order and vacuum instability. *Topics in quantum field theory and gauge theories (Proc. VIII Internat. GIFT Sem. Theoret. Phys., Salamanca, 1977)*, pp. 126-154, *Lecture Notes in Phys.*, 77, Springer, Berlin, 1978. (Ju. M. Lomsadze) 80a:81029 81C12
- (with Seznec, R.) Summation of divergent series by order dependent mappings: application to the anharmonic oscillator and critical exponents in field theory. *J. Math. Phys.* 20 (1979), no. 7, 1398-1408. (Gh. Adam) 80j:81036 81C99 (41A58, 65B10)
- Zinov'ev, Ju. M. Nonunitary representations of  $MH(2)$ , the  $ax+b$  group and the Laplace transform. (Russian. English summary) *Teoret. Mat. Fiz.* 38 (1979), no. 2, 153-162. (Eugene Gutkin) 80g:46039 46F12 (22E25, 32A25, 81F15)
- Zinov'ev, V. A. (with Siforov, V. I.; Sukhov, Yu. M.) On some problems in the information theory and related areas. (Russian summary) *Problemy Control Inform. Theory/Problemy Upravlen. Teor. Inform.* 7 (1978), no. 6, 407-427. (Michele Elia) 80i:94005 94A15
- (with Dumer, I. I.) Some new maximal codes over  $GF(4)$ . *Problemy Peredachi Informacii* 14 (1978), no. 3, 24-34 (Russian); translated as *Problems Inform. Transmission* 14 (1978), no. 3, 174-181 (1979). (Authors' summary) 80b:94053 94B05
- Zinov'ev, Viktor A. Letter to the editor. *Discrete Math.* 28 (1979), no. 1, 107. (Editors) 80m:05015 05B05
- Zinterhof, P. Über zahlentheoretische Methoden in der numerischen Mathematik. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T457-T458. (Harald Niederreiter) 80f:65016 65D15
- Žirabok, A. N. (with Danilov, V. V.; Filippov, F. V.) Derivation of identifying tests for automata. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 2, 213-218, 224 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 2, 173-179 (1979). (Siegmar Gerber) 80d:68064 68D05 (68D50)

- (with Danilov, V. V.) Hardware monitoring of asynchronous automata by partitioning with a substitution property. *Axiomat. i Telemekh.* 1979, no. 7, 130-136 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 7, part 2, 1050-1056. (Authors' summary) **80m:68087** 68J10 (68D25)
- Zirilli, Francesco** Spectral properties of some one-dimensional "singular" Schrödinger Hamiltonian. II. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 15 (1978), no. 2, 386-400. (J. Wiesner) **80d:34031** 34B25 (47E05, 81C05)
- (with de Vito, Paola) Normal elliptic curves and  $C^{*+}$ -systems. (Italian) *Ricerche Mat.* 27 (1978), no. 2, 319-332. (H. Mizuno) **80d:14019** 14H45 (20N15)
- (with Jonsson, T.; McBryan, O.; Hubbard, J.) An existence theorem for multimeron solutions to classical Yang-Mills field equations. *Comm. Math. Phys.* 68 (1979), no. 3, 259-273. (Francesco Guerra) **80k:81100** 81E10 (35J65)
- (with Incerti, Sandro; Parisi, Valerio) A new method for solving nonlinear simultaneous equations. *SIAM J. Numer. Anal.* 16 (1979), no. 5, 779-789. (Authors' summary) **80i:65058** 65H10
- Zironi, Fernando** (with Ubertini, Lucio) A numerical solution of a system of hyperbolic partial differential equations. An application to the pollution problem. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* 26 (1977), no. 2, 403-419 (1979). **80c:65240** 65P05
- Zitov, A. Ju.** (with Plykin, R. V.; Kamaev, D. A.) One-dimensional attractors of  $A$ -diffeomorphisms on  $S^2$  and diffeomorphisms with infinitely many sinks. *Dynamical systems, Vol. III—Warsaw, pp. 355-394, Astérisque*, 51, Soc. Math. France, Paris, 1978. (Zbigniew Nitecki) **80k:58072** 58F12 (58F15)
- Zitov, M. V.** (with Dyn'kin, V. N.) Adaptive selection of optimal coding systems. *Axiomat. i Telemekh.* 1979, no. 4, 117-120 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 4, part 2, 577-579. (Authors' summary) **80g:94037** 94A24
- Zitopel, Y.** (with Krieger, Moshe; Kella, J.) Detection of hazards in combinational switching circuits. *IEEE Trans. Comput.* 28 (1979), no. 1, 52-56. (A. Thayse) **80c:94047** 94C10
- Zlatin, G. M.** (with Vugalter, S. A.) The discrete spectrum of the  $n$ -particle quantum system energy operator. (Russian) *Dokl. Akad. Nauk SSSR* 240 (1978), no. 4, 817-820. (Dietrich A. Uhlenbrock) **80a:81028** 81C10 (35P25, 47F05)
- Zitarska, N. V.** A remark on general boundary value problems for elliptic and parabolic systems of equations with discontinuous coefficients. (Russian) Boundary value problems for differential equations. *Mat. Issled.* No. 46 (1978), 53-60, 97. (V. A. Kondrat'ev) **80c:35022** 35J55 (35K50)
- (with Eidel'man, S. D.) Necessary and sufficient conditions for the stability of the solutions to model parabolic boundary value problems. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 4, 809-813. (Erich Miersemann) **80d:35019** 35B40 (35K35)
- Zitcekl, L. S.** Algorithms for control and teaching in a system with connections with respect to disturbances that use situation recognition. *Axiomatika* 1979, no. 1, 3-10, 78 (Russian. English summary); translated as *Soviet Automat. Control* 12 (1979), no. 1, 1-7. (Author's summary) **80i:68070** 68G05
- Zitomirskii, Ja. I.** (with Borok, V. M.) Holmgren's principle in the abstract Cauchy problem for loaded equations. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 9, 775-777, 660. (Authors' summary) **80b:34071** 34G10 (35K22)
- Zitomirskii, S. V.** The "celestial globe" of Archimedes. (Russian) *Istor.-Astronom. Issled.* No. 14 (1978), 271-302. (E. S. Kennedy) **80k:01005** 01A20 (70-03)
- Zitomirskii, V.** See Pieniński, B. N.; et al., **80k:90001**
- Zitron, Carmen** Isomorphismssätze für Graphen. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 24(28) (1978), no. 1-2, 53-56. (A. Pultr) **80a:05115** 05C25
- Ziv, A. D.** An a posteriori estimate of the inverse operator for a second order differential equation with degeneration. (Russian) *Metody Vyčisl. No. 11* (1978), 118-141, 191. (Author's summary) **80c:65182** 65L99 (65J10)
- Ziv, Jacob** (with Lempel, Abraham) Compression of individual sequences via variable-rate coding. *IEEE Trans. Inform. Theory* 24 (1978), no. 5, 530-536. (Robert Gray) **80d:94014** 94A29
- Zivanović, Žarko** Quasi-extendable mappings. (Russian) *Mat. Vesnik* 2(15)(30) (1978), no. 1, 59-67. (V. I. Belugin) **80c:54018** 54C55
- Zivkov, N. V.** Metric projections and antiprojections in strictly convex normed spaces. *C. R. Acad. Bulgare Sci.* 31 (1978), no. 4, 369-372. (Ivan Singer) **80i:46018** 46B20 (41A65)
- Zivogljador, V. P.** The synthesis of multilevel algorithms of numerical control by a group of continuous stochastic objects. (Russian) *Izv. Akad. Nauk Kirgiz. SSR* 1978, no. 5, 41-48. (From the text) **80b:93106** 93C99
- Zivotova, T. M.** Generation in the memory loop of an asynchronous logical circuit. *Axiomat. i Telemekh.* 1978, no. 4, 144-150 (Russian. English summary); translated as *Automat. Remote Control* 39 (1978), no. 4, part 2, 587-592. (Jan Grabowski) **80a:94050** 94C05
- Ziza, O. A.** Application of summability methods of the class  $(\varphi, \lambda)$  to orthogonal series. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 1, 24-28. (F. Móricz) **80d:42013** 42C15 (40G99)
- Zlatin, A. E.** The method of differential constraints for strictly hyperbolic systems with several independent variables. (Russian) *Čisl. Metody Meh. Splošn. Sredy* 9 (1978), no. 4 *Matematičeskoe Modelirovanie*, 68-81. (Stefan Balint) **80g:35076** 35L40
- Zitler, V.** (with John, K.) On rough norms on Banach spaces. *Comment. Math. Univ. Carolin.* 19 (1978), no. 2, 335-349. (Kok Keong Tan) **80d:46028** 46B20
- (with John, K.) On a tensor product characterization of nuclearity. *Math. Ann.* 244 (1979), no. 1, 83-87. (J. R. Holub) **80i:46005** 46A12 (46M05)
- (with John, K.) A short proof of a version of Asplund's norm averaging theorem. *Proc. Amer. Math. Soc.* 73 (1979), no. 2, 277-278. (Ka Sing Lau) **80b:46020** 46B05
- Zizzi, P.** (with Bonora, L.; Pasti, P.; Tonin, M.) Extended Higgs models and 't Hooft algebra. (Italian summary) *Nuovo Cimento A* (11) 54 (1979), no. 4, 507-522. (From the text) **80m:81062** 81E99 (58E20)
- Zjabrev, N. B.** (with Arsenin, V. Ja.) The construction of approximations to optimal filtering. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 4* (1978), 17 pp. (Authors' summary) **80a:60057** 60G35 (93E10)
- Zjurko, M. P.** (with Šor, L. A.) Nonblocking nonordinary switching circuits. (Russian) *Information networks and their analysis* (Russian), pp. 129-132, 218, "Nauka", Moscow, 1978. (Authors' summary) **80j:94044** 94C10
- Zlimal, Miloš** (with Lesaint, Pierre) Superconvergence of the gradient of finite element solutions. (French summary) *RAIRO Anal. Numér.* 13 (1979), no. 2, 139-166. (R. A. Nicolaides) **80g:65112** 65N30
- (with Čermák, Libor) Transformation of dependent variables and the finite element solution of nonlinear evolution equations. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 1, 31-40. (Authors' summary) **80i:65112** 65N30 (65P05)
- Zlatev, I. S.** Phase-space quasi-distributions in quantum mechanics. II. (Russian summary) *Bulgar. J. Phys.* 5 (1978), no. 1, 3-14. (Author's summary) **80b:81059** 81D05 (46F99)
- Phase-space quasi-distributions in quantum mechanics. III. (Russian summary) *Bulgar. J. Phys.* 5 (1978), no. 2, 137-148. (Editors) **80a:81048** 81C99 (46N05)
- Some estimates of quantum mechanical quasidistributions. (Russian) *C. R. Acad. Bulgare Sci.* 31 (1978), no. 5, 509-512. (Koichiro Matsuno) **80a:81049** 81C99 (46F10)
- Dynamic equations for quasiprobability distributions in quantum mechanics. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 5, 587-590. (Editors) **80i:81011** 81C20 (58F06, 82A05)
- Zlatev, Zahari** Stability properties of variable stepsize variable formula methods. *Numer. Math.* 31 (1978/79), no. 2, 175-182. (Steven M. Serbin) **80b:65107** 65L05
- Zlateva, Stoyanka D.** (with Jugel, Albert) Diskrete zellulare Systeme. (Bulgarian, Russian and English summaries) *Teoret. Prilož. Meh.* 8 (1977), no. 3, 79-88, 5, 7, 9. (From the introduction) **80b:68067** 68D20
- Zlatogorski, Ė. R.** (with Gricky, V. V.; Čerčyk, G. T.) Recognition of a class of images under noisy conditions. (Russian) *Otbor i Peredača Informacii* No. 55 (1978), 3-7, 123. (W. Greblicki) **80k:68075** 68G10
- (with Gricky, V. V.) Recognition of a class of images in the case of a shift of components. (Russian) *Otbor i Peredača Informacii* No. 55 (1978), 7-11, 123. (W. Greblicki) **80k:68076** 68G10
- Zlepko, P. P.** (with Migović, F. M.) Application of the modification of the Newton-Kantorovič method for the approximate construction of implicit functions. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 2, 222-226, 283. (J. Albrých) **80b:65066** 65H10 (47H17)
- Zlobec, S.** On the equivalence of convex and unconstrained optimization problems. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 13(33) (1978), no. 2, 397-407. (Ettore Santi) **80i:90080** 90C25
- (with Mond, B.) Duality for nondifferentiable programming without a constraint qualification. *Utilitas Math.* 15 (1979), 291-302. (Chanchal Singh) **80b:90128** 90C30 (90C25)
- A note on optimization methods with conditioned gradients. *Z. Angew. Math. Mech.* 59 (1979), no. 6, 279-281. (From the introduction) **80g:90098** 90C25 (90C30)
- Zločevskii, S. I.** Application of B. V. Bulgakov's method of normal coordinates in the solution of optimal control problems. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 3, 78-82. (J. M. Skowroński) **80d:93040** 93C15 (49B10)
- Zlotkiewicz, Eligiusz** (with Fait, Maria) Convex hulls of some classes of univalent functions. (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska Sect. A* 30 (1976), 35-41 (1978). (V. Lins) **80c:30009** 30C45
- Zlotnik, A. A.** (with Bahvalov, N. S.) Coefficient stability of differential equations and the averaging of equations with random coefficients. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 4, 745-748. (A. T. Bharucha-Reid) **80c:60077** 60H15 (35R60)
- An estimate of the rate of convergence in  $L_2$  of projection-difference schemes for parabolic equations. (Russian) *Vychisl. Mat. i Mat. Fiz.* 18 (1978), no. 6, 1454-1465, 1628. (Author's summary) **80c:65197** 65N20
- A projection-difference scheme for the equation of a vibrating string. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 2, 292-295. (J. Kopáček) **80i:65103** 65N05 (65N30, 70J15)
- The selection principle for functions of bounded variation with values in a Banach space. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 3, 52-55, 86. (J. Musielak) **80i:26008** 26A45
- Estimate of the convergence rate for a projection-difference scheme for a one-dimensional nonstationary diffusion equation. (Russian) *Vestnik Moskov. Univ. Ser. XV Vychisl. Mat. Kibernet.* 1979, no. 1, 58-61, 71. (Author's summary) **80i:65099** 65M10
- Zlutenko, V. I.** A single server queueing system with an ideal server and oriented priority. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 35 (1978), 113-117, 166. (Author's summary) **80c:60116** 60K25
- Zmitrenko, N. V.** (with Gavriljuk, I. P.; Elenin, G. G.; Zdorenko, Ju. I.; Makarov, V. L.; Šan'ko, I. M.) A difference scheme with an exact spectrum for a quasilinear heat equation. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 97* (1979), 26 pp. (Authors' summary) **80m:65066** 65N05 (80A20)
- Zmorović, V. A.** (with Korobkova, I. K.) The order of starlikeness of certain subclasses of  $\alpha$ -convex functions for  $\alpha > 0$ . (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 4, 536-539, 573. (I. P. Ramadanov) **80a:30014** 30C45
- (with Jakubenko, O. A.) The boundary of  $\alpha$ -convexity of order  $\gamma$  of class  $S^*(m)$ . (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 3* (1979), 165-168, 237. (A. W. Goodman) **80i:30029** 30C45
- Žmud, Ė. M.** (with Veitch, A. I.) Connectedness of a finite group and Zassenhaus groups. (Russian. Georgian and English summaries) *Sakharth. SSR Mecl. Akad. Moambe* 90 (1978), no. 2, 277-279. (S. S. Levičenko) **80c:20034** 20D60
- Zmyslony, R.** See Kleffe, J., **80g:62048**
- Znamenskii, V. A.** The stability of the transfinite diameter for a compact set in  $C$ . (Russian) *Izv. Severo-Kavkaz. Nauch. Centra Vyss. Školy Ser. Estestv. Nauk.* 1978, no. 4, 14-16, 120. (J. Siciak) **80j:32028** 32E30 (31C15)
- Zobin, N. M.** (with Zobina, V. G.) Interpolation in spaces that have given symmetries. (Russian) *Funkcional. Anal. i Priložen.* 12 (1978), no. 4, 85-86. (Jóran Bergh) **80j:46114** 46M35
- Zobina, V. G.** (with Zobin, N. M.) Interpolation in spaces that have given symmetries. (Russian) *Funkcional. Anal. i Priložen.* 12 (1978), no. 4, 85-86. (Jóran Bergh) **80j:46114** 46M35
- Zobnin, A. I.** (with Rabotnov, Ju. N.) A kinetic model of the propagation of a crack in



- polymer materials. (Russian) *Prikl. Meh.* 14 (1978), no. 2, 18–23, 140. (Authors' summary) **80c:73065** 73M05
- Zalrea, Silvia** The spherically conjugate tangents at a point of a surface. (Italian) *Pubbli. Istit. Mat. Appl. Fac. Ingeg. Univ. Stud. Roma Quaderno No. 11* (1978), 35–45. (M. Decuyper) **80b:53005** 53A05
- Zolotarev, E. A.** See Numerical analysis. **80b:65007**
- Zolotarev, Jean-Paul** Solution variationnelle d'un problème de valeur propre non linéaire et frontière libre en physique des plasmas. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 19, A911–A913. (Author's summary) **80c:35060** 35Q99 (35R35)
- Zolotarev, V. A.** Triangular models of systems of noncommuting operators. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen. No. 31* (1979), 56–58, 166. (Chandler Davis) **80j:47015** 47A45
- Zolotarev, V. M.** See Studies in mathematical statistics. **80j:60003**
- Zolotarev, V. P.** The intersection of topologies and sequential spaces. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 1, 21–25, 87. (Václav Koutník) **80g:54032** 54D55
- Zolotareva, S. Ju.** (with Efimov, A. V.) Multiplicative Fourier integral and some of its applications. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 3, 517–520. (I. Kátai) **80c:42009** 42A38 (42C10)
- Zolotarevskii, V. A.** The convergence of the collocation method and the method of mechanical quadratures for systems of singular integral equations. (Russian) *Studies in functional analysis and differential equations* (Russian), pp. 3–12, 76, "Stinica", Kishinev, 1978. (J. Kofron) **80j:65042** 65R20  
(with Čebotaru, I. S.) Approximate solution of systems of Wiener-Hopf equations with nonzero partial indices. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 7(194), 102–105. (V. B. Dybin) **80m:45022** 45L05
- Zolotarevskii, L. A.** (with Emel'janenko, Z. N.; Medz'ko, T. V.) Determination of the set of controllable inaccuracies in the iterative modeling of logic circuits. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1979, no. 1, 31–34, 86. (Aleksander Albicki) **80a:94062** 94C99
- Zomonov, B. D.** Necessary conditions for the existence of positive cycles for systems with a limiting factor. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 39–46, 312–313, *Irkutsk. Gos. Univ., Irkutsk*, 1976. (Author's summary) **80j:34029** 34C05  
Sufficient conditions for the existence of positive cycles for systems with limiting factors. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 6, 1395–1398, 1439. (R. S. Levin) **80i:34047** 34C05 (92A15)
- Zone, Gary** (with Chang, Kun S.) A second-variation algorithm and the convergence conditions for a general class of non-linear distributed-parameter control systems. *Internat. J. Control* 27 (1978), no. 3, 329–350. (Authors' summary) **80a:93092** 93C20
- Zordan, Clara** (with Caviglia, Giacomo) Liénard-Wiechert fields in general relativity. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 3, 935–948. (Brian O. J. Tupper) **80m:83014** 83C50 (53C80)
- Zorin, L. M.** A fundamental problem of influence functions. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 9, 806–808, 662. (Vladimir Mironenko) **80i:34009** 34A30  
On the application of generalized functions in analytic methods of investigation of complex elastic systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 11, 991–994, 1054. (From the summary) **80c:73022** 73C99 (46F10)  
A new method of constructing general solutions for linear differential equations. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 5* (1979), 353–356, 399. (M. Bertolini) **80i:34014** 34A30
- Zuravskii, A. B.** (with Gik, E. Ja.) Properties of cyclic extensions of flows in a network. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 3, 38–44 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 3, 33–40. (Authors' summary) **80c:90063** 90B10
- Zurek, Terol, Procopio** The problems of geometric probabilities. (Spanish) *Rev. Real Acad. Cienc. Exact. Fis. Natur. Madrid* 72 (1978), no. 1, 31–57. (L. A. Santaló) **80g:60013** 60D05
- Zurkii, G.** (with Rogulja, D.; Rymaž, Č.) Nonlocal continuum models of discrete systems. (Russian. English summary) *Adv. in Mech.* 2 (1979), no. 1, 83–108. (W. Kecs) **80j:70001** 70D05 (47H99, 73B20)
- Zurillo, Franco** (with Baker, John A.; Lawrence, John) The stability of the equation  $f(x+y) = f(x)f(y)$ . *Proc. Amer. Math. Soc.* 74 (1979), no. 2, 242–246. (J. Matkowski) **80d:39009** 39B50  
(with Lawrence, John) Groups acting ergodically on measure algebras. (Italian summary) *Rend. Mat.* (6) 12 (1979), no. 1, 79–84. (Peter Walters) **80b:28007** 28A60
- Zuritto, Frank** (with Lawrence, John; Mess, Geoff) Near derivations and information functions. *Proc. Amer. Math. Soc.* 76 (1979), no. 1, 117–122. (J. Aczél) **80d:39005** 39B20 (94A17)
- Zuschinger, Helmut** Invarianten wesentlicher Überdeckungen. *Math. Ann.* 237 (1978), no. 3, 193–202. (Jifi Močková) **80a:13011** 13C10  
Quasiseparable und koseparable Moduln über diskreten Bewertungsringen. *Math. Scand.* 44 (1979), no. 1, 17–36. (Frans Lonstra) **80j:16002** 16A03
- Zou, Zhen Long** (with Huang, Peng; Zhang, Yuan Zhong; Li, Gen Dao; An, Ying; Chen, Shi; Wu, Yong Shi; He, Zuo Xiu; Zhang, Li Ning; Guo, Han Ying) Some researches on gauge theories of gravitation. *Sci. Sinica* 22 (1979), no. 6, 628–636. (Kenneth Dunn) **80b:83033** 83C45
- Zubov, V. See Zubov, V. I.**
- Zowe, Jochem** (with Maurer, Helmut) Optimality conditions for the programming problem in infinite dimensions. *Optimization and operations research* (Proc. Workshop, Univ. Bonn, Bonn, 1977), pp. 261–270, *Lecture Notes in Econom. and Math. Systems*, 157, Springer, Berlin, 1978. (D. J. van Wyk) **80a:90131** 90C30  
Sandwich theorems for convex operators with values in an ordered vector space. *J. Math. Anal. Appl.* 66 (1978), no. 2, 282–296. (A. V. Buhvalov) **80d:47084** 47H07 (46A40)  
A remark on a regularity assumption for the mathematical programming problem in Banach spaces. *J. Optim. Theory Appl.* 25 (1978), no. 3, 375–414. (Author's summary) **80b:90139** 90C48
- Zukhailov, A. V.** Equivalence of categories of affine modules. (Russian) *Mat. Zametki* 24 (1978), no. 4, 475–486, 589. (P. M. Cohn) **80a:16044** 16A64
- Zukhailov, V. A.** See Information processes in complex systems. **80c:93003**
- Zsáké, László** On the equality of two weights. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 4, 631–646. (François Combes) **80d:46119** 46L10  
Invariant subspaces of compact perturbations of linear operators in Banach spaces. *J. Operator Theory* 1 (1979), no. 2, 225–260. (A. Pietsch) **80c:47008** 47A15 (47B10)
- Zuharev, A. L.** Reformulation of the strong-coupling method on the basis of the Schwinger variational principle. *Jadernaja Fiz.* 28 (1978), no. 2, 566–569 (Russian); translated as *Soviet J. Nuclear Phys.* 28 (1978), no. 2, 287–289 (1979). (Author's summary) **80d:81103** 81F05
- Zuharev, D. N.** (with Prozorkevič, A. V.; Smoljanskii, S. A.) Derivation of nonlinear generalized equations of quantum relativistic hydrodynamics. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 3, 394–407. (R. P. Gaido) **80c:76082** 76Y05 (45P05, 82A30)  
See also Balescu, Radu. **80a:82002** and Balescu, Radu. **80b:82023**
- Zuharev, S. V.** Control of a domain in certain systems with distributed parameters. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 4* (1979), 246–249, 320. (Author's summary) **80d:49003** 49A22 (35L10)  
Necessary conditions of optimality for certain systems with distributed parameters. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 4, 434–436, 478. (Author's summary) **80g:49030** 49B99
- Zuharev, A. L. See Zuharev, A. L.**
- Zuharenko, V. V.** Finite-return push-down automata. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 9, 838–841, 664. (V. N. Agafonov) **80c:68059** 68F05 (68F10)  
Finite-automaton mappings into a partially commutative semigroup. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 4, 37–42. (Jifi Adámek) **80c:68039** 68D05
- Zuhov, A. M.** (with Mahailov, V. G.) An estimate of the accuracy of the Poisson approximation in the problem of the distribution of particles into cells. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 4, 819–824. (D. A. Darling) **80c:60011** 60C05 (60F05)  
Markov chains that are close to a sequence of independent trials. (Russian) *Mat. Zametki* 25 (1979), no. 3, 465–474, 478. (G. I. Ivenko) **80b:60005** 60J10  
(with Mihallov, V. G.) The repetitions of s-tuples in a sequence of independent trials. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 2, 267–279. (D. A. Darling) **80b:60034** 60F05 (60C05, 60E05)
- Zubov, E. N.** Three-dimensional steady-state iso-entropic flows of an ideal gas with straight level lines. (Russian) *Cisl. Metody Meh. Spln. Sredy* 9 (1978), no. 1 *Mat. Modelirovanie*, 47–64. (From the text) **80c:76044** 76N15  
Three-dimensional steady-state flows of an ideal gas with degenerate hodograph in the presence of a Bernoulli integral. (Russian) *Trudy Inst. Mat. i Meh. Ural. Nauch. Centr Akad. Nauk SSSR No. 25 Metody Resheniya Kraevykh Zadach Meh. Spln. Sredy* (1978), 31–42, 79. (Author's summary) **80d:76064** 76N10
- Zubov, S. V.** On periodic solutions of hysteresis systems. (Russian) *Control of dynamical systems* (Russian), pp. 100–105, 315, *Leningrad. Univ., Leningrad*, 1978. (Author's summary) **80c:93062** 93C15 (93D05)  
A system with hysteresis. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 6, 1133–1135, 1152. (A. A. Martinjuk) **80d:34071** 34D20  
The stability of periodic motion. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 6, 974–979, 1147. (Helmut Ludescher) **80i:54037** 54H15 (34D20)
- Zubov, V. I.** ★Théorie de la commande. Traduit du russe par Irina Pétrou. Éditions Mir, Moscow, 1978, 468 pp. (Vadim Komkov) **80a:93005** 93-02 (49-02)  
(with Ermolin, V. S.; Sergeev, S. L.; Smirnov, E. Ja.) ★Управление вращательным движением твёрдого тела. (Russian) [Control of the rotary motion of a solid body] *Leningrad. Univ., Leningrad*, 1978, 200 pp. (Editors) **80c:93012** 93A99 (70E15)  
Dynamics of an encounter. (Russian) *Control of dynamical systems* (Russian), pp. 90–95, 314, *Leningrad. Univ., Leningrad*, 1978. (Author's summary) **80c:93063** 93C15  
Bundle transport of charged particles in an electromagnetic field. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 11, 2068–2070, 2109. (From the text) **80d:78023** 78A35 (35Q99)  
Differential equations of probability distributions. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 2, 351–353, 383. (V. G. Kolomoiec) **80c:34038** 34F05  
Stochastic behavior of systems with a finite number of phase states in the presence of aftereffect. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 3, 387–391, 570. (Pavol Marušák) **80i:34066** 34K99  
Nonlinear program controls. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 4, 734–735, 767. (V. F. Dem'janov) **80c:93027** 93A99
- Zubov, V. M.** The closedness of the generalized Green matrices of linear differential operators. (Russian) *Mat. Zametki* 24 (1978), no. 2, 217–229, 302. (M. Tvrdý) **80c:34023** 34B27 (47E05)
- Zubova, A. F.** An investigation of the oscillations of beams of variable cross section. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 9, 1698–1700, 1726. (Author's summary) **80a:73049** 73K05 (35Q99)  
Investigation of oscillations and stability. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 11, 1960–1966, 2108. (Gapirola Dairov) **80b:34046** 34C10 (34D20)
- Zuchini, Cristina** (with Barnabei, Marilena) Abstract arcs of type (m, n). (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 3, 585–591. (A. Barilotti) **80c:51008** 51E20 (05B25)
- Zučin, A. V.** Local crossed products of a ring and a group. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 4(202), 211–212. (Rainer Mitz) **80a:16021** 16A26 (16A27)
- Zucker, I. J.** The summation of series of hyperbolic functions. *SIAM J. Math. Anal.* 10 (1979), no. 1, 192–206. (Y. L. Luke) **80b:33001** 33A10 (33A25, 65A05)
- Zucker, J. I.** (with Tragesser, R. S.) The adequacy problem for inferential logic. *J. Philos. Logic* 7 (1978), no. 4, 501–516. (Ayda I. Arruda) **80c:03031** 03B60  
The adequacy problem for classical logic. *J. Philos. Logic* 7 (1978), no. 4, 517–535. (Martin Weese) **80b:03012** 03B15
- Zuckerman, Dror** Optimal replacement policy for the case where the damage process is a one-sided Lévy process. *Stochastic Process. Appl.* 7 (1978), no. 2, 141–151. (Peter Purdue) **80a:60112** 60K10 (90B25)

- Optimal replacement rule-discounted cost criterion. (French summary) *RAIRO Rech. Opér.* 13 (1979), no. 1, iii, 67-74. (Santosh Kumar) **80f:90065** 90B25
- Zuckerman, Gregg (with Knapp, A. W.) Normalizing factors, tempered representations, and L-groups. *Automorphic forms, representations and L-functions* (Proc. Sympos. Pure Math., Oregon State Univ., Corvallis, Ore., 1977), Part I, pp. 93-105, Proc. Sympos. Pure Math., XXXIII, Amer. Math. Soc., Providence, R.I., 1979. (A. B. Venkov) **80m:22021** 22E45 (10D40)
- Zuenkov, M. A. (with Ignat'schenko, V. V.) Approximate method of solution of one-dimensional knapsack problem. *Avtomat. i Telemekh.* 1979, no. 1, 89-97 (Russian); translated as *Avtomat. Remote Control* 40 (1979), no. 1, part 1, 69-75. (G. Šerkšnyš) **80i:90071** 90C10 (68B20)
- Zuer, G. M. (with Soroko, E. L.) A mathematical description of interregional migration and an analysis of its influence on age-sex structure dynamics. (Russian) *Ekonom. i Mat. Metody* 15 (1979), no. 2, 333-344. **80b:92044** 92A15
- Zuer, Ju. A. Approximation of a partial Boolean function by a monotone-Boolean function. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 18 (1978), no. 6, 1571-1578, 1630. (I. E. Strazdinskii) **80a:94065** 94C10
- Zuer, L. A. Small parameter method for a certain class of stochastic differential games. (Russian) *Theory of random processes*, No. 6 (Russian), pp. 48-54, 134, "Naukova Dumka", Kiev, 1978. (Author's summary) **80c:90142** 90D15 (93E05)
- Zueva, N. M. (with Gerlah, N. I.; Solov'ev, L. S.) The development of convective instability in a uniform magnetic field. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 102* (1979), 24 pp. (Authors' summary) **80a:85005** 85A30 (76E15)
- (with Gerlah, N. I.; Solov'ev, L. S.) Development of MHD-instability in a Z-pinch. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 83* (1979), 20 pp. (Authors' summary) **80m:82040** 82A45
- Zueva, R. A. Solvability of a boundary value problem for a third-order quasilinear equation of mixed-composite type. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 1, 54-60, 186. (A. M. Nahušev) **80f:35089** 35M05
- A quasilinear equation of mixed-composite type in  $n$ -dimensional space. (Russian. Turkmen and English summaries) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* 1979, no. 1, 10-13. (Editors) **80b:35111** 35M05
- ngo Zui Kan See Ngo Zui Kan
- nguen Zui Tien See Nguyen Zui Tien
- Žuk, A. P. (with Babič, S. Ju.; Guž, O. M.) Elastic waves in bodies with initial stresses. (Russian) *Prikl. Meh.* 15 (1979), no. 4, 3-23, 109. (Authors' summary) **80c:73021** 73D99
- Žuk, I. K. A note on the finite approximability of free products with an amalgamated subgroup. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 2, 112-114, 188. (Richard E. Phillips) **80j:20034** 20E25
- Žuk, P. I. (with Litvak, E. I.) Reliability indices of an isolated system with a reduced sliding standby in the case of limited repair. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 6, 86-89. (Viorel Gh. Vodă) **80g:62076** 62N05 (60K10)
- Žuk, V. I. (with Ptačnik, B. I.) A boundary value problem for a system of hyperbolic equations with constant coefficients. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 9 (1979), 3-9, 130. (Authors' summary) **80i:35076** 35L55
- Žuk, V. V. Some sharp inequalities for seminorms given on the sets of periodic functions and their applications to the extremal problems of the theory of best approximations. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 1, 31-37, 133. (M. Tomić) **80j:42008** 42A10
- Zuker, M. (with Tanny, Stephen M.) Analytic methods applied to a sequence of binomial coefficients. *Discrete Math.* 24 (1978), no. 3, 299-310. (Volker Strehl) **80a:05008** 05A10
- Žukov, A. E. Some theorems for a method of allocation by complexes. (Russian) *Mat. Zametki* 25 (1979), no. 1, 149-155, 160. (Robert Bartoszyński) **80g:60012** 60C05 (60F05)
- (with Čistjakov, V. P.) Schemes of distributing complexes which can be approximated by multinomial schemes. (Russian) *Mat. Zametki* 25 (1979), no. 3, 455-463, 478. (G. I. Ivčenko) **80k:60016** 60C05 (60F05)
- Žukov, A. V. Vectors and ideal forms of reference defined by a Weyl tensor in a gravitational field. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 1, 55-58. (From the text) **80i:83017** 83C35 (53B50)
- Žukov, S. A. Some asymptotic estimates of the complexity of partial recursive functions. (Russian) *Questions of systems programming* (Russian), pp. 39-45, *Akad. Nauk Ukrain. SSR, Inst. Kibernet.*, Kiev, 1977. (G. Asser) **80f:03043** 03D15 (03D20, 68C25)
- Žukov, V. P. Method of qualitative stability analysis of nonlinear systems. *Avtomat. i Telemekh.* 1978, no. 6, 11-15 (Russian); translated as *Avtomat. Remote Control* 39 (1978), no. 6, part 1, 785-788. (Author's summary) **80a:93131** 93D05 (34D20)
- A method of investigating the stability of nonlinear systems. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 1, 52-53. (From the text) **80a:93132** 93D05 (34D99)
- On the question of the source method for investigating nonlinear system stability. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 2, 291-294. (K. B. Datta) **80b:93119** 93D05 (34D05)
- Method of sources for the study of stability of nonlinear systems. *Avtomat. i Telemekh.* 1979, no. 3, 12-17 (Russian. English summary); translated as *Avtomat. Remote Control* 40 (1979), no. 3, part 1, 330-335. (A. A. Martynuk) **80i:34073** 34D05
- Investigation of the stability of a class of nonlinear systems by the source method. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 4, 814-818. (Mark A. Alzerman) **80m:93074** 93D99
- Žukova, G. S. Asymptotic representation of the solutions of differential equations with a large parameter. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 36* (1978), 40 pp. (Stefan Mirică) **80b:34067** 34E05
- Sufficient conditions for the solvability of a linear differential equation with a large parameter in the case of a multiple root of a characteristic equation. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 4, 512-516, 572. (P. Brunovský) **80b:34006** 34A25 (34E05)
- Žukova, N. I. (with Gorodža, L. V.; Emec, Ju. P.; Zvirivčik, E. I.) Application of the generalized Riemann boundary value problem to the calculation of electric fields. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 2, 118-120, 189. (Authors' summary) **80b:78002** 78A25 (83C50)
- Žukova, O. I. (with Ivočkina, N. M.) A priori boundedness of the gradient of the solution to the Dirichlet problem for nonuniformly elliptic equations at interior points of the domain. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 2, 132-141, 221. (Ja. A. Roitberg) **80b:35016** 35B45 (35J65)
- Žukovin, V. E. (with Krišman, Ja. S.) The construction of a commutation algorithm for a multi-purpose control system on the basis of game theory. (Russian. Georgian and English summaries) *Sakharth. SSR Mecl. Akad. Moambe* 89 (1978), no. 1, 53-56. (M. Mañás) **80b:90123** 90C31
- Žukovskii, A. N. (with Lukovskii, I. O.; Galitsyn, A. S.) An expansion in eigenfunctions in an elliptic coordinate system and its applications. (Russian) *Physical and technical applications of boundary value problems* (Russian), pp. 60-76, 241, *Naukova Dumka*, Kiev, 1978. (Authors' summary) **80d:35116** 35P10 (33A65)
- (with Galitsyn, A. S.) Integral GF-transformations and their applications. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 39* (1978), 49 pp. (A. Ramm) **80g:65126** 65R10
- Some integral transformations in an elliptic coordinate system. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 4, 529-536, 572. (A. V. Bratičev) **80f:44002** 44A15
- Žukovskii, E. L. (with Meleiko, V. I.) Error correcting solutions in linear conditional algebra. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 5, 1009-1012. (V. N. Igolkina) **80a:93182** 93E15
- Žukovskii, V. I. (with Vaisbord, È. M.) A hierarchical differential two-person game. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 9, 1548-1561, 1722. (È. G. Al'breht) **80c:90160** 90D42 (90D10, 90D25)
- Zulehner, W. (with Wacker, Hansjörg; Zarzer, E. A.) Optimal stepsize control for the globalized Newton method. *Continuation methods* (Proc. Sympos., Johannes Kepler Univ., Linz, 1977), pp. 249-276, Academic Press, New York, 1978. (Hansgeorg Jeggle) **80c:65044** 65H05
- Žulenev, S. V. (with Medovyi, V. S.) The strong law of large numbers and the normality of Kesten's procedure. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 3, 637-643. (V. Fabian) **80g:62068** 62L20 (60F15)
- Žumabekov, L. Ž. (with Kuleev, K. D.) Construction of the Green function of basic boundary value problems for the operator  $\partial/\partial t - A\Delta$ . (Russian) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1979, no. 3, 70-72, 91. (M. M. Skriyanov) **80b:35067** 35K10 (35K40)
- Žumanov, È. The spectrum of a two-parameter pencil. (Russian) *Dokl. Akad. Nauk UzSSR* 1978, no. 1, 9-10. (Editors) **80b:47013** 47A50
- Žumator, S. S. (with Maigarin, B. Ž.) Absolute stability, an estimate of the indices of the transient process of a programming manifold of controllable systems. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1979, no. 1, 29-36, 91. (V. M. Popov) **80i:34082** 34D25
- Žurmer, S. Pseudo-one-dimensional kinetic Ising model. *Phys. Rev. B* 3 (1980), no. 3, 1298-1303. (A. K. Rajagopal) **80k:82074** 82A67
- Zumino, B. Some recent developments in supergravity. Symposium on Mathematical Models in the Theory of Elementary Particles (Liblice, 1978), II. *Czechoslovak J. Phys. B* 29 (1979), no. 3, 245-251. (Philip Huddleston) **80g:83030** 83C99 (17A70, 17B70)
- (with Grimm, R.; Wess, J.) A complete solution of the Bianchi identities in superspace with supergravity constraints. *Nuclear Phys. B* 152 (1979), no. 2, 255-265. (Authors' summary) **80c:83037** 83C99 (53B30, 81M05)
- Žurmybaev, A. Additivity of the spaces  $S_r^p W(\Omega)$  ( $r > 0$  an integral vector). (Russian) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1978, no. 5, 76-79, 94. (Author's summary) **80i:46040** 46E35 (47B99)
- Zund, J. D. (with Harris, R. A.) A curious solution of Einstein's cosmological equations. *Tensor (N.S.)* 32 (1978), no. 2, 170-172. (Author's review (J. D. Z.)) **80d:83024** 83C15
- (with Wilkes, J. M.) A note on the Ruse-Lanczos identity. *Tensor (N.S.)* 32 (1978), no. 3, 355-356. (J. K. Shahin) **80a:53024** 53B20
- dir Zung See Dir Zung
- nguen Zung See Nguyen Zung
- Zuruev, T. G. Calculation of structures of minimal weight and maximal rigidity in the presence of structural constraints. (Russian) *Učen. Zap. CAGI* 10 (1979), no. 2, 149-155. (Author's summary) **80k:73058** 73K99 (49H05)
- Žuravlev, I. V. Some sufficient conditions of quasiconformal continuability of analytic functions. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 6, 1377-1380. (V. Mičič) **80d:30016** 30C60
- Žuravlev, Ju. I. Principles for the construction of proofs for algorithms for the solution of poorly formalized problems. (Russian) *Mat. Zametki* 23 (1978), no. 6, 899-914. (K. L. Jušenko) **80c:68126** 68J10 (92A20)
- Local algorithms over disjunctive normal forms. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 2, 289-292. (V. N. Agafonov) **80b:03091** 03G05 (68C25, 68E99)
- (with Isiev, I. V.) Construction of pattern recognition algorithms that are correct for given control samples. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 3, 726-738, 798. (Authors' summary) **80c:68229** 68G10
- See also Tou, Julius T.; et al. **80g:68115**
- Žuravlev, S. G. Conditionally periodic solutions of the canonical systems of differential equations in nonautonomous resonant case. *Celestial Mech.* 19 (1979), no. 1, 77-93. (Author's summary) **80f:70023** 70K30 (34C25)
- Žuravlev, V. F. (with Žbanov, Ju. K.) On certain properties of the finite rotations of a rigid body in the presence of a nonholonomic constraint. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* 13 (1978), no. 1, 9-14 (Russian); translated as *Mech. Solids* 13 (1978), no. 1, 6-11. (Gh. Silas) **80h:70007** 70E05 (70F25)
- Žuravlev, V. G. The zeros of Dirichlet L-functions on short intervals of the critical line. (Russian) *Analytic number theory and the theory of functions. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 76 (1978), 72-88, 217. (H. Iwaniec) **80g:10039** 10H08
- The zeros of the Dirichlet series associated with Hilbert modular forms on the critical line. (Russian) *Analytic number theory and the theory of functions. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 76 (1978), 89-123, 217-218. (K.-B. Gundlach) **80e:10027** 10D24 (10H10)
- Žuravleva, V. M. Solution of a system of linear algebraic equations with a nonsymmetric matrix using a bi-orthogonal algorithm. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979),



- no. 5, 1320-1322, 1359. (Author's summary) **80i:65037** 65F10
- Żurawiecki, Jerzy** The maximal  $k$ -machines. *Demonstratio Math.* 11 (1978), no. 2, 509-518. (Siegmar Gerber) **80d:68073** 68D35
- (with Grodzki, Z.) On deterministic  $(k, m)$ -machines. I. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 4, 561-566. (Ronald E. Prather) **80j:68046a** 68D35
- (with Grodzki, Z.) On deterministic  $(k, m)$ -machines. II. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 4, 567-572. (Ronald E. Prather) **80j:68046b** 68D35
- Żurawska, L.** (with Uziębło, A. O.) Definability of functions on a finite set by means of compositions of addition and multiplication modulo some prime numbers. *Demonstratio Math.* 11 (1978), no. 4, 1029-1032 (1979). (Editors) **80j:10010** 10A20 (12C99)
- Žurbenko, I. G.** An estimate of the spectral density of a stationary process. (Russian. Uzbek summary) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1978, no. 6, 18-22. (M. A. Mirzakhmedov) **80i:62009** 62M15
- Local properties of estimate of spectral function. *Problemy Peredači Informacii* 14 (1978), no. 3, 85-91 (Russian); translated as *Problems Inform. Transmission* 14 (1978), no. 3, 218-222 (1979). (P. A. Morettin) **80m:62096** 62M15
- Spectral density estimates with a weak dependence on far frequencies. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist.* No. 19 (1978), 57-66, 157. (M. A. Mirzakhmedov) **80a:62155** 62M15
- Estimates of the spectrum of time sequences with polynomial smoothing. (Russian. English summary) *Vesci Akad. Navuk BSSR Ser. Fiz.-Mat. Nauk* 1978, no. 4, 36-41, 135. (M. A. Mirzakhmedov) **80a:62156** 62M15
- On the efficiency of estimates of a spectral density. *Scand. J. Statist.* 6 (1979), no. 2, 49-56. (P. A. Morettin) **80j:62090** 62M15
- Žurbenko, L. N.** (with Avhadiev, R. G.) A generalization of the inverse boundary value problem in  $x$  and the stability of its solution. (Russian) *Trudy Sem. Kraev. Zadacham* No. 14 (1977), 5-19. (A. P. Soldatov) **80j:30057** 30E25
- The stability of the solutions of inverse boundary value problems for multiply connected domains in the case of the parameter  $x$ . (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 2, 31-41. (P. Ju. Alekna) **80j:30063** 30E25
- Žuravskiy, S. N.** (with Nurekenov, T. K.) The asymptotic stability in the first approximation of the solutions of countable systems of differential equations. (Russian) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1978, no. 1, 77-79, 93. (Authors' summary) **80a:34061** 34D05 (34G20)
- Žuravskiy, A.** (with Cernov, Ju. P.; Lange, È. G.) Application of the successive calculation method to solving a production allocation problem with fractional-convex functional. (Russian) *Izv. Akad. Nauk Kirgiz. SSR* 1979, no. 2, 27-34, 93. (N. B. Lebedinskaja) **80j:90113** 90C50 (90C25)
- Žukoma, E. V.** (with Grines, V. Z.) Topological classification of orientable attractors on an  $n$ -dimensional torus. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 4(208), 185-186. (Hans G. Bothe) **80k:58071** 58F12 (58F15)
- Zveginzov, N.** Partial-match retrieval in an index sequential directory. *Comput. J.* 23 (1980), no. 1, 37-40. (Author's summary) **80m:68084** 68H05 (68C05)
- Zveigowski, P.** (with Milgram, R. James; Strutt, J.) Projective stable stems of spheres. *Bol. Soc. Mat. Mexicana* (2) 22 (1977), no. 2, 48-57. (Donald W. Kahn) **80e:55025** 55Q45 (55Q70)
- Zverev, A. E.** (with Konoval'cev, I. V.) Application of regularization methods for the solution of problems of synthesis of photoelectric transformers. (Russian) *Vychisl. Metody i Programirovanie* No. 28 (1978), 195-201. (From the text) **80d:78035** 78A99 (65R20)
- (with Čelnokov, V. A.) The use of the multiparameter regularization method for the solution of the problem of synthesis of the displacement of a two-layer capacitance transformer. (Russian) *Vychisl. Metody i Programirovanie* No. 28 (1978), 202-207. (From the text) **80d:78036** 78A99
- Zverkin, A. M.** The spectrum of a degenerate boundary value problem. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 3, 435-441, 572. (G. N. Mil'štejn) **80a:34098** 34K10 (47E05)
- Zverkova, T. S.** (with Plotnikov, V. A.) Averaging of boundary value problems in terminal optimal control problems. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 8, 1381-1387, 1530. (Constantin Vărsan) **80b:93102** 93C99 (49B99)
- Zivovici, E. I.** (with Panțenko, I. F.) A Riemann boundary value problem for  $n$  pairs of functions on a Riemann surface in the space  $L_2^n(\Gamma)$ . (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1978, no. 3, 71-72, 88. (V. B. Dybin) **80a:30050** 30E25 (30F99)
- (with Gorodža, L. V.; Emec, Ju. P.; Žukova, N. I.) Application of the generalized Riemann boundary value problem to the calculation of electric fields. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 2, 118-120, 189. (Authors' summary) **80k:78002** 78A25 (83C50)
- Zyagina, R. A.** (with Bulavskii, V. A.; Jakovleva, M. A.) ★Численные методы линейного программирования (специальные задачи). (Russian) [Numerical methods of linear programming (special problems)] Edited by L. V. Kantorovič. Экономико-Математическая Библиотека. [Library of Economics and Mathematics] "Nauka", Moscow, 1977. 367 pp. (Josef Kaika) **80e:90093** 90C05
- Zwahlen, Bruno** A minimax principle for the critical value of a boundary value problem with positive and increasing nonlinearity. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 4, 709-712. (I. Kiguradze) **80k:34027** 34B15 (45C05)
- van der Zwan, G.** (with Mazur, P.) Brownian motion in a fluid near its critical point. *Fundamental problems in statistical mechanics, IV (Proc. Fourth Internat. Summer School, Jadwisin, 1977)*, pp. 469-492, Ossolineum, Wrocław, 1978. (Katsuhiko Fujii) **80k:82047** 82A50
- Zwanziger, Daniel** (with Brandt, Richard A.; Neri, Filippo) Lorentz invariance from classical particle paths in quantum field theory of electric and magnetic charge. *Phys. Rev. D* (3) 19 (1979), no. 4, 1153-1167. (Authors' summary) **80d:81060** 81E05 (81M05)
- Infrared catastrophe averted by Hertz potential. *Phys. Rev. D* (3) 19 (1979), no. 12, 3614-3634. (K. Wódkiewicz) **80g:81061** 81E99
- Zweibel, Stuart H.** (with McDonald, M. A.) An optimal method for deletion in one-sided height-balanced trees. *Comm. ACM* 21 (1978), no. 6, 441-445. (A. T. Amin) **80k:68054** 68E10 (68B05, 68C25)
- (with Riihiä, Kari-Jouko) An optimal insertion algorithm for one-sided height-balanced binary search trees. *Comm. ACM* 22 (1979), no. 9, 508-512. (Authors' summary) **80k:68044** 68C25 (68E10)
- Zwiefel, P. F.** (with Bowden, R. L.; Greenberg, William) Resolvent integration techniques for generalized transport equations. *J. Math. Phys.* 20 (1979), no. 6, 1099-1108. (Edward W. Larsen) **80d:82063** 82A70
- (with Arthur, M. D.; Bowden, R. L.) Analysis of the dispersion function for anisotropic longitudinal plasma waves. *J. Math. Phys.* 20 (1979), no. 10, 2126-2130. (Authors' summary) **80j:76053** 76X05 (82A45)
- (with Cercignani, Carlo; Greenberg, William) Global solutions of the Boltzmann equation on a lattice. *J. Statist. Phys.* 20 (1979), no. 4, 449-462. (Authors' summary) **80c:35085** 35Q20 (47D05, 82A67)
- (with Greenberg, William; Voigt, Jürgen) Discretized Boltzmann equation: lattice limit and non-Maxwellian gases. *J. Statist. Phys.* 21 (1979), no. 6, 649-657. (Carlo Cercignani) **80m:82033** 82A40 (35Q20, 76P05, 82A67)
- (with Greenberg, William; Voigt, Jürgen) Convergence of a lattice model of the Boltzmann equation. *Lett. Math. Phys.* 3 (1979), no. 4, 293-296. (T. Kahan) **80k:82005** 82A05
- (with Burnap, C.; Greenberg, William) Eigenvalue problem for singular potentials. (Italian summary) *Nuovo Cimento A* (11) 50 (1979), no. 4, 457-465. (Walter Eberhard) **80j:34022** 34B25
- (with Arthur, M. D.; Greenberg, William) Transverse plasma oscillations. *Phys. Fluids* 22 (1979), no. 8, 1465-1470. (Authors' summary) **80d:82049** 82A45
- (with Arthur, M. D.; Voigt, Jürgen) An existence and uniqueness theorem for the Vlasov-Maxwell equations. *Transport Theory Statist. Phys.* 8 (1979), no. 1, 23-28. (M. Drăganu) **80b:82027** 82A45 (35K99, 82A70)
- van Zwet, W. R.** (with Bickel, P. J.) Asymptotic expansions for the power of distribution free tests in the two-sample problem. *Ann. Statist.* 6 (1978), no. 5, 937-1004. (M. Raghavachari) **80j:62043** 62G10 (62E20)
- Mean, median, mode. II. *Statist. Neerlandica* 33 (1979), no. 1, 1-5. (L. E. Clarke) **80d:62001** 62-01
- Zwicker, William** (with di Prisco, Carlos A.) A remark on Part\*( $\kappa, \lambda$ ). (Spanish summary) *Acta Cient. Venezolana* 29 (1978), no. 5, 365-366. (James Baumgartner) **80d:03048** 03E05 (03E55, 04A20)
- Zwillinger, Dan** A Goldbach conjecture using twin primes. *Math. Comp.* 33 (1979), no. 147, 1071. (Author's summary) **80b:10071** 10J15 (10-04)
- Zygmund, A.** (with Calderón, A.-P.) A note on singular integrals. *Studia Math.* 65 (1979), no. 1, 77-87. (W. R. Madych) **80k:42022** 42B20
- Zygmunt, Jan** Entailment relations and matrices. I. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 8 (1979), no. 2, 112-115. (From the text) **80b:03048** 03B99
- Zynal, Dominik** See Kleffe, J., **80g:62048**
- Zyskowska, Krystyna** (with Zielińska, Alicja) On estimation of the eighth coefficient of bounded univalent functions with real coefficients. *Demonstratio Math.* 12 (1979), no. 1, 231-246. (A. W. Goodman) **80k:30032** 30C50





## KEY INDEX

- Analysis** See Séminaire: Pierre Lelong-Henri Skoda (Analyse), 80a:32001
- Aarhus** See Proceedings: Symposium on Modular Representations of Finite Groups, 80d:20002
- Abriégé d'histoire des mathématiques** ★ Abriégé d'histoire des mathématiques 1700-1900. Tome I. Algèbre, analyse classique, théorie des nombres. Édité par Jean Dieudonné. Hermann, Paris, 1978. x+392 pp. ISBN 2-7056-5870-X (D. J. Struik) 80k:01002a 01A05 (00A05)
- ★ Abriégé d'histoire des mathématiques 1700-1900. Tome II. Fonctions elliptiques, analyse fonctionnelle, topologie, géométrie différentielle, probabilités, logique mathématique. Édité par Jean Dieudonné. Hermann, Paris, 1978. vii+469 pp. ISBN 2-7056-5871-9 (D. J. Struik) 80k:01002b 01A05 (00A05)
- ACM 78** ★ ACM 78. Vols. 1, 2. Proceedings of the 1978 Annual Conference of the Association for Computing Machinery held December 4-6, 1978, in Washington, D.C. Association for Computing Machinery (ACM), New York, 1978. xxiii+501 pp.; pp. i-xxiii and 502-990. ISBN 0-89791-000-1 (Editors) 80j:68003 68-06
- ACM Symposium:**
- Theory of Computing** See Conference Record: Annual ACM Symposium on Theory of Computing, 80b:68003
- Acoustic propagation** See Journées: Études sur la Propagation Acoustique, 80c:76001
- Acoustics** See IEEE Conference: Acoustics, Speech and Signal Processing, 80a:68002
- Actes:**
- Colloque International DGRST-CNRS** ★ Actes du Colloque International DGRST-CNRS. Held at Marseille, December 11-13, 1975. Informatica et Sci. Humaines, 40-41. Institut des Sciences Humaines Appliquées, Paris, 1979. 433 pp. (Editors) 80j:62001 62-06 (90-06)
- Adaptation problems in technical systems** ★ Задачи адаптации в технических системах. (Russian) [Adaptation problems in technical systems] Edited by L. A. Rastrigin [L. Rastrigin]. Problemy Slučain. Poiska No. 7 (1978). "Zinatne", Riga, 1978. pp. 5-323. (Editors) 80a:90002 90-06
- Advances in fuzzy set theory and applications** ★ Advances in fuzzy set theory and applications. Edited by Madan M. Gupta, Rammohan K. Ragade and Ronald R. Yager. North-Holland Publishing Co., Amsterdam-New York, 1979. xv+753 pp. ISBN 0-444-85372-3 (Editors) 80k:00006 00A10 (03E72, 90-06, 92-06)
- Advances in holomorphy** ★ Advances in holomorphy. Proceedings of the Seminar of Holomorphy, Universidade Federal do Rio de Janeiro, Rio de Janeiro, 26-28 September 1977. Edited by Jorge Alberto Barroso. North-Holland Mathematics Studies, 34. Notas de Matemática [Mathematical Notes], 65. North-Holland Publishing Co., Amsterdam-New York, 1979. ix+766 pp. ISBN 0-7204-1965-4 (Editors) 80a:46001 46-06 (32-06)
- Aerodynamics of rarefied gases** ★ Аэродинамика разреженных газов. Вып. 9. (Russian) [Aerodynamics of rarefied gases. No. 9] Edited by R. G. Barancev. Leningrad. Univ., Leningrad, 1978. 242 pp. (Author's summary) 80m:76064a 76P05 (45K05)
- Algebra** See Beiträge: Algebra und Geometrie, 80a:00003; Topics in algebra, 80a:00011; Conference: Algebra, 80b:00003; Studies in algebra and number theory, 80c:00011; Contributions to general algebra, 80d:00007; Collection: Algebra, 80c:00003; Collection: Algebra, 80k:18017; American Mathematical Society Translations, Ser. 2, 80m:00006 and Séminaire: Algebra Paul Dubreil, 80m:13001
- Algebra, number theory and their applications** ★ Алгебра, теория чисел и их приложения. (Russian) [Algebra, number theory and their applications] Edited by S. M. Nikol'skii. Trudy Mat. Inst. Steklov. 148 (1978). "Nauka" Leningrad. Otdel., Leningrad, 1978. pp. 1-279. (Editors) 80k:16004 16-06
- Algebra, Topology, Geometry** ★ Алгебра. Топология. Геометрия. Том 16. (Russian) [Algebra. Topology. Geometry. Vol. 16] Edited by R. V. Gamkrelidze. Itogi Nauki i Tekhniki. [Progress in Science and Technology] Akad. Nauk SSSR Vsesojuz. Inst. Nauch. Tehn. Informacii, Moscow, 1978. 247 pp. (errata insert). (Editors) 80h:00001 00A10 (10-06, 14-06, 16-06)
- Algebraic analysis of quantum field theory** ★ Algebraic analysis of quantum field theory. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, January 30-February 1, 1978. Sirkaiseikenkyūsho Kōkyūroku No. 324 (1978). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1978. pp. i-ii and 1-105. (Editors) 80h:81001 81-06 (32-06)
- Algebraic combinatorics** See Unsolved problems, 80j:05001
- Algebraic and geometric topology** ★ Algebraic and geometric topology. Part I. Proceedings of the Symposium in Pure Mathematics of the American Mathematical Society (Twenty-fourth Summer Research Institute), held at Stanford University, Stanford, Calif., August 2-21, 1976. Edited by R. James Milgram. Proceedings of Symposia in Pure Mathematics, XXXII. American Mathematical Society, Providence, R.I., 1978. vii+412 pp. ISBN 0-8218-1432-X (Editors) 80d:57001a 57-06 (18-06)
- ★ Algebraic and geometric topology. Part 2. Proceedings of the Symposium in Pure Mathematics of the American Mathematical Society (Twenty-fourth Summer Research Institute), held at Stanford University, Stanford, Calif., August 2-21, 1976. Edited by R. James Milgram. Proceedings of Symposia in Pure Mathematics, XXXII. American Mathematical Society, Providence, R.I., 1978. vi+322 pp. ISBN 0-8218-1433-8 (Editors) 80d:57001b 57-06 (18-06)
- Algebraic geometry** ★ Algebraic geometry. Proceedings of a Symposium held at the University of Tromsø, Tromsø, June 27-July 8, 1977. Edited by Loren D. Olson. Lecture Notes in Mathematics, 687. Springer-Verlag, Berlin-New York, 1978. ii+244 pp. ISBN 3-540-08954-3 (Editors) 80c:14002 14-06
- ★ Algebraic geometry. Proceedings of the Summer Meeting, held at the University of Copenhagen, Copenhagen, August 7-12, 1978. Edited by Knud Lønsted. Lecture Notes in Mathematics, 732. Springer-Verlag, Berlin-New York, 1979. vi+658 pp. ISBN 3-540-09527-6 (Editors) 80k:14001 14-06
- See also Journées: Géométrie Algébrique de Rennes, 80m:14001a; Journées: Géométrie Algébrique de Rennes, 80m:14001b and Journées: Géométrie Algébrique de Rennes, 80m:14001c
- Algebraic languages** See Languages algébriques, 80a:68003
- Algebraic numbers and finite groups** ★ Алгебраические числа и конечные группы. (Russian) [Algebraic numbers and finite groups] Edited by B. B. Venkov. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 86 (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. 192 pp. (Editors) 80c:00005 00A10
- Algebraic systems** See Topological spaces and algebraic systems, 80m:54002
- Algebraic theory of semigroups** ★ Algebraic theory of semigroups. Proceedings of the Sixth Algebraic Conference held in Szeged, August 23-26, 1976. Edited by G. Pollák. Colloquia Mathematica Societatis János Bolyai, 20. North-Holland Publishing Co., Amsterdam-Oxford-New York, 1979. 753 pp. vi+278 pp. ISBN 3-540-08930-6 (Editors) 80d:20001 20-06 (20Mxx)
- Algebraic topology** ★ Algebraic topology. Proceedings of a Conference held at the University of British Columbia, Vancouver, B.C., July 25-August 12, 1977. Edited by Peter Hoffman, Renzo A. Piccinini and Denis Serre. Lecture Notes in Mathematics, 673. Springer-Verlag, Berlin-New York, 1978. vi+278 pp. ISBN 3-540-08930-6 (Editors) 80b:55002 55-06
- ★ Algebraic topology, Waterloo, 1978. Proceedings of a Conference held at the University of Waterloo, Waterloo, Ont., June, 1978. Edited by Peter Hoffman and Victor Snaith. Lecture Notes in Mathematics, 741. Springer-Verlag, Berlin-New York, 1979. xi+655 pp. ISBN 3-540-09545-4 (Editors) 80k:55002 55-06 (57-06)
- See also Studies in algebraic topology, 80c:00012
- Algèbres d'opérateurs** ★ Algèbres d'opérateurs. Séminaire held at Plans-sur-Bex, 13-18 March 1978. Edited by Pierre de la Harpe. Lecture Notes in Mathematics, 725. Springer-Verlag, Berlin-New York, 1979. iv+309 pp. ISBN 3-540-09512-8 (Editors) 80g:46002 46-06 (22-06)
- Algèbres d'opérateurs et leurs applications en physique mathématique** ★ Algèbres d'opérateurs et leurs applications en physique mathématique. Colloquium held at Marseille, June 20-24, 1977. Colloques Internationaux du Centre National de la Recherche Scientifique, 274. Éditions du Centre National de la Recherche Scientifique (CNRS), Paris, 1979. 533 pp. (1 plate). ISBN 2-222-02441-2 (Editors) 80h:46001 46-06 (47-06, 81-06, 82-06)
- Algorithms** See Studies in mathematical logic and the theory of algorithms, 80c:03006 and Graphs, data structures, algorithms, 80m:68008
- Algorithms in numerical computations** ★ Algorithms in numerical computations. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, November 4-6, 1976. Sirkaiseikenkyūsho Kōkyūroku No. 310 (1977). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1977. pp. i-ii and 1-115. (Editors) 80b:65003 65-06
- Algorithms for numerical computations and computers** ★ Algorithms for numerical computations and computers. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, October 31-November 2, 1977. Sirkaiseikenkyūsho Kōkyūroku No. 339 (1978). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1978. pp. i-ii and 1-143. (Editors) 80f:65003 65-06 (65-04)
- All-Union Conference:**
- Computational Methods in Linear Algebra** See Computational methods in linear algebra, 80j:65003
- Partial Differential Equations** ★ Труды Всесоюзной Конференции по Уравнениям с Частными Производными. (Russian) [Proceedings of an All-Union Conference on Partial Differential Equations] Held at Moscow State University, January 27-31, 1976. Dedicated to Academician I. G. Petrovskii on the occasion of his 75th birthday. Edited by P. S. Aleksandrov and O. A. Oleinik. Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978. 511 pp. (1 plate). (Editors) 80f:35002 35-06
- All-Union Summer School:**
- Mathematical** See Spectral theory of operators, 80j:47003
- All-Union Symposium:**
- Artificial Intelligence and the Automation of Investigations in Mathematics** ★ Всесоюзный симпозиум: "Искусственный интеллект и автоматизация исследований в математике". (Russian) [All-Union Symposium: "Artificial Intelligence and the Automation of Investigations in Mathematics"] Abstracts of lectures and communications held in Kiev, November 28-30, 1978. Edited by A. P. Žezun and V. F. Kostyrko. Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev, 1978. 114 pp. (Editors) 80d:68116 68Gxx
- Attenberg** See Vorträge: Problemseminar, Algebraische Methoden der Automaten-theorie, 80d:68009
- American Mathematical Society Translations, Ser. 2** ★ American Mathematical Society Translations, Ser. 2, Vol. 111. Nine papers on analysis. American Mathematical Society, Providence, R.I., 1978. iii+219 pp. ISBN 0-8218-3061-9 (Table of contents) 80c:00006 00A10
- ★ Twelve papers in logic and algebra. American Mathematical Society Translations, Series 2, 113. American Mathematical Society, Providence, R.I., 1979. v+250 pp. ISBN 0-8218-3063-5 (Editors) 80m:00006 00A10 (03-06, 20-06, 22-06)
- See also Birman, M. S.; et al., 80m:46026

- Amsterdam** See Current topics in cybernetics and systems, 80a:68001; Congress: Dutch Mathematical, 80d:00005; Proceedings: Bicentennial Congress Wiskundig Genootschap, 80d:00016a; Proceedings: Bicentennial Congress Wiskundig Genootschap, 80d:00016b; Foundations of computer science, 80m:68006a and Foundations of computer science, 80m:68006b
- Analog fault diagnosis** See Special issue: Automatic analog fault diagnosis, 80e:94002
- Analyse non convexe** ★Analyse non convexe. Proceedings of a Colloquium held in Pau, May 23-25, 1977. Bull. Soc. Math. France Mém. No. 60 (1979). Société Mathématique de France, Paris, 1979. pp. 1-183. (Editors) 80m:49001 49-06 (46-06, 58-06)
- Analysis** See History of analysis, 80a:01001; American Mathematical Society Translations, Ser. 2, 80c:00006; Séminaire: Choquet, 80c:26001a; Séminaire: Choquet, 80c:26001b; Studies in analysis, 80f:00006; Contributions to analysis, 80j:30002; School: Latin-American, Mathematics, 80m:00005 and Analyse non convexe, 80m:49001
- Analytic function methods in probability theory** ★Analytic function methods in probability theory. Proceedings of the Colloquium on the Methods of Complex Analysis in the Theory of Probability and Statistics held at the Kossuth L. University, Debrecen, August 29-September 2, 1977. Edited by B. Gyires. Colloquia Mathematica Societatis János Bolyai, 21. North-Holland Publishing Co., Amsterdam-Oxford-New York, 1979. 379 pp. ISBN 0-444-85333-2 (Editors) 80m:60002 60-06 (62-06)
- Analytic varieties** See Variétés analytiques compactes, 80a:32002
- Ann Arbor, Mich.** See IEEE Symposium: Foundations of Computer Science, 80d:68008
- Anniversary:**
- Archives of the Academy of Sciences of the USSR** The 250th anniversary of the Archives of the Academy of Sciences of the USSR. (Russian) Vestnik Akad. Nauk SSSR 1978, no. 7, 93-101. (Editors) 80a:01026 01A65 (01A75)
- Birth of Amedeo Avogadro** See Proceedings: Commemorative Meeting for the Second Centennial of the Birth of Carl Friedrich Gauss and the 150th Anniversary of the Death of Pierre Simon Laplace, 80j:01001
- Birth of Albert Einstein** See Einstein, Albert, 80b:01030; Hollingdale, S. H., 80b:01031 and Schüpf, Hans-Georg, 80b:01047
- Birth of Abū Naṣr Muḥammad ibn Muḥammad ibn Tarkhān al-Fārībī** See Sagadeev, A. V., 80c:01003
- Birth of Carl Friedrich Gauss** See Dombrowski, Peter, 80g:01013; Dieudonné, Jean, 80b:01029; Festakt und Tagung aus Anlass des 200. Geburtstages von Carl Friedrich Gauss, 80i:01001; Proceedings: Commemorative Meeting for the Second Centennial of the Birth of Carl Friedrich Gauss and the 150th Anniversary of the Death of Pierre Simon Laplace, 80j:01001 and Festschrift: Gauss, Carl Friedrich, 80k:01001
- Birth of Johann Heinrich Lambert** See Schreiber, Peter, 80j:01013
- Birth of Gustav Zeuner** See Pawłowiński, Alex, 80g:01029
- Death of Georges Louis Buffon** See Geometrical probability and biological structures: Buffon's 200th anniversary, 80a:92003
- Death of Pierre Simon de Laplace** See Proceedings: Commemorative Meeting for the Second Centennial of the Birth of Carl Friedrich Gauss and the 150th Anniversary of the Death of Pierre Simon Laplace, 80j:01001
- Death of Isaac Newton** See Treder, Hans-Jürgen, 80b:01007
- History of Mathematics Society of Japan** See Special issue: Sōgakushi Kenkyū, 80j:00004
- Mathematical Society of Japan** See Special issue: Mathematical Society of Japan, 80j:00008
- Sōgakushi Kenkyū** See Special issue: Sōgakushi Kenkyū, 80b:01004
- Annual review of fluid mechanics** ★Annual review of fluid mechanics. Vol. 11. Edited by Milton Van Dyke, J. V. Wehausen and John L. Lumley. Annual Reviews Inc., Palo Alto, Calif., 1979. iv + 556 pp. ISBN 0-8243-0711-9 (Editors) 80d:76001 76-06
- Ansätze zur Organisationstheorie rechnergestützter Informationssysteme** ★Ansätze zur Organisationstheorie rechnergestützter Informationssysteme. Edited by Carl Adam Petri. Berichte der Gesellschaft für Mathematik und Datenverarbeitung, 111. R. Oldenbourg Verlag, Munich, 1979. 403 pp. ISBN 3-486-23131-6 (Editors) 80j:94001 94-06
- Antwerp** See Ring theory, 80a:16001; Path integrals and their applications in quantum, statistical, and solid state physics, 80c:82019; Ring theory, 80m:16001 and Padé approximation and its applications, 80m:41001
- Application of computers to the solution of problems in mathematical physics and automatic control systems** ★Применение ЭВМ к решению задач математической физики и АСУ. (Russian) [Application of mathematical methods in economic investigations and planning] Edited by A. N. Čekalin and E. V. Ermolin. Kazan. Univ., Kazan, 1978. 300 pp. (Editors) 80c:65004 65-06 (00A69)
- Application of mathematical methods in economic investigations and planning** ★Применение математических методов в экономических исследованиях и планировании. (Russian) [Application of mathematical methods in economic investigations and planning] Edited by A. A. Bakaeв and L. I. Bažan. Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev, 1978. 97 pp. (2 foldouts). (Editors) 80d:90008 90C50 (90A99)
- Applications of catastrophe theory in the behavioral and life sciences** ★Applications of catastrophe theory in the behavioral and life sciences. Edited by Loren Cobb and Rammoan K. Ragade. Behavioral Sci. 23 (1978), no. 5. University of Louisville, Society for General Systems Research, Louisville, Ky., 1978. pp. i-ii + 291-419. (Editors) 80a:92002 92-06
- Applications of sheaves** ★Applications of sheaves. Proceedings of the Research Symposium on Applications of Sheaf Theory to Logic, Algebra and Analysis held at the University of Durham, Durham, July 9-21, 1977. Edited by Michael P. Fourman, Christopher J. Mulvey and Dana S. Scott. Lecture Notes in Mathematics, 753. Springer-Verlag, Berlin-New York, 1979. xiv + 779 pp. ISBN 3-540-09564-0 (Editors) 80j:18001 18-06 (00A10, 03-06, 32-06, 46-06)
- Applied mathematics** See Information linkage between applied mathematics and industry, 80c:00004 and Questions of mathematical cybernetics and applied mathematics, 80g:93002
- Applied nonlinear analysis** ★Applied nonlinear analysis. Proceedings of the Third International Conference held at the University of Texas, Arlington, Tex., April 20-22, 1978. Edited by V. Lakshmikantham. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xx + 726 pp. ISBN 0-12-434180-2 (Editors) 80d:00003 00A10
- Applied numerical modelling** ★Applied numerical modelling. Proceedings of the First International Conference held at the University of Southampton, Southampton, July 11-15, 1977. Edited by C. A. Brebbia. A Halsted Press Book. John Wiley & Sons, New York-Toronto, Ont., 1978. ix + 713 pp. ISBN 0-470-99271-9 (Editors) 80m:65001 65-06 (65C20)
- ★Applied numerical modelling. Proceedings of the Second International Conference held at the Madrid Polytechnic University, Madrid, September 1978. Edited by E. Alarcón and Carlos Alberto Brebbia. Pentech Press, London, 1979. viii + 698 pp. ISBN 0-7273-0105-5 (Editors) 80m:65002 65-06 (65C20)
- Applied sciences** ★Computing methods in applied sciences and engineering, 1977. II. Proceedings of the Third International Symposium, held at Versailles, December 5-9, 1977. Edited by R. Glowinski and J.-L. Lions. Lecture Notes in Physics, 91. Springer-Verlag, Berlin-New York, 1979. vi + 359 pp. ISBN 3-540-09119-X (Editors) 80d:65010b 65-06
- Applied stochastic** See Symposium: Operations Research, 80d:90004c
- Applied time series analysis** ★Applied time series analysis. Edited by David F. Findley. Proceedings of the First Applied Time Series Symposium held in Tulsa, Okla., May 14-15, 1976. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1978. x + 345 pp. ISBN 0-12-257250-5 (Editors) 80c:62002 62-06
- Approximation of fixed points** See Functional differential equations and approximation of fixed points, 80g:00005
- Approximation of functions** See Studies in the theory of approximation of functions and their applications, 80j:41005
- Approximation theory** ★Approximation theory. Papers presented at the VIth semester at the Stefan Banach International Mathematical Center, Warsaw, held September 17-December 17, 1975. Edited by Zbigniew Ciesielski. Banach Center Publications, 4. PWN—Polish Scientific Publishers, Warsaw, 1979. 316 pp. ISBN 83-01-01491-1 (Editors) 80c:41003 41-06 (42-06)
- See also Numerische Methoden der Approximationstheorie, 80a:65015; Fourier analysis and approximation theory, 80d:42001a; Fourier analysis and approximation theory, 80d:42001b and Multivariate approximation theory, 80k:65006
- Approximation theory and functional analysis** ★Approximation theory and functional analysis. Proceedings of the International Symposium on Approximation Theory, held at the Universidade Estadual de Campinas (UNICAMP), Campinas, August 1-5, 1977. Edited by João B. Prola. North-Holland Mathematics Studies, 35. Notas de Matemática [Mathematical Notes], 66. North-Holland Publishing Co., Amsterdam-New York, 1979. viii + 449 pp. ISBN 0-7204-1964-6 (Editors) 80i:41004 41-06
- Les arbres en algèbre et en programmation** ★Les arbres en algèbre et en programmation. 4ème Colloque held at Lille, February 22-24, 1979. Université de Lille 1, U.E.R., I.E.E.A., Lille, 1979. iv + 327 pp. (Editors) 80j:68004 68-06
- Arlington, Tex.** See Applied nonlinear analysis, 80c:00003
- Armidale** See Combinatorial mathematics, 80j:05002
- Artificial intelligence** See Topics in artificial intelligence, 80a:68102 and All-Union Symposium: Artificial Intelligence and the Automation of Investigations in Mathematics, 80d:68116
- Asterisque** See Journées Singulières, 80c:58001; Dombrowski, Peter, 80g:01013; Journées: Arithmétiques de Luminy, 80j:10003 and Première classe de Chern et courbure de Ricci: preuve de la conjecture de Calabi, 80j:53064
- Astrophysics** See Dynamical systems and applications of Boltzmann equations to astrophysics, 80c:85001
- Asymptotic behavior of solutions of functional-differential equations** ★Асимптотическое поведение решений дифференциально-функциональных уравнений. (Russian) [Asymptotic behavior of solutions of functional-differential equations] Edited by A. N. Šarkovskii. Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1978. 158 pp. (Editors) 80j:34001 34-06 (34Kxx)
- Asymptotic methods in systems theory** ★Асимптотические методы в теории систем. (Russian) [Asymptotic methods in systems theory] Edited by A. M. Pančenko. Irkutsk. Gos. Univ., Irkutsk, 1977. 238 pp. (Editors) 80f:00002 00A10 (41A60, 93-06)
- Athens, Ga.** See Geometric topology, 80d:57002
- Atlanta, Ga.** See Numerical analysis, 80c:65007
- Austerlitz-Zeist** See Proceedings: CERN School of Physics, 80k:81119a
- Austin, Tex.** See Group theoretical methods in physics, 80c:81002 and Extremal methods and systems analysis, 80m:00011
- Automata** See Foundations of computer science, 80m:68006a
- Automata, languages and programming** ★Automata, languages and programming. Fifth International Colloquium held at Udine, July 17-21, 1978. Edited by Giorgio Ausiello and Corrado Böhm. Lecture Notes in Computer Science, 62. Springer-Verlag, Berlin-New York, 1978. viii + 508 pp. ISBN 3-540-08860-1 (Editors) 80c:68003 68-06
- Automatic analog fault diagnosis** See Special issue: Automatic analog fault diagnosis, 80e:94002
- Automatic control systems** See Application of computers to the solution of problems in mathematical physics and automatic control systems, 80c:65004
- Automating quality control** See Methodology and the attempt to develop the problem of automating quality control, 80a:68004
- Automaton theory** See Vorträge: Problemseminar, Algebraische Methoden der Automaten-theorie, 80d:68009
- Automorphic forms, representations and L-functions** ★Automorphic forms, representations and L-functions. Part 1. Proceedings of the Symposium in Pure Mathematics of the American Mathematical Society (Twenty-fifth Summer Research Institute) held at Oregon State University, Corvallis, Ore., July 11-August 5, 1977. Edited by Armand Borel and W. Casselman. Proceedings of Symposia in Pure Mathematics, XXXIII. American Mathematical Society, Providence, R.I., 1979. x + 322 pp. ISBN 0-8218-1435-4 (Editors) 80g:10002a 10-06 (10Dxx, 10Hxx, 12-06, 22-06)
- ★Automorphic forms, representations, and L-functions. Part 2. Proceedings of the Symposium in Pure Mathematics of the American Mathematical Society (Twenty-fifth Summer Research Institute) held at Oregon State University, Corvallis, Ore., July 11-August 5, 1977. Edited by Armand Borel and W. Casselman. Proceedings of Symposia in Pure Mathematics, XXXIII. American Mathematical Society, Providence, R.I., 1979. vii + 382 pp. ISBN 0-8218-1437-0 (Editors) 80g:10002b 10-06 (10Dxx, 10Hxx, 12-06, 22-06)



Axiomatic quantum field theory See Conference: Mathematical Problems of Quantum Field Theory and Quantum Statistics, 80m:81005a

B-valued analysis and nonstandard analysis ★B-valued analysis and nonstandard analysis. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, July 3-6, 1978. *Sūrikaiseikenkyūsho Kōkyūroku* No. 336 (1978). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1978. pp. i-ii and 1-149. (Editors) 80b:03002 03-06 (03C90, 03D65, 03H05)

Bad Godesberg See Measuring, modelling and evaluating computer systems, 80c:68004

Bad Honnef See Stochastic control theory and stochastic differential systems, 80f:60004 and Semi-infinite programming, 80j:90005

Baku See Spectral theory of operators, 80j:47003

Baltimore, Md. See Transactions: Conference of Army Mathematicians, 80m:73002

Banach spaces See Probability on Banach spaces, 80c:60007 and Probability in Banach spaces, 80d:60004

Bath See Proceedings: International Symposium on Multiple-Valued Logic, 80k:54001

Baton Rouge, La. See Proceedings: Topology Conference, 80i:54001a and Proceedings: Topology Conference, 80i:54001b

Bayesian methods See New developments in the applications of Bayesian methods, 80a:62006

Beiträge:

Algebra and Geometrie ★Beiträge zur Algebra und Geometrie. 7. Edited by Ott-Heinrich Keller, Otto Krötenheerd, Eligius Tamás Schmidt and Ludwig Stammler. *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M 11* (1978). *VEB Deutscher Verlag der Wissenschaften, Berlin*, 1978. pp. 7-144. (Editors) 80a:00003 00A10

Differentialgeometrie ★Beiträge zur Differentialgeometrie, Heft 1. Bonner Mathematische Schriften, 102. *Universität Bonn, Mathematisches Institut, Bonn*, 1978. ii + 50 pp. (Editors) 80b:58001 58-06 (53-06)

★Beiträge zur Differentialgeometrie, Heft 2. Bonner Mathematische Schriften, 103. *Universität Bonn, Mathematisches Institut, Bonn*, 1978. ii + vii + 98 pp. (Wolfgang Ziller) 80j:58060a 58F17 (53C22, 70H05)

Berichte:

Tagung Numerische Behandlung Gewöhnlicher Differentialgleichungen ★Berichte der Tagung "Numerische Behandlung Gewöhnlicher Differentialgleichungen". Held at Humboldt University, Berlin, October 2-3, 1978. *Seminarberichte, 11. Humboldt Universität, Sektion Mathematik, Berlin*, 1978. iv + 112 pp. (Editors) 80d:65009 65-06

Berlin See Theory of nonlinear operators, 80d:47002; Berichte: Tagung Numerische Behandlung Gewöhnlicher Differentialgleichungen, 80d:65009; Fortschritte in der mathematischen Optimierung, 80d:90003; Categorical topology, 80f:18002; Structure and mechanisms of turbulence, 80h:76021a; Structure and mechanisms of turbulence, 80h:76021b and Festakt und Tagung am Anlass des 200. Geburtstages von Carl Friedrich Gauss, 80i:01001

Berlin/Wendisch-Rietz See Fundamentals of computation theory, 80m:68007

Besançon See Journées: Analyse Non Linéaire, 80a:46002

Bibliography:

Abaffy, József József Abaffy. (Hungarian) *Mat. Lapok* 27 (1976), no. 1-2, 189-190 (1978). (Editors) 80g:01032 01A70

Andréka, Hajnal Hajnal Andréka. (Hungarian) *Mat. Lapok* 27 (1976), no. 1-2, 190-191 (1978). (Editors) 80g:01033 01A70

Borivka, Otakar See Neuman, František, 80j:01032

Brauer, Richard D. See Felt, Walter, 80m:01033

Brauer, Richard Dagobert See Green, J. A., 80g:01024

Clairaut, Alexis-Claude See Taton, René, 80b:01012

Cunningham, Ebenezer See McCrea, W. H., 80a:01036

Demidovič, B. P. See Efimov, N. V.; et al., 80a:01031

Duhem, Pierre See Duhem, Pierre, 80m:01045

Edgeworth, Francis Ysidro See Stigler, Stephen M., 80a:62001

Erdélyi, Arthur See Colton, David, 80b:01028

Faddeev, D. K. See Aleksandrov, P. S.; et al., 80b:01024

Fisher, Ronald A. See Box, Joan Fisher, 80i:62002

Fractijs de Veubeke, Boudouin The main publications of Professor Fractijs de Veubeke. *Energy methods in finite element analysis*, pp. 349-355, Wiley, Chichester, 1979. (Editors) 80m:01039b 01A70

Fréchet, Maurice René See *Obituary: Fréchet, Maurice René*, 80b:01032b

Gurevič, G. B. See Vasil'eva, M. V.; et al., 80c:01019

Hermelink, Heinrich See Scriba, Christoph J., 80m:01035b and Folkerts, M.; et al., 80m:01035c

Hočevar, Franc See Povšik, Jože, 80a:01039

Kac, Mark See Kac, Mark, 80i:01016

König, Dénes See Gallai, Tibor, 80b:01021

Leśniewski's logic See Riecke, V. Frederick, 80b:03031

Littlewood, John Edensor See Burkitt, J. C., 80b:01027

Louellé, Georgiou See *Obituary: Louellé, Georgiou*, 80b:01030

Mac Lane, Saunders See Mac Lane, Saunders, 80b:01064

MacMahon, Percy Alexander See MacMahon, Percy Alexander, 80b:01065

Mihlin, S. G. See Kantorovič, L. V.; et al., 80a:01033

Morse, Marston See Cairns, Stewart S., 80d:01020

Newton, Isaac See Treder, Hans-Jürgen, 80b:01007

Orlicz, Władysław See Matuszewska, Wanda, 80b:01035

Rabinovič, I. M. See Reizip, L.; et al., 80a:01042

Robb, A. A. See Briginshaw, A. J., 80d:01015

Robinson, Abraham See Robinson, Abraham, 80b:01039a

Rosenfeld, Léon See Rosenfeld, Léon, 80b:01068

Rothe, Erich H. Published works of Erich H. Rothe. *Nonlinear analysis (collection of papers in honor of Erich H. Rothe)*, pp. 235-238, Academic Press, New York, 1978. (Editors) 80a:01049 01A70

Sarton, George See Hamarneh, Sami, 80c:01055

Scherrer, Willy See Hadwiger, H., 80j:01027

Segre, Beniamino See Vesentini, Edoardo, 80a:01047

Stampacchia, Guido See Magenes, Enrico; et al., 80c:01016

Subbankov, M. A. See Babudjanov, P. B.; et al., 80a:01027

Svoboda, Karel See Švec, Alois, 80a:01045

van Veen, S. C. See Bottema, O., 80a:01029

Vekna, I. N. See Bogoljubov, N. N.; et al., 80a:01028

Výsina, Jan See Kraemer, Emil, 80c:01026

Weil, André See Weil, André, 80k:01067a; Weil, André, 80k:01067b and Weil, André, 80k:01067c

Wilder, Raymond Louis See Raymond, Frank, 80b:01023

Competitive bidding See Stark, Robert M.; et al., 80c:90039

Complex multivariate statistical analysis See Saxena, Ashok K., 80c:62067

Computer aided design of digital systems, Vol. 3 See van Cleemput, W. M., 80i:68004a and van Cleemput, W. M., 80i:68004b

Continuous lattices, topology and topological algebra See Hofmann, Karl Heinrich, 80k:06011

Designs for experiments in three dimensions See Preece, D. A., 80b:62090

Einstein equations See Solutions of the Einstein equations, 80f:83001

Evaluation of numerical software See Einarsson, Bo, 80c:65001

French mathematical seminars See Anderson, Nancy D., 80i:00007

Graph equations See Cvetković, Dragolj M.; et al., 80j:05054

Graph isomorphism See Gati, Georg, 80j:05097

History of natural science See History of natural science: literature published in the USSR, 80d:00025

History of science and its cultural influences. One hundred third critical bibliography of the history of science and its cultural influences (to January 1978). Edited by John Neu. *Isis* 69 (1978), no. 250, 183 pp. (Editors) 80k:90017a 00A15 (01A75)

One hundred fourth critical bibliography of the history of science and its cultural influences (to January 1979). Edited by John Neu. *Isis* 70 (1979), no. 255, 211 pp. (Editors) 80k:00017b 00A15 (01A75)

History of science and technology See Belkowska, Krystyna; et al., 80k:00016a; Majewska-Tronowicz, Jadwiga; et al., 80k:00016b and Majewska-Tronowicz, Jadwiga; et al., 80k:00016c

Integer programming and related areas See Integer programming and related areas, 80c:90110

Mathematics books See Hayrup, Elise, 80j:00009

Mathematics in Latvia See Kanervik, A.; et al., 80d:01019

Order statistics See Harter, H. Leon, 80c:62031

Random number generation and testing See Sahai, Hardeo, 80i:65008

Schlicht functions See Bernardi, S. D., 80b:30017

Squaring rectangles and squares See Federico, P. J., 80b:05019

Statistical bibliographies See Lancaster, H. O., 80c:62001

Steiner systems See Doyen, Jean; et al., 80g:51009

Vector optimization See Achilles, A.; et al., 80b:90002

Western scientific manuscripts before 1600 See Jayawardene, S. A., 80f:01009

Bielefeld See Many degrees of freedom in particle theory, 80j:81006

Bielsko Biala See Systems analysis applications to complex programs, 80j:93008

Bifurcation theory and applications in scientific disciplines ★Bifurcation theory and applications in scientific disciplines. Papers presented at a Conference held in New York, October 31-November 4, 1977. Edited by Okan Gürel and Otto E. Rössler. *Annals of the New York Academy of Sciences*, 316. *New York Academy of Sciences, New York*, 1979. vi + 708 pp. ISBN 0-89766-000-5 (Editors) 80k:00007 00A10

Biography:

Almeida Costa, Antonio See Abellanas, Pedro, 80c:01009

Ampère, André-Marie See Taton, René, 80b:01058

Behnke, Heinrich See Behnke, Heinrich, 80b:01025

Bierens de Haan, David See Bos, H. J. M., 80b:01026

Borivka, Otakar See Neuman, František, 80j:01032

Brahe, Tycho See Christianson, J. R., 80c:01010

Buys Ballot, C. H. D. See Bottema, O., 80b:01051

Cantor, Georg See Dauben, Joseph Warren, 80i:01010

Coxeter, Harold Scott MacDonald Harold Scott MacDonald Coxeter. *Bull. London Math. Soc.* 11 (1979), no. 1, 111-112. (Editors) 80c:01030 01A70

Delligne, Pierre See Mumford, David; et al., 80a:01038

Djakov, Emil See Birthday: Djakov, Emil, 80d:01022

Edgeworth, Francis Ysidro See Stigler, Stephen M., 80a:62001

Einstein, Albert See Albert Einstein: The human side, 80g:01031; Einstein, Albert, 80h:01030; Hollingdale, S. H., 80b:01031; Albert Einstein in Berlin 1913-1933, 80k:01060a; Albert Einstein in Berlin 1913-1933, 80k:01060b and Frank, Philipp, 80b:01034

Faddeev, D. K. See Aleksandrov, P. S.; et al., 80b:01024

Fefferman, Charles Louis See Moser, Jürgen, 80a:01037

Fractijs de Veubeke, Boudouin Biography of Professor B. Fractijs de Veubeke. *Energy methods in finite element analysis*, p. xi (1 plate), Wiley, Chichester, 1979. (Editors) 80m:01039a 01A70

Fréchet, Maurice René See Huiková, Marie; et al., 80b:01032a

Gauss, Carl Friedrich ★Carl Friedrich Gauss 1777-1855. Four lectures on his life and work. Edited by A. F. Monna. *Communications of the Mathematical Institute, Rijksuniversiteit Utrecht, 7. Rijksuniversiteit Utrecht, Mathematical Institute, Utrecht*, 1978. iii + 54 pp. (J. Dieudonné) 80g:01034 01A70 (01A55)

Grassmann, Hermann See Dieudonné, Jean, 80b:01053

Green, George See Edge, D. A., 80c:01012

Gurevič, G. B. See Vasil'eva, M. V.; et al., 80c:01019

Hardy, Godfrey Harold See Goddard, L. S., 80g:01023

Humal, A. See Birthday: Humal, A., 80c:01031

I'in, V. A. See Birthday: I'in, V. A., 80b:01028

Keldyš, M. V. See Zakis, J., 80a:01048

Kočina, P. Ja. See Birthday: Kočina, P. Ja., 80k:01061

König, Dénes See Gallai, Tibor, 80b:01021

Kovalevskaja, S. V. See Kovalevskaja, S. V., 80b:01033

## Biography: (continued)

- Lavašev, A. E. See Birthday: Lavašev, A. E., 80a:01050  
 Lebačevskii, Nikolai Ivanovič See Halanekšir, Alexander; et al., 80a:01054  
 Mac Lane, Saunders See Mac Lane, Saunders, 80a:01064  
 Martinian, André See Martinian, André, 80a:01038  
 Mihlin, S. G. See Kantorovič, L. V.; et al., 80a:01033  
 Mitropol'skii, Ju. O. See Stojanov, N. V.; et al., 80b:01026  
 Napier, John See Hawkins, Bill, 80a:01022  
 Neugebauer, Otto See Boas, Ralph P., 80a:01022  
 Newton, Isaac See Treder, Hans-Jürgen, 80a:01007  
 Orlicz, Władysław See Matuszewska, Wanda, 80a:01035  
 Peirce, James Mills See Kennedy, Hubert, 80a:01036  
 Pontrjagin, L. S. See Pontrjagin, L. S., 80a:01021  
 Quillen, Daniel See Bass, Hyman, 80a:01010  
 Robinson, Abraham See Robinson, Abraham, 80a:01039a  
 Schouten, J. A. See Struik, D. J., 80a:01029  
 Sloane, Neil J. A. See Roselle, David P., 80a:01057  
 Sobolev, S. L. See Erugin, N. P.; et al., 80a:01013  
 Suppes, Patrick ★Patrick Suppes. Edited by Radu J. Bogdan. Profiles, I. D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1979. x + 264 pp. ISBN 90-277-0950-5, 90-277-0951-3 (Manfred Kochen) 80m:01040 01A70 (03A05, 92A25)  
 Svoboda, Karel See Švec, Alois, 80a:01045  
 Ufjanov, P. L. See Men'sov, D. E.; et al., 80g:01027  
 van Veen, S. C. See Bottema, O., 80a:01029  
 Vekua, I. N. See Bogoljubov, N. N.; et al., 80a:01028  
 Vyšin, Jan See Kraemer, Emil, 80a:01026  
 Wilder, Raymond Louis See Raymond, Frank, 80a:01023  
 Wu, Ta You See Festschrift: Wu, Ta You, 80f:01006  
 Zeuner, Gustav See Pawłowiński, Alex, 80g:01029
- Biography:**  
 Stieltjes, Thomas Jan See van Veen, S. C., 80f:01022
- Biological rhythms** See Special issue: Mathematics of biological rhythms, 80d:92002
- Biological structures** See Geometrical probability and biological structures: Buffon's 200th anniversary, 80a:92003
- Biological systems** See Conference: Deterministic Differential Equations and Stochastic Processes Models for Biological Systems, 80d:92001
- Biomathematics and cell kinetics** ★Biomathematics and cell kinetics. Based on a Workshop held at Université Paris 7, Paris, February 27-28, 1978. Edited by Alain-Jacques Valleron and P. D. M. Macdonald. Developments in Cell Biology, 2. Elsevier/North-Holland Biomedical Press, Amsterdam, 1978. xvii + 431 pp. ISBN 0-444-80059-X (Editors) 80f:92009 92A09
- Birthday:**  
 Behnke, Heinrich See Griesel, Heinz, 80c:01014  
 Blomberg, Hans See Topics in systems theory, 80f:93005  
 Borůvka, Otakar See Neuman, František, 80j:01032  
 Charnes, Abraham See Extremal methods and systems analysis, 80m:00011  
 Džakov, Emil Academician Emil Džakov (on the occasion of his 70th birthday). (Bulgarian) *Fiz.-Mat. Spis. B'lgar. Akad. Nauk.* 21(54) (1978), no. 3, 237-239. (Editors) 80d:01022 01A70  
 Faddeev, D. K. See Aleksandrov, P. S.; et al., 80b:01024  
 Gurevič, G. B. See Vasil'eva, M. V.; et al., 80a:01019  
 Humal, A. A. Humal (on the occasion of his seventieth birthday). (Estonian) With a Russian translation. *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* 27 (1978), no. 2, 245. (Editors) 80e:01031 01A70  
 Il'in, V. A. Vladimir Aleksandrovič Il'in (on the occasion of his fiftieth birthday). (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1979, no. 3, 3. (Editors) 80b:01028 01A70  
 Kočina, P. Ja. Pelageja Jakovlevna Kočina (on the occasion of her eightieth birthday). (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1979, no. 3, 3. (Editors) 80k:01061 01A70  
 Krein, M. G. See Topics in functional analysis, 80d:00023  
 Lavašev, A. E. Anatoliĭ Evgen'evič Lavašev—80 years. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1978, no. 3, 78-79. (Editors) 80a:01050 01A70  
 Mihlin, S. G. See Kantorovič, L. V.; et al., 80a:01033  
 Mitropol'skii, Ju. O. See Stojanov, N. V.; et al., 80b:01026  
 Nožička, František See Vlach, Milan; et al., 80b:01027  
 Orlicz, Władysław See Matuszewska, Wanda, 80a:01035  
 Petrovskii, I. G. See All-Union Conference: Partial Differential Equations, 80f:35002  
 Ráb, Miloš See Novák, Vítězslav, 80e:01027  
 Sobolev, S. L. See Erugin, N. P.; et al., 80a:01013  
 Svoboda, Karel See Švec, Alois, 80a:01045  
 Teodorescu, Nicolae See Vrănceanu, Gheorghe; et al., 80j:01035  
 Tutte, William Thomas See Graph theory and related topics, 80c:05004  
 Ufjanov, P. L. See Men'sov, D. E.; et al., 80g:01027  
 Vekua, I. N. See Bogoljubov, N. N.; et al., 80a:01028  
 Vyšin, Jan See Kraemer, Emil, 80a:01026
- Boca Raton, Fla.** See Proceedings: Southeastern Conference on Combinatorics, Graph Theory and Computing, 80a:05004
- Boltzmann equations** See Dynamical systems and applications of Boltzmann equations to astrophysics, 80c:85001
- Bombay** See Optimizing methods in statistics, 80d:62003
- Bonn** See Differential geometrical methods in mathematical physics, 80b:81056
- Bonnacre** See Langages algébriques, 80a:60003
- Bonn** See Functional differential equations and approximation of fixed points, 80g:00005 and Game theory and related topics, 80j:90003
- Boundary value problems** See Physical and technical applications of boundary value problems, 80a:00006; Mixed boundary value problems in fluid dynamics, 80f:76001 and Free and mixed boundary value problems, 80m:35001
- Boundary value problems of mathematical physics and related questions in the theory of functions** ★Краевые задачи математической физики и смежные вопросы теории функций. 11. (Russian) [Boundary value problems of mathematical physics and related questions in the theory of functions. 11] Edited by O. A. Ladyženskaja. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 84 (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. pp. 1-320. (Editors) 80j:00006 00A10
- Boundary value problems for partial differential equations** ★Краевые задачи для уравнений в частных производных. (Russian) [Boundary value problems for partial differential equations] Edited by Ja. B. Lopatinskii, I. I. Daniljuk and I. V. Skripnik [I. V. Skripnik]. "Naukova Dumka", Kiev, 1978. 168 pp. (Editors) 80i:35003 35-06
- Boundary value problems. Spectral theory** ★Краевые задачи. Спектральная теория. (Russian) [Boundary value problems. Spectral theory] Edited by N. N. Ural'ceva. Проблемы Математического Анализа [Problems of Mathematical Analysis], 7. Leningrad. Univ., Leningrad, 1979. 248 pp. (Editors) 80k:35003 35-06
- Branching processes** ★Branching processes. Papers presented at a Conference held in Saint Hippolyte, Que., August 11-20, 1976. Edited by Anatole Joffe and Peter Ney. Advances in Probability and Related Topics, 5. Marcel Dekker, Inc., New York-Basel, 1978. x + 322 pp. ISBN 0-8247-6800-0 (Editors) 80c:60004 60-06 (60J80)
- Brasov** See Systems theory, 80m:93002
- Braunschweig** See Programmiersprachen, 80f:68010
- Bremen** See Proceedings: Bremer Konferenz zur Chemie, 80k:92018a and Proceedings: Bremer Konferenz zur Chemie, 80k:92018b
- Brighton** See Numerical software—needs and availability, 80f:68009
- Brussels** See Vorträge: Wissenschaftliche Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, 80c:65008 and Colloque: Mathématiques Discrètes: Codes et Hypergraphes, 80f:05002
- Bucharest** See Romanian-Finnish Seminar on Complex Analysis, 80i:30002
- Budapest** See Conference: Algebra, 80b:00003; Fourier analysis and approximation theory, 80d:42001a and Fourier analysis and approximation theory, 80d:42001b
- Bull. Soc. Math. France** See Colloque: Les Formes Quadratiques, 80h:15016 and Analyse non convexe, 80m:49001
- Bulletin GRG** See Solutions of the Einstein equations, 80f:83001
- Burnaby, B.C.** See Unsolved problems, 80j:05001
- Business statistics** See Proceedings: Business and Economic Statistics Section, American Statistical Association, 80c:62003
- Calabi conjecture** See Première classe de Chern et courbure de Ricci: preuve de la conjecture de Calabi, 80j:53064
- Calcutta** See Proceedings: Symposium on Graph Theory, 80j:05055
- Calgary, Alta.** See Polynomial and spline approximation, 80f:41001
- Cambridge** See Symposium: Mathematical Genetics, 80a:92007 and Special issue: Mathematics of biological rhythms, 80d:92002
- Cambridge, Mass.** See Maximum entropy formalism, 80b:82001
- Camplinas** See Approximation theory and functional analysis, 80i:41004
- Canberra** See Topics in algebra, 80a:00011; Combinatorial mathematics, 80a:05001 and Conference: Stochastic Processes and their Applications, 80c:60005
- Catastrophe theory** See Applications of catastrophe theory in the behavioral and life sciences, 80a:92002 and Structural stability in physics, 80j:00017
- Categorical data analysis** See Special issue: Theory and practice for categorical data analysis, 80d:62042
- Categorical topology** ★Categorical topology. Proceedings of the International Conference held at the Free University Berlin, Berlin, August 27-September 2, 1978. Edited by Horst Herrlich and Gerhard Preuss. Lecture Notes in Mathematics, 719. Springer-Verlag, Berlin-New York, 1979. xii + 420 pp. ISBN 3-540-09503-9 (Editors) 80f:18002 18-06 (54B30)
- Celestial mechanics** See Instabilities in dynamical systems, 80k:70002
- Cell kinetics** See Biomathematics and cell kinetics, 80f:92009
- Charlottesville, Va.** See Transactions: Conference of Army Mathematicians, 80b:00005
- Chelwood Gate** See Topology of low-dimensional manifolds, 80g:57005
- Circuits and systems** See IEEE Symposium: Circuits and Systems, 80a:94041
- Clausthal** See Numerische Behandlung von Eigenwertaufgaben, 80i:65002
- Clemson, S.C.** See Proceedings: Annual Southeastern Symposium on System Theory, 80j:93007
- Codes** See Colloque: Mathématiques Discrètes: Codes et Hypergraphes, 80f:05002
- Coding theory** See Vorträge: Codierungstheorie und Theorie der Suchalgorithmen, 80d:94018
- Coding theory and the optimization of complex systems** ★Теория кодирования и оптимизация сложных систем. (Russian) [Coding theory and the optimization of complex systems] Edited by V. M. Amerbaev. "Nauka" Kazah. SSR, Alma-Ata, 1977. 248 pp. (Editors) 80b:94001 94-06 (90C99)
- Collected papers:**  
 MacMahon, Percy Alexander See MacMahon, Percy Alexander, 80k:01065
- Collection:**  
 Leray, Jean ★Raccolta degli scritti dedicati a Jean Leray. Parte prima. (Italian) [Collection of articles dedicated to Jean Leray. Part I] Articles which have appeared in the Annali della Scuola Normale Superiore di Pisa Classe di Scienze. Scuola Normale Superiore Pisa, Pisa, 1978. iii + 506 pp. (1 plate). (Editors) 80f:00005 00A10 (01A70)  
 ★Raccolta degli scritti dedicati a Jean Leray. Parte seconda. (Italian) [Collection of articles dedicated to Jean Leray. Part II] Articles which have appeared in the Annali della Scuola Normale Superiore di Pisa Classe di Scienze. Scuola Normale Superiore Pisa, Pisa, 1978. pp. i-ii and 507-1023. (Editors) 80f:00005b 00A10 (01A70)  
 Lewy, Hans ★Raccolta degli scritti dedicati a Hans Lewy. (Italian) [Collection of articles dedicated to Hans Lewy] Appearing in the Annali della Scuola Normale Superiore di Pisa Classe di Scienze. Scuola Normale Superiore Pisa, Pisa, 1978. vi + 666 pp. (1 plate). (Editors) 80g:00004 00A10 (01A70)  
 Algebra ★Сборник работ по алгебре. (Russian) [A collection of papers on algebra] Minist. Oborony SSSR, 1978. 342 pp. (Editors) 80c:00003 00A10  
 ★Сборник работ по алгебре. 2. (Russian) [Collection of articles on algebra. 2] Гомологическая алгебра, теория алгебр и групп Ли. [Homological algebra, the



## Collection: (continued)

theory of algebras and Lie groups] Edited by G. S. Čogolvi. Trudy Tbiliss. Mat. Inst. Razmadze Akad. Nauk Gruzin. SSR 62 (1979). "Mecniereba", Tbilisi, 1979. pp. 1-106. (Editors) 80b:18017 18Gxx

## Colloque:

Algèbres d'Opérateurs et leur Applications en Physique Mathématique. See Algèbres d'opérateurs et leurs applications en physique mathématique. 80b:46001

Analyse non convexe. See Analyse non convexe. 80m:49001

Les Arbres en Algèbre et en Programmation. See Les arbres en algèbre et en programmation. 80j:68004

CNRS, Économétrie des Données Individuelles Temporelles. ★Colloque International du CNRS sur l'Économétrie des Données Individuelles Temporelles. Held in Paris, August 22-24, 1977. Ann. I.N.S.E.E. No. 30-31 (1978). Institut National de la Statistique et des Études Économiques, Paris, 1978. pp. 1-747. (Editors) 80a:62003 62-06

CNRS, Journées Arithmétiques de Luminy. See Journées Arithmétiques de Luminy. 80j:10003

CNRS, Problèmes Combinatoires et Théorie des Graphes. See Problèmes combinatoires et théorie des graphes. 80c:05005

DGRST-CNRS. See Actes: Colloque International DGRST-CNRS. 80j:62001

Les Formes Quadratiques. ★Colloque sur les Formes Quadratiques. 2. Held in Montpellier, November 14-18, 1977. Bull. Soc. Math. France Mém. No. 59 (1979). Société Mathématique de France, Paris, 1979. pp. 1-155. (Editors) 80b:15016 15A63

Mathématiques Discrètes: Codes et Hypergraphes. ★Colloque Mathématiques Discrètes: Codes et Hypergraphes. Held in Brussels on April 27-28, 1978. Cahiers Centre Études Rech. Opér. 20 (1978), no. 3-4, 229-470. Université Libre de Bruxelles, Institut Statistique, Centre d'Études de Recherche Opérationnelle, Brussels, 1978. pp. 229-472. (Editors) 80f:05002 05-06 (50C65, 94Bxx)

Variétés Analytiques Compacts. See Variétés analytiques compactes. 80a:32002

Colloques Internationaux du Centre National de la Recherche Scientifique. See Problèmes combinatoires et théorie des graphes. 80c:05005 and Algèbres d'opérateurs et leurs applications en physique mathématique. 80b:46001

Colloquia Mathematica Societatis János Bolyai. See Combinatorics. 80a:05002b; Algebraic theory of semigroups. 80d:20001; Fourier analysis and approximation theory. 80d:42001a and Fourier analysis and approximation theory. 80d:42001b

## Colloquium:

Automata, Languages, and Programming. See Automata, languages and programming. 80c:68003

Brazilian Mathematical. See Proceedings: Brazilian Mathematical Colloquium.

80c:00008; Proceedings: Brazilian Mathematical Colloquium. 80c:00009a;

Proceedings: Brazilian Mathematical Colloquium. 80c:00009b; Proceedings:

Brazilian Mathematical Colloquium. 80c:00010a; Proceedings: Brazilian

Mathematical Colloquium. 80c:00010b; Proceedings: Brazilian Mathematical

Colloquium. 80d:00017a and Proceedings: Brazilian Mathematical Colloquium.

80d:00017b

Complex Analysis. See Complex analysis. 80b:30002

Feynman Path Integrals. See Feynman path integrals. 80b:81014

Fourier Analysis and Approximation Theory. See Fourier analysis and approximation theory. 80d:42001a and Fourier analysis and approximation theory. 80d:42001b

Group Theoretical Methods in Physics. See Group theoretical methods in physics. 80i:81002

Group Theory. See Group theoretical methods in physics. 80i:81002

Hungarian, Combinatorics. See Combinatorics. 80a:05002a and Combinatorics. 80a:05002b

Logic. ★Logic Colloquium '77. Proceedings of the Colloquium held in Wrocław, August 1-12, 1977. Edited by Angus Macintyre, Leszek Pacholski and Jeff Paris. Studies in Logic and the Foundations of Mathematics, 96. North-Holland Publishing Co., Amsterdam-New York, 1978. x+311 pp. ISBN 0-444-85178-X (Editors) 80a:03003 03-06

Methods of Complex Analysis in the Theory of Probability and Statistics. See Analytic function methods in probability theory. 80b:60002

Noncommutative Harmonic Analysis. See Noncommutative harmonic analysis. 80g:22001

Ontology and Logic. See Ontologie und Logik/Ontology and logic. 80f:03007

Quasiconformal Mappings and their Generalizations. See Metric questions of the theory of functions and mappings. 80c:30023

Quasiconformal Mappings, their Generalizations and Applications. See Questions in the metric theory of mappings and its application. 80j:30004

Columbus, Ohio. See Relations between combinatorics and other parts of mathematics. 80a:05005

Combinatorial algorithms for optimal decision making. ★Комбинаторные алгоритмы принятия оптимальных решений. (Russian) [Combinatorial algorithms for optimal decision making] Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 10 (1978). Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978. pp. 1-28. (Editors) 80j:90002 90-06 (90C50)

Combinatorial mathematics. ★Combinatorial mathematics. Proceedings of the International Conference on Combinatorial Theory, held at the Australian National University, Canberra, August 16-27, 1977. Edited by D. A. Holton and Jennifer Seberry. Lecture Notes in Mathematics, 686. Springer-Verlag, Berlin-New York; Australian Academy of Science, Canberra, 1978. ix+353 pp. ISBN 3-540-08953-5 (Editors) 80a:05001 05-06

★Combinatorial mathematics. VI. Proceedings of the Sixth Australian Conference held at the University of New England, Armidale, August, 1978. Edited by A. F. Horadam and W. D. Wallis. Lecture Notes in Mathematics, 748. Springer-Verlag, Berlin-New York, 1979. ix+206 pp. ISBN 3-540-09555-1 (Editors) 80j:05002 05-06

See also Conference: Combinatorial Mathematics. 80j:05003

Combinatorial structures and graph theory. ★Combinatorial structures and graph theory. II. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, September 16-17, 1977.

Sinkaiseikenkyūsho Kōkyūroku No. 333 (1978). Kyoto University, Research Institute

for Mathematical Sciences, Kyoto, 1978. pp. i-ii and 1-235. (Editors) 80f:05003 05-06

Combinatorial theory. See Numerische Methoden bei graphentheoretischen und kombinatorischen Problemen. 80a:05003

Combinatorics. ★Combinatorics. Vol. I. Proceedings of the 5th Hungarian Colloquium held at Keszthely, June 28-July 3, 1976. Edited by A. Hajnal and Vera T. Sós. Colloquia Mathematica Societatis János Bolyai, 18. North-Holland Publishing Co., Amsterdam-Oxford-New York, 1978. 606 pp. ISBN 0-444-85093-3 (Editors) 80a:05002a 05-06

★Combinatorics. Vol. II. Proceedings of the 5th Hungarian Colloquium held at Keszthely, June 28-July 3, 1976. Edited by A. Hajnal and Vera T. Sós. Colloquia Mathematica Societatis János Bolyai, 18. North-Holland Publishing Co., Amsterdam-Oxford-New York, 1978. pp. 607-1220. ISBN 0-444-85093-3 (Editors) 80a:05002b 05-06

See also Polyhedral combinatorics. 80a:05003; Proceedings: Southeastern Conference on Combinatorics, Graph Theory and Computing. 80a:05004; Relations between combinatorics and other parts of mathematics. 80a:05005; Studies in foundations and combinatorics. 80b:00004 and Problèmes combinatoires et théorie des graphes. 80c:05005

Combustion theory. See Lectures: Combustion theory. 80b:76001

Como. See Stochastic behavior in classical and quantum Hamiltonian systems. 80b:70004

Compact analytic varieties. See Variétés analytiques compactes. 80a:32002

Compagnie. See Information and systems. 80a:94001

Complementarity problems. See Numerical solution of highly nonlinear problems. 80b:65010

Complex analysis. ★Complex analysis. Joensuu, 1978. Proceedings of a Colloquium held at the University of Joensuu, Joensuu, August 24-27, 1978. Edited by Ilpo Laine, Olli Lehto and Tuomas Sorvali. Lecture Notes in Mathematics, 747. Springer-Verlag, Berlin-New York, 1979. xv+450 pp. ISBN 3-540-09553-5 (Editors) 80b:30002 30-06

See also Proceedings: Rolf Nevanlinna Symposium on Complex Analysis. 80c:30004; Romanian-Finnish Seminar on Complex Analysis. 80b:30002; Hyperbolic complex analysis. 80b:32001 and Analytic function methods in probability theory. 80b:60002

Complex analysis and manifolds. ★Комплексный анализ и многообразия. (Russian) [Complex analysis and manifolds] Edited by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii] and Ju. Ju. Trohimčuk. Izdanie Inst. Mat. Akad. Nauk Ukrain. SSR, Kiev, 1978. 167 pp. (Editors) 80d:00004 00A10 (32-06)

Complex control systems. ★Сложные системы управления. (Russian) [Complex control systems] Edited by A. I. Kuhtenko [O. I. Kuhtenko] and D. V. Lebedev. Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev, 1978. 91 pp. (Editors) 80d:93034 93B99 (93-06)

Complex fields. See Équations différentielles et systèmes de Pfaff dans le champ complexe. 80f:34003

Complex manifold techniques in theoretical physics. ★Complex manifold techniques in theoretical physics. Proceedings of a Workshop held at Lawrence, Kan., July 10-15, 1978. Edited by D. E. Lerner and P. D. Sommers. Research Notes in Mathematics, 32. Pitman (Advanced Publishing Program), San Francisco, Calif.-London, 1979. iv+242 pp. ISBN 0-273-08437-2 (Editors) 80m:81004 81-06

Complex programs. See Systems analysis applications in complex programs. 80j:93008

Complex systems. See Questions of modeling complex systems. 80j:90055

Complexity of algorithms. See Discrete systems, formal languages and complexity of algorithms. 80d:68003

Comstat. ★Comstat 1978. Proceedings of the Third Symposium in Computational Statistics, held in Leiden, 1978. Edited by L. C. A. Corsten and J. Hermans. Physica Verlag, Vienna, 1978. 540 pp. ISBN 3-7908-0196-8 (Editors) 80a:62004 62-06 (65U05)

Computat. Lectures. ★Computat. Lectures. I. Lectures in computational statistics. Edited by H. Skarabos and P. P. Sint. Physica Verlag, Würzburg, 1978. 132 pp. ISBN 3-7908-0197-6 (Editors) 80f:62003 62-06

Computation theory. See Fundamentals of computation theory. 80m:68007

Computational methods in linear algebra. ★Вычислительные методы линейной алгебры. (Russian) [Computational methods in linear algebra] Proceedings of the Fourth All-Union Conference held at the Computing Center of the Siberian Branch of the Academy of Sciences of the USSR, Novosibirsk, June 1976. Edited by G. I. Marčuk. Akad. Nauk SSSR Sibsk. Otdel., Vychisl. Centr., Novosibirsk, 1977. 164 pp. (Editors) 80j:65003 65-06 (65Fxx)

Computational statistics. See Computat. 80a:62004 and Computat. Lectures. 80f:62003

Computer arithmetic. See Proceedings: IEEE Symposium on Computer Arithmetic. 80c:68001

Computer design. See Mathematical theory in computer design. 80d:68005

Computer networks. See Rupińska, Maria. 80j:00010

Computer performance. ★Computer performance. Proceedings of the International

Symposium on Computer Performance Modeling, Measurement and Evaluation held at the IBM Thomas J. Watson Research Center, Yorktown Heights, N.Y., August 16-18, 1977. IFIP Working Group 7.3 Conference on Computer System Modeling. Edited by K. Mani Chandy and Martin Reiser. North-Holland Publishing Co., Amsterdam-New York, 1977. xiii+564 pp. ISBN 0-444-85038-4 (Editors) 80d:68001 68-06 (68A05, 68Jxx)

Computer science. See Mathematical foundations of computer science. 80b:68004; IEEE Symposium: Foundations of Computer Science. 80d:68008; Mathematical methods and computer science in mining. 80d:90009; Mathematical foundations for computer science. 80f:68003; Foundations of computer science. 80m:68006; Foundations of computer science. 80m:68006b; Graphs, data structures, algorithms. 80m:68008 and Jahrestagung: Gesellschaft für Informatik, 7. 80m:68072a

Computer simulation. See Current issues in computer simulation. 80m:68005

Computer system modeling. See Computer performance. 80d:68002

Computer systems. See Measuring, modelling and evaluating computer systems. 80c:68004

Computers. See Proceedings: Army Numerical Analysis and Computers Conference. 80m:65004

Computing. See Proceedings: Southeastern Conference on Combinatorics, Graph Theory and Computing. 80a:05004; Conference Record: Annual ACM Symposium on Theory of Computing. 80b:68003 and Proceedings: Manitoba Conference on Numerical Mathematics and Computing. 80g:65005

- Computing methods in applied sciences and engineering ★Computing methods in applied sciences and engineering, 1977. 1. Proceedings of the Third International Symposium, held at Versailles, December 5-9, 1977. Edited by R. Glowinski and J.-L. Lions. Lecture Notes in Mathematics, 704. Springer-Verlag, Berlin-New York, 1979. vi + 391 pp. ISBN 3-540-09123-8 (Editors) 80d:65010a 65-06
- See also Applied sciences, 80d:65010b
- Condensed matter physics See Solitons and condensed matter physics, 80b:81002
- Conference:
- ACM See ACM 78, 80j:60003
- Algebra ★Conference on Algebra. Held at the Technical University of Budapest, Budapest, October 12-13, 1978. Technical University of Budapest, Department of Mathematics, Budapest, 1978. i + 47 pp. (Editors) 80b:00003 00A10
- Algebraic, Arithmetic, and Categorical Methods in Computation Theory See Fundamentals of computation theory, 80m:68007
- Algebraic Theory of Semigroups See Algebraic theory of semigroups, 80d:20001
- Algebraic Topology See Algebraic topology, 80b:55002 and Algebraic topology, 80b:55002
- Applied Nonlinear Analysis See Applied nonlinear analysis, 80d:00003
- Applied Numerical Modelling See Applied numerical modelling, 80m:65001 and Applied numerical modelling, 80m:65002
- Army Mathematicians See Transactions: Conference of Army Mathematicians, 80a:00012; Transactions: Conference of Army Mathematicians, 80b:00005 and Transactions: Conference of Army Mathematicians, 80m:73002
- Army Numerical Analysis and Computers See Proceedings: Army Numerical Analysis and Computers Conference, 80m:65004
- Australian, Combinatorial Mathematics See Combinatorial mathematics, 80j:05002
- Bifurcation Theory and Applications in Scientific Disciplines See Bifurcation theory and applications in scientific disciplines, 80b:00007
- Branching Processes See Branching processes, 80c:60004
- Categorical Topology See Categorical topology, 80f:18002
- Combinatorial Mathematics ★Second International Conference on Combinatorial Mathematics. Held in New York, April 4-7, 1978. Edited by Allan Gewirtz and Louis V. Quintas. Annals of the New York Academy of Sciences, 319. New York Academy of Sciences, New York, 1979. x + 602 pp. (1 plate; 1 cassette tape). ISBN 0-89766-010-2 (Editors) 80j:05003 05-06
- Combinatorial Theory See Combinatorial mathematics, 80a:05001
- Constructive Approaches in Mathematical Models See Constructive approaches to mathematical models, 80c:00021
- Czechoslovak, Differential Equations and their Applications See Equadiff, 80c:34002
- Design of Experiments See Proceedings: Conference on the Design of Experiments, 80j:62003
- Deterministic Differential Equations and Stochastic Processes Models for Biological Systems ★Conference on Deterministic Differential Equations and Stochastic Processes Models for Biological Systems. Held in San Cristobal, N.M., August 1-5, 1977. Rocky Mountain J. Math. 9 (1979), no. 1. Rocky Mountain Mathematical Consortium, Provo, Utah, 1979. pp. 1-189. (Editors) 80d:92001 92-06
- Differential Geometrical Methods in Mathematical Physics See Differential geometrical methods in mathematical physics, 80b:81056
- Dynamic Programming and its Applications See Dynamic programming and its applications, 80d:90002
- Équations aux Dérivées Partielles See Équations aux dérivées partielles, 80c:35001
- Ergodic Theory See Ergodic theory, 80g:28002
- European Cooperation in Informatics See Information systems methodology, 80c:94001
- European, New Developments in the Applications of Bayesian Methods See New developments in the applications of Bayesian methods, 80a:62006
- Few Body Systems and Nuclear Forces See Few body systems and nuclear forces, 80m:81083a and Few body systems and nuclear forces, 80m:81083b
- Franco-Southeast Asian Mathematical See Proceedings: Franco-Southeast Asian Mathematical Conference, 80b:00009
- Free and Mixed Boundary Value Problems See Free and mixed boundary value problems, 80m:35001
- Functional Differential Equations and Approximation of Fixed Points See Functional differential equations and approximation of fixed points, 80g:00005
- Fundamentals of Computation Theory See Fundamentals of computation theory, 80m:68007
- Generalized Functions and Operational Calculus See Generalized functions and operational calculus, 80f:46003
- Georgia, Topology See Geometric topology, 80d:57002
- Graph Theory and Related Topics See Graph theory and related topics, 80c:05004
- Group Theory and Mathematical Physics See Group theoretical methods in physics, 80c:81002
- Higher Set Theory See Higher set theory, 80a:03005
- Hilbert Space Operators See Hilbert space operators, 80a:47001
- History of Analysis See History of analysis, 80a:01001
- Kington, Differential Games and Control Theory See Differential games and control theory, 80d:90001; Differential games and control theory, 80f:90006a and Control theory in mathematical economics, 80f:90006b
- Klagenfurt, Contributions to General Algebra See Contributions to general algebra, 80d:00007
- Lattice Dynamics See Proceedings: International Conference on Lattice Dynamics, 80f:82001
- MAFELAP See Mathematics of finite elements and applications, 80b:65005
- Manitoba, Numerical Mathematics and Computing See Proceedings: Manitoba Conference on Numerical Mathematics and Computing, 80g:65005
- Mathematical Analysis and its Applications See Proceedings: Conference on Mathematical Analysis and its Applications, 80c:00007
- Mathematical and Numerical Methods for Inverse and Improperly Posed Problems in Differential Equations See Inverse and improperly posed problems in differential equations, 80d:35004
- Mathematical Problems of Quantum Field Theory and Quantum Statistics ★International Conference on Mathematical Problems of Quantum Field Theory

and Quantum Statistics. Part I. Axiomatic quantum field theory. Held in Moscow, 1972. Edited by V. S. Vladimirov. Cover to cover translation of Trudy Mat. Inst. Steklov. 135 (1975). Proc. Steklov Inst. Math. 1978, no. 1. American Mathematical Society, Providence, R.I., 1978. iv + 260 pp. ISBN 0-8218-3035-X (Editors) 80m:81005a 81-06

★International Conference on Mathematical Problems of Quantum Field Theory and Quantum Statistics. Part II. Fields and Particles. Mathematical Questions of Quantum Statistics. Held in Moscow, 1972. Edited by V. S. Vladimirov. Cover to cover translation of Trudy Mat. Inst. Steklov. 136 (1975). Proc. Steklov Inst. Math. 1978, no. 2. American Mathematical Society, Providence, R.I., 1978. v + 450 pp. ISBN 0-8218-3036-8 (Editors) 80m:81005b 81-06 (00A10)

Maximum Entropy Formalism See Maximum entropy formalism, 80b:82001

Measure Theory Applications to Stochastic Analysis See Measure theory applications to stochastic analysis, 80c:60006

Multivariate Approximation Theory See Multivariate approximation theory, 80b:65006

NSF-CBMS, Geometric Methods in Mathematical Physics See Geometric methods in mathematical physics, 80g:83001

Numerical Analysis of Singular Perturbation Problems See Numerical analysis of singular perturbation problems, 80j:65004

Numerical Methods in Fluid Dynamics ★Sixth International Conference on Numerical Methods in Fluid Dynamics. Proceedings of the Conference held in Tbilisi, June 21-24, 1978. Edited by H. Cabannes, M. Holt and V. Rusanov. Lecture Notes in Physics, 90. Springer-Verlag, Berlin-New York, 1979. viii + 620 pp. ISBN 3-540-09115-7 (Editors) 80g:76002 76-06 (65-06)

Numerical Software—Needs and Availability See Numerical software—needs and availability, 80f:68009

Operator Algebras, Ideals, and their Applications in Theoretical Physics See Proceedings: International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics, 80a:47002

Operator Theory Summary of the Proceedings of a Conference on Operator Theory. J. Elisha Mitchell Sci. Soc. 94 (1978), no. 1, 27-29 (1979). (Editors) 80g:47001 47-06

Optimizing Methods in Statistics See Optimizing methods in statistics, 80d:62003

p-adic Analysis See Proceedings: Conference on p-adic Analysis, 80a:12021

Padé Approximation and its Applications See Padé approximation and its applications, 80m:41001

Partial Differential Equations and Geometry See Partial differential equations and geometry, 80d:58002

Prague Information Theory, Statistical Decision Functions, Random Processes See Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80a:62005; Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80d:62004a; Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80d:62004b and Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80d:60004

Probability in Banach Spaces See Probability in Banach spaces, 80d:60004

Probability Measures on Groups See Probability measures on groups, 80d:60005

Probability Theory on Vector Spaces See Probability theory on vector spaces, 80c:60008

Problem Analysis in Science and Engineering See Problem analysis in science and engineering, 80b:00004

Recent Theoretical Developments in Control See Recent theoretical developments in control, 80c:93004

Ring Theory See Ring theory, 80a:16001; Ring theory, 80g:16001 and Ring theory, 80m:16001

Scheveningen, Differential Equations See Differential equations and applications, 80b:35002

Southeastern, Combinatorics, Graph Theory and Computing See Proceedings: Southeastern Conference on Combinatorics, Graph Theory and Computing, 80a:05004

Soviet-Finnish Logic See Essays on mathematical and philosophical logic, 80f:03006

Stochastic Analysis See Stochastic analysis, 80b:60006

Stochastic Processes and their Applications Eighth Conference on Stochastic Processes and their Applications. Abstracts. Held in Canberra, July 6-10, 1978. Adv. in Appl. Probab. 11 (1979), no. 2, 257-309. (Editors) 80b:60005 60-06

Sussex, Topology of Low-Dimensional Manifolds See Topology of low-dimensional manifolds, 80g:57005

Systems Theory See Systems theory, 80m:93002

Topology See Proceedings: Topology Conference, 80i:54001a; Proceedings: Topology Conference, 80i:54001b; Proceedings: Topology Conference, 80i:54002a and Proceedings: Topology Conference, 80i:54002b

Topology and Measure See Proceedings: Conference Topology and Measure, 80d:28002a and Proceedings: Conference Topology and Measure, 80d:28002b

Volta Memorial See Stochastic behavior in classical and quantum Hamiltonian systems, 80b:70004

Young Scientists of the Institute of Cybernetics See Proceedings: Conference of Young Scientists of the Institute of Cybernetics, 80f:93004

#### Conference Record:

Annual ACM Symposium on Theory of Computing ★Conference Record of the Tenth Annual ACM Symposium on Theory of Computing. Papers presented at the Symposium held in San Diego, Calif., May 1-3, 1978. Association for Computing Machinery, New York, 1978. iv + 346 pp. (Editors) 80b:68003 68-06

#### Congress:

Cybernetics and Systems See Current topics in cybernetics and systems, 80b:68001

Dutch Mathematical ★14th Dutch Mathematical Congress. Held with the Bicentennial Congress of the Wiskundig Genootschap, at the Vrije Universiteit, Amsterdam, March 29-31, 1978. Nieuw Arch. Wisk. (3) 27 (1979), no. 1. Mathematisch Centrum, Amsterdam, 1979. pp. 1-152. (Editors) 80d:00005 00A10

Mathematicians See Proceedings: Congress of Mathematicians, 80m:00004



## Congress: (continued)

- Wiskundig Genootschap** See **Proceedings: Bicentennial Congress Wiskundig Genootschap**, 80d:00016a and **Proceedings: Bicentennial Congress Wiskundig Genootschap**, 80d:00016b
- Congress Numerantium** See **Proceedings: Manitoba Conference on Numerical Mathematics and Computing**, 80g:65005
- Conics** See **Apollonius**, 80g:01036a; **Apollonius**, 80g:01036b; **Apollonius**, 80g:01036c and **Apollonius**, 80g:01036d
- Constructive approaches to mathematical models** ★Constructive approaches to mathematical models. Proceedings of a Conference in honor of R. J. Duffin held in Pittsburgh, Pa., July 10-14, 1978. Edited by Charles Vernon Coffman and George J. Fix. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1979. xviii + 458 pp. ISBN 0-12-178150-X (Editors) 80k:00021 00A69
- Constructive mathematics** See **Studies in constructive mathematics and mathematical logic**, 80j:03005
- Constructive theory of functions and functional analysis** ★Конструктивная теория функций и функциональный анализ. (Russian) [The constructive theory of functions and functional analysis] Edited by A. N. Šerstnev. Kazan. Univ., Kazan, 1977. 58 pp. (Editors) 80d:00006 00A10 (46-06)
- Contemporary developments in continuum mechanics and partial differential equations** ★Contemporary developments in continuum mechanics and partial differential equations. Proceedings of the International Symposium held at the Instituto de Matemática, Universidade Federal do Rio de Janeiro, Rio de Janeiro, August 1-5, 1977. Edited by Guilherme de la Penha and Luiz Aduato J. Medeiros. North-Holland Mathematics Studies, 30. North-Holland Publishing Co., Amsterdam-New York, 1978. viii + 613 pp. ISBN 0-444-85166-6 (Editors) 80a:73003 73-06 (00A10)
- Continuous optimization** See **Symposium: Operations Research**, 80d:90004a
- Continuum mechanics** See **Contemporary developments in continuum mechanics and partial differential equations**, 80a:73003; **Problems of continuum mechanics**, 80d:73009; **Problems of electrodynamics and continuum mechanics**, 80g:73005; **Numerical methods in continuum mechanics**, 80k:76001 and **Methods in continuum mechanics**, 80m:76001
- Contributions to analysis** ★Contributions to analysis. International Symposium on Analysis held at the Eidgenössische Technische Hochschule, Zurich, April 10-15, 1978. In honour of Professor Albert Pfuger. Monographies de l'Enseignement Mathématique, 27. Université de Genève, L'Enseignement Mathématique, Geneva, 1979. 106 pp. (1 plate). (Editors) 80j:30002 30-06
- Contributions to general algebra** ★Contributions to general algebra. Proceedings of the Klagenfurt Conference held in Klagenfurt, May 25-28, 1978. Edited by Hermann Kautschitsch, Winfried B. Müller and Wilfried Nöbauer. Verlag Johannes Heyn, Klagenfurt, 1979. 429 pp. ISBN 3-85366-305-2 (Editors) 80d:00007 00A10 (08-06)
- Control** See **Recent theoretical developments in control**, 80d:93004 and **Probability processes and control**, 80d:93012
- Control of distributed parameter systems** ★Control of distributed parameter systems. Proceedings of the Second IFAC Symposium, held in Coventry, June 28-July 1, 1977. Edited by A. J. Pritchard and S. P. Banks. Published for the International Federation of Automatic Control (IFAC), Düsseldorf; by Pergamon Press, Oxford-New York-Toronto, Ont., 1978. xi + 541 pp. ISBN 0-08-022018-5 (Editors) 80c:93003 93-06 (93C20)
- Control and dynamic systems: advances in theory and application** ★Control and dynamic systems: advances in theory and application. Vol. 15. Edited by C. T. Leonides. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xviii + 360 pp. ISBN 0-12-012715-6 (Editors) 80j:93003 93-02
- Control of dynamical systems** ★Управление динамическими системами. (Russian) [Control of dynamical systems] Edited by V. V. Novozilov. Вопросы Механики и Процессы Управления. Вып. 2. [Questions of Mechanics and Control Processes. No. 2] Leningrad. Univ., Leningrad, 1978. 327 pp. (Editors) 80d:93008 93-06 (90Dxx)
- Control and information** See **Cybernetics—in the service of Communism**, 80f:00003
- Control systems** See **Learning algorithms in control systems and in data processing systems**, 80d:62002; **Complex control systems**, 80d:93034; **Mathematical methods of control of systems with distributed parameters**, 80d:93041 and **Software for control systems**, 80k:93002
- Control theory** See **Differential games and control theory**, 80d:90001 and **Differential games and control theory**, 80f:90006a
- Control theory in mathematical economics** ★Control theory in mathematical economics. Proceedings of the Third Kingston Conference, Part B, held at the University of Rhode Island, Kingston, R.I., June 5-8, 1978. Edited by Pan Tai Liu and Jon G. Sutin. Lecture Notes in Pure and Applied Mathematics, 47. Marcel Dekker, Inc., New York-Basel, 1979. viii + 241 pp. ISBN 0-8247-6852-3 (Editors) 80f:90006b 90-06 (93-06)
- Copenhagen** See **Algebraic geometry**, 80k:14001
- Correspondence:**  
Élie Cartan and Albert Einstein. See Cartan, Élie; et al., 80m:01030  
N. N. Lusin and A. Denjoy. N. N. Lusin's letters to A. Denjoy. (Russian) With an introduction and notes by Pierre Dugac. Translated from the French by F. A. Medvedev. *Istor.-Mat. Issled.* No. 23 (1978), 314-348, 359. (Esther R. Phillips) 80c:01008 01A60
- Cortina d'Ampezzo** See **Instabilities in dynamical systems**, 80k:70002
- Corvallis, Ore.** See **Automorphic forms, representations and L-functions**, 80g:10002a and **Automorphic forms, representations and L-functions**, 80g:10002b
- Countable product spaces** See **Family of countable product spaces**, 80c:54002
- Coventry** See **Control of distributed parameter systems**, 80c:93003
- Current issues in computer simulation** ★Current issues in computer simulation. Edited by Nabil R. Adam and Ali Dogramaci. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1979. xviii + 292 pp. ISBN 0-12-044120-9 (Editors) 80m:68085 68Jxx (68-06, 90Bxx)
- Current problems of geometry and its applications** ★Актуальные проблемы геометрии и ее приложений. (Russian) [Current problems of geometry and its applications] Edited by N. M. Mas'kin. *Cuac.* *Gov. Univ., Cheboksary*, 1975. 108 pp. (Editors) 80k:53001 53-06
- Current problems in mathematics** ★Современные проблемы математики. Том 12. (Russian) [Current problems in mathematics. Vol. 12] Edited by R. V. Gamkrelidze.

Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR Vsesojuz. Inst. Nauch. Tehn. Informacii, Moscow, 1979. 239 pp. (loose errata). (Editors) 80d:00008 00A10 (14-06)

**Current topics in cybernetics and systems** ★Current topics in cybernetics and systems. Proceedings of the Fourth International Congress of Cybernetics and Systems, held in Amsterdam, August 21-25, 1977. Edited by J. Rose. Springer-Verlag, Berlin-New York, 1978. x + 409 pp. ISBN 3-540-08977-2 (Editors) 80a:68001 68-06 (90-06, 92-06, 93-06, 94-06)

**Current trends in the theory of fields** ★Current trends in the theory of fields. Symposium in honor of Paul A. M. Dirac held at Florida State University, Tallahassee, Fla., April 6-7, 1978. Edited by J. E. Lannutti and P. K. Williams. AIP Conference Proceedings, 48. Particles and Fields Subseries, 15. American Institute of Physics, New York, 1978. xii + 178 pp. (6 plates). ISBN 0-88318-147-9 (Editors) 80c:81002 81-06

**Curve estimation** See **Smoothing techniques for curve estimation**, 80m:62002

**Cybernetic systems** See **Self-organization of cybernetic systems**, 80a:93014

**Cybernetics** See **Questions of engineering cybernetics**, 80a:93176a; **Progress in cybernetics and systems research**, 80c:68005; **Mathematical methods of cybernetics**, 80d:00013; **Proceedings: Conference of Young Scientists of the Institute of Cybernetics**, 80f:93004; **Questions of mathematical cybernetics and applied mathematics**, 80g:93002 and **Physico-technological questions in cybernetics**, 80j:90004a

**Cybernetics—in the service of Communism** ★Кибернетика—на службу коммунизму. Том 9: Управление и информация. (Russian) [Cybernetics—in the service of Communism. Vol. 9: Control and information] Edited by A. I. Berg. "Énergija", Moscow, 1978. 238 pp. (Editors) 80f:00003 00A10 (94-06)

**Cybernetics and systems** See **Current topics in cybernetics and systems**, 80a:68001

**Data bases** See **Logic and data bases**, 80f:68009

**Data processing systems** See **Learning algorithms in control systems and in data processing systems**, 80d:62002

**Data structures** See **Foundations of computer science**, 80m:68006a and **Graphs, data structures, algorithms**, 80m:68008

**Debreceen** See **Analytic function methods in probability theory**, 80m:60002

**Decision making** See **Game theory questions of decision making**, 80d:90092 and **Combinatorial algorithms for optimal decision making**, 80j:90002

**Dédication du fascicule à Claude Chabauty à l'occasion de sa retraite** Dédication du fascicule à Claude Chabauty à l'occasion de sa retraite. *Ann. Inst. Fourier (Grenoble)* 29 (1979), no. 1, iv-vi (1 plate). (Editors) 80a:01035 01A70

**Denver, Colo.** See **Some mathematical questions in biology**, 80a:92005

**Design of experiments** See **Proceedings: Conference on the Design of Experiments**, 80j:62003

**Developments in statistics** ★Developments in statistics. Vol. 2. Edited by Paruchuri R. Krishnaiah. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xiii + 322 pp. ISBN 0-12-426602-9 (Editors) 80j:62002 62-06 (60-06)

## Dictionary:

**Computer and automated control systems terminology** See **Glossary of English and Russian computer and automated control systems terminology**, 80c:68001

**Computer networks (Polish-English)** See **Rupinska, Maria**, 80j:00010

**Computers** See **Spencer, Donald D.**, 80m:68001

**German-Polish** ★Mały słownik techniczny. Niemiecko-polski i polsko-niemiecki. (Polish) [Concise technical dictionary. German-Polish and Polish-German] Edited by Małgorzata Sokółowska. Fourth unaltered edition. Wydawnictwa Naukowo-Techniczne (WNT), Warsaw, 1978. viii + 131 + viii + 155 pp. (Editors) 80m:00007 00A20

**Logical terms and symbols** See **Greenstein, Carol Horn**, 80b:03010

**Microprocessors** ★Short microprocessor dictionary. In English, Czech, German, Hungarian, Polish and Russian. With introductions in Russian and Polish. Prace IPI PAN [ICS PAS Reports], 324. Polskiej Akademii Nauk, Instytut Podstaw Informatyki, Warsaw, 1978. 59 pp. (J. S. Joel) 80j:00011 00A20 (68-XX)

**Physics** See **Thewlis, J.**, 80b:00002

**Scientific terminology (Spanish)** Scientific terminology: Mathematics (continued). (Spanish) *Rev. Real Acad. Cienc. Exact. Fis. Natur. Madrid* 72 (1978), no. 1, 181-186. (Editors) 80c:00006 00A20 (62-01)

**Didaktik der Mathematik** ★Didaktik der Mathematik. Edited by Hans-Georg Steiner. Wege der Forschung, CCCLXI. Wissenschaftliche Buchgesellschaft, Darmstadt, 1978. xlviii + 478 pp. ISBN 3-534-06005-9 (Editors) 80a:00004 00A10

**Differentiable functions** See **Theory and applications of differentiable functions of several variables**, 80d:90022 and **Studies in the theory of differentiable functions of several variables and its applications**, 80c:46001

**Differential equations** See **Numerical treatment of differential equations in applications**, 80a:65014; **Equadiff**, 80c:34002; **Studies in functional analysis and differential equations**, 80d:00020; **Studies in some questions of the constructive theory of functions and differential equations**, 80d:00021; **Elliptische Differentialgleichungen**, 80d:35003; **Inverse and improperly posed problems in differential equations**, 80d:35004; **Conference: Deterministic Differential Equations and Stochastic Processes Models for Biological Systems**, 80d:92001; **Équations différentielles et systèmes de Pfaff dans le champ complexe**, 80f:34003 and **Proceedings: Seminar on Differential Equations**, 80c:34002

**Differential equations and applications** ★Differential equations and applications. Proceedings of the Third Scheveningen Conference on Differential Equations, held at Scheveningen, August 29-September 2, 1977. Edited by Wiktor Eckhaus and Eduard M. de Jager. North-Holland Mathematics Studies, 31. North-Holland Publishing Co., Amsterdam-New York, 1978. viii + 264 pp. ISBN 0-444-85185-2 (Editors) 80a:35002 35-06

**Differential equations in the complex domain** ★Differential equations in the complex domain. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, September 11-13, 1978. Sūrikaiseikenkyūsho Kōkyūroku No. 351 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-84. (Editors) 80f:34002 34-06 (32-06)

**Differential games and control theory** ★Differential games and control theory. II. Proceedings of the Second Kingston Conference held at University of Rhode Island, Kingston, R.I., June 7-10, 1976. Edited by Emilio O. Roxin, Pan Tai Liu, and Robert L.

- Sternberg. Theme: Stochastic problems and applications. Lecture Notes in Pure and Applied Mathematics, 30. Marcel Dekker, Inc., New York-Basel, 1977. ix + 485 pp. ISBN 0-8247-6549-4 (Editors) **80a:90001** 90-06 (90D25, 93E05)
- ★ Differential games and control theory. III. Proceedings of the Third Kingston Conference, Part A, held at the University of Rhode Island, Kingston, R.I., June 5-8, 1978. Edited by Pan Tai Liu and Emilio Roxin. Lecture Notes in Pure and Applied Mathematics, 44. Marcel Dekker, Inc., New York-Basel, 1979. vii + 244 pp. ISBN 0-8247-6845-0 (Editors) **80a:90006a** 90-06 (93-06)
- Differential geometrical methods in mathematical physics ★ Differential geometrical methods in mathematical physics. II. Proceedings of a Conference held at the University of Bonn, Bonn, July 13-16, 1977. Edited by Konrad Bleuler, Herbert Rainer Petry and Axel Reetz. Lecture Notes in Mathematics, 676. Springer-Verlag, Berlin-New York, 1978. vi + 626 pp. ISBN 3-540-08935-7 (Editors) **80b:81056** 81C99 (58-06)
- Differential geometry See Beiträge: Differentialgeometrie, **80b:58001** and Beiträge: Differentialgeometrie, **80j:58006a**
- Differential and integral equations ★ Дифференциальные и интегральные уравнения. Вып. 4. (Russian) [Differential and integral equations. No. 4] Edited by V. V. Vasil'ev. Irkutsk. Gos. Univ., Irkutsk, 1976. 310 pp. (Editors) **80i:00004** 00A10
- ★ Дифференциальные и интегральные уравнения. Вып. 1. (Russian) [Differential and integral equations. No. 1] Edited by P. V. Coi and N. R. Radzabov. Tadizik. Gos. Univ., Dushanbe, 1977. 151 pp. (Editors) **80k:35004** 35-06
- Diffraction and propagation of waves See Problems in the diffraction and propagation of waves, **80f:78002**
- Digital processing and transmission of data and control of processes by means of computers ★ Prelucrarea și transmiterea numerică a datelor și conducerea proceselor cu ajutorul calculatoarelor. (Romanian) [Digital processing and transmission of data and control of processes by means of computers] Edited by Gh. Cartianu and Edmond Nicolau. Probleme de Automatizare [Problems of Automation], 10. Editura Academiei Republicii Socialiste România, Bucharest, 1978. 269 pp. (Editors) **80c:90113a** 68A05 (90C50, 94A05)
- Dijon See Journées Singulières, **80e:58001**
- Diophantine problems ★ Diophantine problems. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, June 19-21, 1978. Sūrikaiseikenyūsho Kōkyūroku No. 334 (1978). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1978. pp. i-ii and 1-97. (Editors) **80e:10006** 10-06 (10Fxx)
- Direct and inverse problems for partial differential equations and their applications ★ Прямые и обратные задачи для дифференциальных уравнений с частными производными и их приложения. (Russian) [Direct and inverse problems for partial differential equations and their applications] Edited by M. S. Salakhitdinov. Izdat. "Fan", Uzbek. SSR, Tashkent, 1978. 188 pp. (Editors) **80d:35002** 35-06
- Discrete linear stochastic systems See Self-tuned regulation of discrete linear stochastic systems, **80j:93149**
- Discrete mathematics See Colloque: Mathématiques Discrètes: Codes et Hypergraphes, **80f:05002** and Tagung: Diskrete Mathematik und ihre Anwendungen in der Mathematischen Kybernetik, **80j:68006**
- Discrete optimization See Symposium: Operations Research, **80d:90004b**
- Discrete systems, formal languages and complexity of algorithms ★ Дискретные системы, формальные языки и сложность алгоритмов. (Russian) [Discrete systems, formal languages and complexity of algorithms] Edited by D. V. Speranskii and V. A. Lipskaja. Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev, 1978. 95 pp. (Editors) **80d:68003** 68-06
- Distributed parameter systems See Control of distributed parameter systems, **80c:93003**
- Distributed process control system See Special issue: Distributed process control system, **80j:93004**
- Donetsk See Metric questions of the theory of functions and mappings, **80c:30023** and Questions in the metric theory of mappings and its application, **80j:30004**
- Duality and complementarity in mechanics of solids ★ Duality and complementarity in mechanics of solids. School-Conference on Duality in Problems of the Mechanics of Deformable Bodies held in Jablonna, September 19-24, 1977. Edited by Adam Borkowski. Zakład Narodowy im. Ossolińskich—Wydawnictwo Polskiej Akademii Nauk (Ossolineum), Wrocław, 1979. 481 pp. ISBN 83-04-00189-6 (Editors) **80k:49001** 49-06 (73-06)
- Durham See Applications of sheaves, **80j:18001** and Homological group theory, **80m:20001**
- Dynamic programming and its applications ★ Dynamic programming and its applications. Proceedings of the International Conference held at the University of British Columbia, Vancouver, B.C., April 14-16, 1977. Edited by Martin L. Puterman. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1978. xv + 410 pp. ISBN 0-12-568150-X (Editors) **80d:90002** 90-06 (90C39)
- Dynamic systems See Control and dynamic systems: advances in theory and application, **80j:93003**
- Dynamical systems See Instabilities in dynamical systems, **80k:70002**
- Dynamical systems and applications of Boltzmann equations to astrophysics ★ Dynamical systems and applications of Boltzmann equations to astrophysics. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, October 31-November 2, 1977. Sūrikaiseikenyūsho Kōkyūroku No. 315 (1977). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1977. pp. i-ii and 1-218. (Editors) **80c:85001** 85-06
- Dynamics of multibody systems ★ Dynamics of multibody systems. Proceedings of an IUTAM Symposium held in Munich, August 29-September 3, 1977. Edited by Kurt Magnus. Springer-Verlag, Berlin-New York, 1978. xvi + 376 pp. ISBN 3-540-08623-4 (Editors) **80b:70001** 70-06
- École d'Été: Calcul des Probabilités de Saint-Flour ★ École d'Été de Calcul des Probabilités de Saint-Flour. The 8th École d'Été held July 5-22, 1978. Ann. Sci. Univ. Clermont Math. No. 17 (1979). Université de Clermont-Ferrand, Clermont-Ferrand, 1979. ii + 104 pp. (Editors) **80d:60003** 60-06
- Probabilités de Saint-Flour ★ École d'Été de Probabilités de Saint-Flour. VII—1977. Held August 21-September 7, 1977. Edited by P. L. Hennequin. Lecture Notes in Mathematics, 678. Springer-Verlag, Berlin-New York, 1978. ix + 379 pp.
- ISBN 3-540-08938-1 (Editors) **80a:60005** 60-06 (62-06)
- École de Printemps: Informatique Théorique See Séries formelles en variables non commutatives et applications, **80a:68005**
- Econometrics See Colloque: CNRS, Économétrie des Données Individuelles Temporelles, **80a:62003** and Symposium: Operations Research, **80d:90004c**
- Economic planning See Application of mathematical methods in economic investigations and planning, **80d:90088**
- Economic problems See Mathematical methods of solution of economic problems, **80m:90003**
- Economic statistics See Proceedings: Business and Economic Statistics Section, American Statistical Association, **80b:62003**
- Economic systems See Mathematical modeling of economic systems, **80m:90004**
- Edinburgh See Nonlinear analysis and mechanics: Heriot-Watt Symposium, **80d:00015**
- Eigenvalue problems See Numerische Behandlung von Eigenwertaufgaben, **80i:65002**
- Albert Einstein: The human side ★ Albert Einstein: the human side. New glimpses from his archives. Selected and edited by Helen Dukas and Banesh Hoffmann. Princeton University Press, Princeton, N.J., 1979. viii + 167 pp. (1 plate). ISBN 0-691-08231-6 (M. Kline) **80g:01031** 01A70 (83-03)
- Albert Einstein in Berlin 1913-1933 ★ Albert Einstein in Berlin 1913-1933. Teil I. Darstellung und Dokumente. With an introduction by Hans-Jürgen Treder. Edited by Christa Kirsten and Hans-Jürgen Treder. Studien zur Geschichte der Akademie der Wissenschaften der DDR, 6. Akademie-Verlag, Berlin, 1979. 287 pp. (D. J. Strüik) **80k:01060a** 01A70
- ★ Albert Einstein in Berlin 1913-1933. Teil II. Spezialinventar. Register of Einstein documents in the archives of the DDR; register of minutes of meetings of the Berlin Academy of Science; index of Academy papers and Berlin patents by A. Einstein. Edited by Christa Kirsten and Hans-Jürgen Treder. Studien zur Geschichte der Akademie der Wissenschaften der DDR, 7. Akademie-Verlag, Berlin, 1979. 295 pp. (D. J. Strüik) **80k:01060b** 01A70
- Ekonom. I Mat. Metody (Supplement) See Mathematical methods of solution of economic problems, **80m:90003**
- Elasticity See Investigation of questions in the theory of elasticity and plasticity, **80b:73001** and Studies in elasticity and plasticity, **80d:73004**
- Elasticity and inelasticity ★ Упругость и неупругость. Вып. 5. (Russian) [Elasticity and inelasticity. No. 5] Collection of the results of a Scientific Research Seminar of the Department of Elasticity Theory directed by A. A. Il'jūin. Edited by P. M. Ogibalov. Moskov. Gos. Univ., Moscow, 1978. 231 pp. (Editors) **80d:73005** 73-06
- Electrical circuits See Mathematical modeling and the theory of electrical circuits, **80k:94033a**
- Electrodynamics See Problems of electrodynamics and continuum mechanics, **80g:73005**
- Electromagnetic scattering ★ Electromagnetic scattering. Edited by Piergiorgio L. E. Usleghi. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1978. x + 801 pp. ISBN 0-12-709650-7 (Editors) **80f:78001** 78-06
- Elementary particles See Symposium: Mathematical Methods in the Theory of Elementary Particles, **80b:81003a** and Symposium: Mathematical Methods in the Theory of Elementary Particles, **80b:81003b**
- Elliptische Differentialgleichungen ★ Elliptische Differentialgleichungen. Lectures from a Meeting held in Rostock, October 10-16, 1977. Wilhelm-Pieck-Universität, Rostock, 1978. 279 pp. (Editors) **80d:35003** 35-06
- Encyclopedia: Statistics ★ International encyclopedia of statistics. Vol. 1. Edited by William H. Kruskal and Judith M. Tanur. With a foreword by David L. Sills. With a preface by W. Allen Wallis. Free Press [Macmillan Publishing Co., Inc.], New York; Collier-Macmillan Publishers, London, 1978. xxi + 666 pp. ISBN 0-02-917970-X (Editors) **80b:62001a** 62-XX
- ★ International encyclopedia of statistics. Vol. 2. Edited by William H. Kruskal and Judith M. Tanur. Free Press [Macmillan Publishing Co., Inc.], New York; Collier-Macmillan Publishers, London, 1978. pp. 667-1350. ISBN 0-02-917980-7 (Editors) **80b:62001b** 62-XX
- Energy methods in finite element analysis ★ Energy methods in finite element analysis. Dedicated to the memory of Professor B. Fraeijs de Veubeke. Edited by R. Glowinski, Ervin Y. Rodin and O. C. Zienkiewicz. Wiley Series in Numerical Methods in Engineering. A Wiley-Interscience Publication. John Wiley & Sons, Ltd., Chichester, 1979. xviii + 361 pp. ISBN 0-471-99723-4 (Editors) **80d:73100** 73K25 (49H05, 65N30)
- Engineering See Computing methods in applied sciences and engineering, **80d:65010a** and Applied sciences, **80d:65010b**
- Engineering cybernetics ★ Техническая кибернетика. Том 10. (Russian) [Engineering cybernetics. Vol. 10] Edited by B. N. Petrov and Z. B. Golemo. Итоги Наук и Техники. [Progress in Science and Technology] Akad. Nauk SSSR Inst. Nauch. Tehn. Informacii, Moscow, 1978. 321 pp. (Editors) **80d:93009** 93-06
- Entropy See Maximum entropy formalism, **80b:82001**
- Environmental systems See Modeling, identification and control in environmental system, **80a:92004**
- Equadiff ★ Equadiff IV. Proceedings of the Czechoslovak Conference on Differential Equations and their Applications held in Prague, August 22-26, 1977. Edited by Jiří Fábry. Lecture Notes in Mathematics, 703. Springer-Verlag, Berlin-New York, 1979. xix + 441 pp. ISBN 3-540-09116-5 (Editors) **80c:34002** 34-06
- Équations aux dérivées partielles ★ Équations aux dérivées partielles. Proceedings of a Conference held at Saint-Jean-de-Monts, June 1-4, 1977. Edited by Pham The Lai. Lecture Notes in Mathematics, 660. Springer-Verlag, Berlin-New York, 1978. vi + 216 pp. ISBN 3-540-08913-6 (Editors) **80c:35001** 35-06
- Équations différentielles et systèmes de Pfaff dans le champ complexe ★ Équations différentielles et systèmes de Pfaff dans le champ complexe. Exposés of a Séminaire held at the Institut de Recherche Mathématique Avancée, Strasbourg, 1975. Edited by Raymond Gérard and Jean-Pierre Ramis. Lecture Notes in Mathematics, 712. Springer-Verlag, Berlin-New York, 1979. iii + 364 pp. ISBN 3-540-09250-1 (Editors) **80f:34003** 34-06 (14D05, 35-06)



- Equivariant homotopy theory** ★Equivariant homotopy theory. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, on November 30–December 2, 1977. *Sūrikaiseikikenkyūsho Kōkyūroku* No. 319 (1978). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1978. pp. i–iii and 1–123. (Editors) **80e:55002** 55–06
- Ergodic theory** ★Ergodic theory. Proceedings of a Conference held in the Mathematisches Forschungsinstitut, Oberwolfach, June 11–17, 1978. Edited by Manfred Denker and Konrad Jacobs. Lecture Notes in Mathematics, 729. *Springer-Verlag, Berlin-New York*, 1979. xii + 209 pp. (1 plate). *ISBN 3-540-09517-9* (Editors) **80e:28002** 28–06
- See also *Studies in probability and ergodic theory*, **80b:28001**
- Erlangen** See *Graphs, data structures, algorithms*, **80m:68008**
- Esquisses Mathématiques** ★Esquisses mathématiques. No. 30. *Université d'Amiens, U.E.R. de Mathématiques, Amiens*, 1978. 185 pp. (not consecutively paged). (Editors) **80a:00005** 00A10
- Essays**
- Philosophy of Charles Peirce** ★Essays on the philosophy of Charles Peirce. *Synthese* 41 (1979), no. 1, 1–114. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1979. pp. 1–116. (Editors) **80b:03005** 03–03 (03A05)
- Essays on mathematical and philosophical logic** ★Essays on mathematical and philosophical logic. Proceedings of the Fourth Scandinavian Logic Symposium and of the First Soviet-Finnish Logic Conference, Jyväskylä, June 29–July 6, 1976. Edited by Jaakko Hintikka, Ilkka Niiniluoto and Esa Saarinen. *Synthese Library*, 122. D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1979. viii + 462 pp. *ISBN 90-277-0879-7* (Editors) **80f:03006** 03–06
- Étude numérique des grands systèmes** ★Étude numérique des grands systèmes. Proceedings of a Symposium held at Novosibirsk, June 9–12, 1976. Edited by J.-L. Lions and G. I. Marchouk [G. I. Marčuk]. *Méthodes Mathématiques de l'Informatique*, 7. Dunod, Paris, 1978. ix + 277 pp. *ISBN 2-04-010527-1* (Editors) **80a:65011** 65–06
- Euclidean spaces** See *Harmonic analysis in Euclidean spaces*, **80f:42001a** and *Harmonic analysis in Euclidean spaces*, **80f:42001b**
- Evanson, III** See *Stochastic analysis*, **80b:60006** and *Modern problems in elastic wave propagation*, **80d:73008**
- Evolving systems** See *Modeling and control in evolving systems*, **80d:93011**
- Extremal methods and systems analysis** ★Extremal methods and systems analysis. An International Symposium on the occasion of Abraham Charnes' sixtieth birthday held at the University of Texas, Austin, Tex., September 13–15, 1977. Edited by Anthony V. Fiacco and Kenneth O. Kortanek. Lecture Notes in Economics and Mathematical Systems, 174. *Springer-Verlag, Berlin-New York*, 1980. xi + 545 pp. *ISBN 3-540-09730-9* (Editors) **80m:00011** 00A69 (90–06)
- Extremal problems in function theory** ★Extremal problems in function theory. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, February 8–10, 1978. *Sūrikaiseikikenkyūsho Kōkyūroku* No. 323 (1978). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1978. pp. i–ii and 1–172. (Editors) **80e:30002** 30–06 (30C70, 30D55)
- Fachtagung:**
- Gesellschaft für Informatik, Programmiersprachen** See *Programmierprachen*, **80f:68010**
- Graphentheoretische Konzepte in der Informatik** See *Graphs, data structures, algorithms*, **80m:68008**
- Family of countable product spaces** ★The family of countable product spaces. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, June 6–9, 1978. *Sūrikaiseikikenkyūsho Kōkyūroku* No. 330 (1978). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1978. pp. i–ii and 1–27. (Editors) **80e:54002** 54–01 (54B10)
- Festakt und Tagung aus Anlass des 200. Geburtstages von Carl Friedrich Gauss** ★Festakt und Tagung aus Anlass des 200. Geburtstages von Carl Friedrich Gauss. Held in Berlin, April 22–23, 1977. Edited by Horst Sachs, Wolfgang Eckart and Gert Kneis. Abhandlungen der Akademie der Wissenschaften der DDR, Abteilung Mathematik, Naturwissenschaften, Technik, 1978, 3. *Akademie-Verlag, Berlin*, 1978. 160 pp. (Editors) **80e:81001** 01–06 (01A70)
- Festschrift:**
- Gauss, Carl Friedrich** ★Festschrift zum 200. Geburtstag von Carl Friedrich Gauss. *Gauss-Ges. Göttingen Mitt.* No. 14 (1977). *Gauss-Gesellschaft e.V., Göttingen*, 1977. 139 pp. (Editors) **80e:01001** 01–06 (01A70)
- Wu, Ta You** ★The Ta-You Wu Festschrift: Science of matter. Presented in honor of the 70th birthday of Ta You Wu. Edited by Shigeji Fujita. With a biographical sketch of Ta You Wu. *Gordon and Breach Science Publishers, New York-Paris-London*, 1978. xi + 334 pp. (1 plate). *ISBN 0-677-13650-1* (Editors) **80f:81006** 81–06
- Few body systems and nuclear forces** ★Few body systems and nuclear forces. I. Proceedings of the Eighth International Conference held in Graz, August 24–30, 1978. Edited by Harald F. K. Zingl, Michael I. Haftel and Hubert Zankel. Lecture Notes in Physics, 82. *Springer-Verlag, Berlin-New York*, 1978. xix + 442 pp. *ISBN 3-540-08917-9* (Editors) **80m:81083a** 81F20
- ★Few body systems and nuclear forces. II. Proceedings of the Eighth International Conference held in Graz, August 24–30, 1978. Edited by Harald F. K. Zingl, Michael I. Haftel and Hubert Zankel. Lecture Notes in Physics, 87. *Springer-Verlag, Berlin-New York*, 1978. x + 545 pp. *ISBN 3-540-09099-1* (Editors) **80m:81083b** 81F20
- Feynman path integrals** ★Feynman path integrals. Proceedings of the International Colloquium held in Marseille, May 22–26, 1978. Edited by S. Albeverio, Ph. Combe, R. Hoegh-Krohn, G. Rideau, M. Sirugue-Collin, M. Sirugue and R. Stora. Lecture Notes in Physics, 106. *Springer-Verlag, Berlin-New York*, 1979. xi + 451 pp. *ISBN 3-540-09532-2* (Editors) **80i:81014** 81C35
- Field theory** See *Current trends in the theory of fields*, **80e:81002**
- Fields and particles** See *Conference: Mathematical Problems of Quantum Field Theory and Quantum Statistics*, **80m:81005b**
- Finite difference method** See *Use of finite element method and finite difference method in geophysics*, **80e:65007**

- Finite element analysis** See *Energy methods in finite element analysis*, **80d:73100**
- Finite element methods** See *Use of finite element method and finite difference method in geophysics*, **80e:65007**
- Finite elements** See *Mathematics of finite elements and applications*, **80e:65005**
- Finite groups** See *Algebraic numbers and finite groups*, **80e:00005**; *Proceedings: Symposium on Modular Representations of Finite Groups*, **80d:20002** and *Theory of finite groups*, **80g:20003**
- Fixed point algorithms** See *Numerical solution of highly nonlinear problems*, **80b:65010**
- Fluid dynamics** See *Numerical methods in fluid dynamics*, **80e:76002**; *Mixed boundary value problems in fluid dynamics*, **80f:76001**; *Statistical fluid dynamics*, **80f:76002** and *Conference: Numerical Methods in Fluid Dynamics*, **80f:76002**
- Fluid mechanics** See *Annual review of fluid mechanics*, **80d:76001** and *Tagung: Strömungsmechanik*, **80m:76002**
- Foliations** See *Topology of foliations*, **80g:57004**
- Fonctions de plusieurs variables complexes** ★Fonctions de plusieurs variables complexes. III. Séminaire François Norguet, October 1975–June 1977. Edited by François Norguet. Lecture Notes in Mathematics, 670. *Springer-Verlag, Berlin-New York*, 1978. xii + 394 pp. *ISBN 3-540-08927-6* (Editors) **80g:32001** 32–06
- Fontainebleau** See *New developments in the applications of Bayesian methods*, **80e:62006**
- Formal description of programming concepts** ★Formal description of programming concepts. Proceedings of the IFIP Working Conference, St. Andrews, N.B., August 1–5, 1977. Edited by Erich J. Neuhold. *North-Holland Publishing Co., Amsterdam-New York*, 1978. xviii + 648 pp. *ISBN 0-444-85107-0* (Editors) **80d:68004** 68–06 (68Cxx, 68H05)
- Formal languages** See *Discrete systems, formal languages and complexity of algorithms*, **80d:68003**
- Formal series** See *Séries formelles en variables non commutatives et applications*, **80e:68005**
- Fortschritte in der mathematischen Optimierung** ★Fortschritte in der mathematischen Optimierung. Meeting held at Humboldt University, Berlin, May 29–31, 1978. Dedicated to F. Nožička. Edited by K. Lommatzsch. With English and Russian summaries. Seminarberichte, 15. *Humboldt Universität, Sektion Mathematik, Berlin*, 1978. i + 117 pp. (Editors) **80d:90003** 90–06 (90C10)
- Foundations of computer science** ★Foundations of computer science. III. Part 1. Automata, data structures, complexity. Third Advanced Course held in Amsterdam, August 21–September 1, 1978. Edited by J. W. de Bakker and J. van Leeuwen. Mathematical Centre Tracts, 108. *Mathematisch Centrum, Amsterdam*, 1979. iii + 112 pp. *ISBN 90-6196-176-9* (Editors) **80m:68006a** 68–06
- ★Foundations of computer science. III. Part 2. Languages, logic, semantics. Advanced Course held in Amsterdam, August 21–September 1, 1978. Edited by J. W. de Bakker and J. van Leeuwen. Mathematical Centre Tracts, 109. *Mathematisch Centrum, Amsterdam*, 1979. i + 164 pp. *ISBN 90-6196-177-7* (Editors) **80m:68006b** 68–06
- Fourier analysis and approximation theory** ★Fourier analysis and approximation theory. Vol. I. Proceedings of a Colloquium held in Budapest, August 16–21, 1976. Edited by G. Alexits and Pál Turán. *Colloquia Mathematica Societatis János Bolyai*, 19. *North-Holland Publishing Co., Amsterdam-Oxford-New York*, 1978. 458 pp. *ISBN 0-444-85197-6* (Editors) **80d:42001a** 42–06
- ★Fourier analysis and approximation theory. Vol. II. Proceedings of a Colloquium held in Budapest, August 16–21, 1976. Edited by G. Alexits and Pál Turán. *Colloquia Mathematica Societatis János Bolyai*, 19. *North-Holland Publishing Co., Amsterdam-Oxford-New York*, 1978. 461–926. *ISBN 0-444-85197-6* (Editors) **80d:42001b** 42–06
- Fracture mechanics** ★Fracture mechanics. Proceedings of the Symposium in Applied Mathematics of the American Mathematical Society and the Society for Industrial and Applied Mathematics, held in New York, March 28–29, 1978. Edited by Robert Burridge. *SIAM-AMS Proceedings*, XII. *American Mathematical Society, Providence, R.I.*, 1979. vi + 169 pp. *ISBN 0-8218-1332-3* (Editors) **80e:73064** 73M99
- Free and mixed boundary value problems** ★Free and mixed boundary value problems. Proceedings of a Conference held in Oberwolfach, April 16–22, 1978. Edited by Rainer Kress and Norbert Weck. *Methoden und Verfahren der Mathematischen Physik*, 18. *Verlag Peter D. Lang, Frankfurt*, 1979. iii + 212 pp. *ISBN 3-8204-6369-0* (Editors) **80m:35001** 35–06
- Function theory** See *Extremal problems in function theory*, **80e:30002**
- Functional analysis** ★Функциональный анализ. Вып. 12. (Russian) [Functional analysis. No. 12]. *Спектральная теория*. [Spectral theory] Edited by A. V. Strauss. *Ul'janovsk. Gos. Ped. Inst., Ul'janovsk*, 1979. 176 pp. (Editors) **80j:47001** 47–06 (46–06)
- See also *Constructive theory of functions and functional analysis*, **80d:00006**; *Methods of functional analysis in problems of mathematical physics*, **80d:00014**; *Studies in functional analysis and differential equations*, **80d:00020**; *Topics in functional analysis*, **80d:00023**; *Approximation theory and functional analysis*, **80i:41004**; *Séminaire: Analyse Fonctionnelle*, **80e:46002** and *Studies in functional analysis*, **80e:47001**
- Functional analysis and its applications** ★Функциональный анализ и его применение. Вып. 3. (Russian) [Functional analysis and its applications. No. 3]. Edited by F. G. Maksimov. *"Elm", Baku*, 1978. 184 pp. (Editors) **80d:00009** 00A10 (34–06)
- Functional differential equations** See *Qualitative research on stability of solutions of functional differential equations*, **80g:34001** and *Asymptotic behavior of solutions of functional differential equations*, **80j:34001**
- Functional differential equations and approximation of fixed points** ★Functional differential equations and approximation of fixed points. Proceedings of the Summer School and Conference held at the University of Bonn, Bonn, July 17–22, 1978. Edited by Heinz-Otto Peitgen and Hans-Otto Walther. Lecture Notes in Mathematics, 730. *Springer-Verlag, Berlin-New York*, 1979. xv + 503 pp. *ISBN 3-540-09518-7* (Editors) **80g:00005** 00A10 (34Kxx, 55–06, 55M20, 65H10)
- Functions of several variables** See *Studies in the theory of differentiable functions of several variables and its applications*, **80e:46001**
- Fundamentals of computation theory** ★Fundamentals of computation theory. Proceedings of the Conference on Algebraic, Arithmetic and Categorical Methods in Computation Theory held in Berlin/Wendisch-Rietz, September 17–21, 1979. Edited by Lothar Budach. *Mathematical Research*, 2. *Akademie-Verlag, Berlin*, 1979. 576 pp. (Editors) **80m:68007** 68–06
- Fuzzy reasoning** See *Special issue: Fuzzy reasoning*, **80e:00005**

Fuzzy set theory See *Advances in fuzzy set theory and applications*, 80b:00006

Game theory questions of decision making ★Теоретико-игровые вопросы принятия решений. (Russian) [Game theory questions of decision making] Edited by Nikolai Nikolaevich Vorob'ev. "Nauka", Leningrad. Otdel., Leningrad, 1978. 128 pp. (Editors) 80d:90892 90Dxx (90-02)

Game theory and related topics ★Game theory and related topics. Proceedings of the Seminar held at Bonn and Hagen, September 26-29, 1978. Edited by Otto Moeschlin and Diethard Pallaschke. North-Holland Publishing Co., Amsterdam-New York, 1979. ix + 399 pp. ISBN 0-444-85342-1 (Editors) 80j:90003 90-06 (90Dxx)

Game theory, social choice, and ethics ★Game theory, social choice, and ethics. Part I. Edited by Horace W. Brock. Theory and Decision 11(1979), no. 2. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1979. pp. 143-237. (Editors) 80j:90004a 90-06

★Game theory, social choice, and ethics. Part II. Edited by Horace W. Brock. Theory and Decision 11(1979), no. 3. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1979. pp. 239-337. (Editors) 80j:90004b 90-06

Gaußig See *Vorträge: Geometrie und Anwendungen*, 80d:51002

Generalized functions and operational calculus ★Generalized functions and operational calculus. Proceedings of a Conference held at Varna, September 29-October 6, 1978. Edited by I. Dimovski [Ivan H. Dimovski]. Publishing House of the Bulgarian Academy of Sciences, Sofia, 1979. 216 pp. (Editors) 80i:46003 46-06 (44-06, 47-06)

Generalized recursion theory ★Generalized recursion theory. II. Proceedings of the Second Symposium held at the University of Oslo, Oslo, June 13-17, 1977. Edited by Jens Erik Fenstad, R. O. Gandy and Gerald E. Sacks. Studies in Logic and the Foundations of Mathematics, 94. North-Holland Publishing Co., Amsterdam-New York, 1978. vii + 417 pp. ISBN 0-444-85163-1 (Editors) 80a:03004 03-06 (03Dxx)

Geometric methods in mathematical physics ★Geometric methods in mathematical physics. Proceedings of an NSF-CBMS Conference held at the University of Lowell, Lowell, Mass., March 19-23, 1979. Edited by G. Kaiser and J. E. Marsden. Lecture Notes in Mathematics, 775. Springer-Verlag, Berlin-New York, 1980. vii + 257 pp. ISBN 3-540-09742-2 (Editors) 80j:83001 83-06 (49H05, 73C50)

Geometric topology ★Geometric topology. Proceedings of the Georgia Topology Conference held in Athens, Ga., August 1-12, 1977. Edited by James C. Cantrell. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xiii + 698 pp. ISBN 0-12-158860-2 (Editors) 80d:57002 57-06

See also Algebraic and geometric topology, 80d:57001a and Algebraic and geometric topology, 80d:57001b

Geometrical probability and biological structures: Buffon's 200th anniversary ★Geometrical probability and biological structures: Buffon's 200th anniversary. Proceedings of the Buffon Bicentenary Symposium on Geometrical Probability, Image Analysis, Mathematical Stereology, and their Relevance to the Determination of Biological Structures, held in Paris, June 1977. Edited by Roger E. Miles and Jean Serra. Lecture Notes in Biomathematics, 23. Springer-Verlag, Berlin-New York, 1978. xii + 338 pp. ISBN 3-540-08856-3 (Editors) 80a:92003 92-06

Geometry ★Геометрия. Вып. 6. (Russian) [Geometry. No. 6] Edited by I. Ja. Bakel'man and V. T. Bazylev. Leningrad. Gosudarst. Ped. Inst. im. A. I. Gercena, Leningrad, 1977. 128 pp. (Editors) 80c:53002 53-06

See also Beiträge: Algebra and Geometrie, 80a:00003; Vorträge: Geometrie und Anwendungen, 80d:51002; Modern geometry, 80d:53001; Problems in geometry, 80d:53002; Partial differential equations and geometry, 80d:58002; Global analysis in geometry, 80f:58001; Algebra, Topology, Geometry, 80b:00001 and Current problems of geometry and its applications, 80b:53001

Geometry and global analysis ★Geometry and global analysis. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, December 18-21, 1978. Sūrikaiseikikenkyūsho Kōkyūroku No. 352 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-164. (Editors) 80j:59002 58-06 (14-06)

Geophysics See Numerical methods in mathematical physics, geophysics and optimal control, 80c:65006 and Use of finite element method and finite difference method in geophysics, 80c:65007

Ghent See *Modeling, identification and control in environmental systems*, 80a:92004

Global analysis See *Geometry and global analysis*, 80j:59002

Global analysis in geometry ★Global analysis in geometry. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, November 9-12, 1977. Sūrikaiseikikenkyūsho Kōkyūroku No. 321 (1978). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1978. pp. i-ii and 1-160. (Editors) 80f:58001 58-06

Global optimization See *Towards global optimisation*, 80a:49002

Glossary of English and Russian computer and automated control systems terminology ★Glossary of English and Russian computer and automated control systems terminology. General editor: Irene Agnew. Compiled by Vladimir Goldgor. Agnew Tech-Tran, Inc., Woodland Hills, Calif., 1978. v + 165 pp. (J. S. Joel) 80b:68001 68-XX (00A20)

Golden age of theoretical ecology: 1923-1940 ★The golden age of theoretical ecology, 1923-1940. A collection of works by V. Volterra, V. A. Kostitzin, A. J. Lotka and A. N. Kolmogoroff. Edited by Francesco M. Scudo and James R. Ziegler. Lecture Notes in Biomathematics, 22. Springer-Verlag, Berlin-New York, 1978. xi + 490 pp. ISBN 3-540-08769-9 (Editors) 80c:01021 01A75 (92-03)

Graph theory See *Proceedings: Southeastern Conference on Combinatorics, Graph Theory and Computing*, 80a:05004; *Problèmes combinatoires et théorie des graphes*, 80c:05005; *Combinatorial structures and graph theory*, 80f:05003; *Proceedings: Symposium on Graph Theory*, 80j:05055; *Topics in graph theory*, 80j:05056 and *Numerische Methoden bei graphentheoretischen und kombinatorischen Problemen*, 80m:05003

Graph theory and related topics ★Graph theory and related topics. Proceedings of the Conference in honour of Professor W. T. Tutte on the occasion of his sixtieth birthday, held at the University of Waterloo, Waterloo, Ont., July 5-9, 1977. Edited by John Adrian Bondy and U. S. R. Murty. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xxxii + 371 pp. ISBN 0-12-114350-3 (Editors) 80c:05004 05-06

Graphs, data structures, algorithms ★Graphs, data structures, algorithms. Proceedings of the Workshop WG 78 on Graphtheoretic Concepts in Computer Science (4. Fachtagung

über Graphentheoretische Konzepte in der Informatik), held near Erlangen, June 13-17, 1978. Edited by Manfred Nagl and Hans-Jürgen Schneider. Applied Computer Science. Berichte zur Praktische Informatik, 13. Carl Hanser Verlag, Munich-Vienna, 1979. 339 pp. ISBN 3-446-12748-8 (Editors) 80m:68006 68-06 (68E10)

Graz See *Few body systems and nuclear forces*, 80m:81083a and *Few body systems and nuclear forces*, 80m:81083b

Group theoretic methods in mathematical physics ★Теоретико-групповые методы в математической физике. (Russian) [Group-theoretic methods in mathematical physics] Edited by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii] and V. I. Fusičik. Izdanie Inst. Ma., Akad. Nauk Ukrain. SSR, Kiev, 1978. 187 pp. (Editors) 80d:00010 00A10 (22-0, 35-06, 81-06)

Group theoretical methods in physics ★Group theoretical methods in physics. Proceedings of the Seventh International Colloquium and Integrative Conference on Group Theory and Mathematical Physics held at the University of Texas, Austin, Tex., September 11-16, 1978. Edited by Wolf Beiglbock, Arno Böhm and Eiichi Takasugi. Lecture Notes in Physics, 94. Springer-Verlag, Berlin-New York, 1979. xiii + 540 pp. ISBN 3-540-09238-2 (Editors) 80i:81002 81-06 (17-06, 22-06, 58F06, 81C40, 81G40)

Group theory See *Problems of group theory and homological algebra*, 80g:00006 and *Homological group theory*, 80m:20001

Groupe d'Étude: Théorie des Stables ★Groupe d'Étude de Théories Stables. Ire année: 1977/78. Held at the Université Pierre et Marie Curie, Paris, 1977/78. Edited by Bruno Poizat. Secrétariat Mathématique, Paris, 1978. 104 pp. (not consecutively paged). ISBN 2-85926-268-7 (Editors) 80b:03003 03-06 (03C45)

Groups See *Structure of groups and properties of their subgroups*, 80d:20024 and *Probability measures on groups*, 80d:60005

Hagen See *Game theory and related topics*, 80j:90003

Halle See *Inverse and improperly posed problems in differential equations*, 80d:35004

Hamburg See *Numerical mathematics*, 80c:65003

Hamiltonian systems See *Stochastic behavior in classical and quantum Hamiltonian systems*, 80h:70004

Hampton, Va. See *Transactions: Conference of Army Mathematicians*, 80a:00012

Handbook:

Mathematical terms See Aleksandrova, N. V., 80a:00013

Mathematics ★Poradnik matematyczny. (Polish) [Handbook of mathematics] With the collaboration of R. Bartoszyński, W. Czapliński, I. Dziubiński, E. Kącki, M. Koluha, E. Otto, T. Śródka, T. Świątkowski, W. Waliszewski and L. Włodarski. Edited by I. Dziubiński and T. Świątkowski. PWN—Polish Scientific Publishers, Warsaw, 1978. 908 pp. (Editors) 80f:00007 00A20

Operations research ★Handbook of operations research. Models and applications. Edited by Joseph J. Moder and Salah E. Elmaghraby. Van Nostrand Reinhold Co., New York-London, 1978. xxiv + 659 pp. ISBN 0-442-24596-3 (Editors) 80a:90047 90Bxx (90-01)

Hardy spaces See *Linear operators on Hardy spaces*, 80g:46003

Harmonic analysis See *Noncommutative harmonic analysis*, 80g:22001 and *Séminaire: Analyse Harmonique*, 80f:42003

Harmonic analysis in Euclidean spaces ★Harmonic analysis in Euclidean spaces. Part I. Proceedings of the Symposium in Pure Mathematics of the American Mathematical Society held at Williams College, Williamstown, Mass., July 10-28, 1978. Dedicated to Nestor M. Riviere. Edited by Guido Weiss and Stephen Wainger. Proceedings of Symposia in Pure Mathematics, XXXV, Part 1. American Mathematical Society, Providence, R.I., 1979. vii + 438 pp. ISBN 0-8218-1438-9 (Editors) 80f:42001a 42-06 (43-06)

★Harmonic analysis in Euclidean spaces. Part 2. Proceedings of the Symposium in Pure Mathematics of the American Mathematical Society held at Williams College, Williamstown, Mass., July 10-28, 1978. Dedicated to Nestor M. Riviere. Edited by Guido Weiss and Stephen Wainger. Proceedings of Symposia in Pure Mathematics, XXXV, Part 2. American Mathematical Society, Providence, R.I., 1979. xxvi + 460 pp. (4 plates). ISBN 0-8218-1436-2 (Editors) 80f:42001b 42-06 (43-06)

Heidelberg See *Smoothing techniques for curve estimation*, 80m:62002

Heiligenstadt See Hoffmann, A.; et al., 80c:90001

Helsinki See *Proceedings: Congress of Mathematicians*, 80m:00004

Higher set theory ★Higher set theory. Proceedings of a Conference held at the Mathematisches Forschungsinstitut, Oberwolfach, April 13-23, 1977. Edited by Gert H. Müller and Dana S. Scott. Lecture Notes in Mathematics, 669. Springer-Verlag, Berlin-New York, 1978. xii + 476 pp. ISBN 3-540-08926-8 (Editors) 80a:03005 03-06 (03Exx)

Hilbert space operators ★Hilbert space operators. Proceedings of a Conference held at California State University, Long Beach, Calif., 20-24 June 1977. Edited by John M. Bachar, Jr. and Donald W. Hadwin. Lecture Notes in Mathematics, 693. Springer-Verlag, Berlin-New York, 1978. viii + 184 pp. ISBN 3-540-09097-5 (Editors) 80a:47001 47-06

History of analysis ★History of analysis. Proceedings of a Conference on History of Analysis held at Rice University, Houston, Tex., March 12-13, 1977. Edited by R. J. Stanton and R. O. Wells, Jr. Rice Univ. Stud. 64 (1978), no. 2-3. Rice University, Houston, Tex., 1978. pp. i-iv and 1-228. (Editors) 80a:01001 01-06

History of mathematics See *Abregé d'histoire des mathématiques*, 80k:01002a and *Abregé d'histoire des mathématiques*, 80k:01002b

History of mathematics and physics in the Ukraine See *Outlines on the history of mathematics and physics in the Ukraine*, 80m:01044

History and methodology of the natural sciences ★История и методология естественных наук. Вып. XIX. Физика. (Russian) [History and methodology of the natural sciences. No. XIX. Physics] Edited by D. I. Gordeev, I. P. Bazarov and C. S. Sarangov. Moskov. Gos. Univ., Moscow, 1978. 240 pp. (Editors) 80d:01001 01-06

★История и методология естественных наук. Вып. XX: Математика и механика. (Russian) [History and methodology of the natural sciences. No. XX: Mathematics and mechanics] Edited by K. A. Rybnikov, I. G. Baïmakova and I. A. Tjulina. Moskov. Gos. Univ., Moscow, 1978. 224 pp. (Editors) 80d:01002 01-06



**History of natural science: literature published in the USSR** ★История естествознания. (Russian) [History of natural science] Литература опубликованная в СССР (1962-1966). [Literature published in the USSR (1962-1966)] Edited by A. T. Grigor'jan and D. D. Ivanov. "Nauka", Moscow, 1977. 700 pp. (Editors) 80d:00025 00A15 (00A20, 00A69, 01A75)

**History of science** See Bibliography: History of science and its cultural influences, 80d:00017a and Bibliography: History of science and its cultural influences, 80d:00017b  
**Holomorphic curves** See Meromorphic functions and value-distributions of holomorphic curves, 80f:30017

**Holomorphy** See Advances in holomorphy, 80a:46001

**Holonomic quantum fields** See Solitons and holonomic quantum fields, 80f:81003

**Homological algebra** See Problems of group theory and homological algebra, 80g:00006 and Collection: Algebra, 80d:18017

**Homological group theory** ★Homological group theory. Proceedings of a Symposium on Homological and Combinatorial Techniques in Group Theory held at Durham, September, 1977. Edited by C. T. C. Wall. London Mathematical Society Lecture Note Series, 36. Cambridge University Press, Cambridge-New York, 1979. ix + 394 pp. ISBN 0-521-22729-1 (Editors) 80m:20001 20-06 (22-06)

**Homotopy theory** See Equivariant homotopy theory, 80c:55002

**Houston, Tex.** See History of analysis, 80a:01001

**How convincing is a proof?** How convincing is a proof? With contributions by Ju. I. Mazin, B. H. Neumann and Solomon Feferman. *Math. Intelligencer* 2 (1979/80), no. 1, 17-24. (E. Mendelson) 80m:03024 03A05 (00A25, 03F99, 68G15)

**Hyperbolic complex analysis** ★Hyperbolic complex analysis. Proceedings of the All India Seminar held at the Ramanujan Institute, University of Madras, Madras, March 28-April 7, 1977. Edited by D. Sundararaman. Publications of the Ramanujan Institute, 4. University of Madras, Ramanujan Institute, Madras, 1979. v + 222 pp. (Editors) 80k:32001 32-06 (30-06)

**Hypergraphs** See Colloque: Mathématiques Discrètes: Codes et Hypergraphes, 80f:05002  
**Ideas of natural science in Old Russia** ★Естественнонаучные представления Древней Руси. (Russian) [Ideas of natural science in Old Russia] Edited by A. N. Bogoljubov [O. M. Bogoljubov]. Серия "История науки и техники". [Series in the History of Science and Technology] "Nauka", Moscow, 1978. 176 pp. (Editors) 80g:01008 01A35 (01A40)

**Identification and system parameter estimation** ★Identification and system parameter estimation. Part 1. Proceedings of the Fourth IFAC Symposium, held in Tbilisi, September 21-27, 1976. Edited by N. S. Rajbman [N. S. Raibman]. North-Holland Publishing Co., Amsterdam-New York, 1978. xxix + 634 pp. ISBN 0-444-85112-7 (Editors) 80d:93010a 93-06 (93E10, 93E12)

★Identification and system parameter estimation. Part 2. Proceedings of the Fourth IFAC Symposium, held in Tbilisi, September 21-27, 1976. Edited by N. S. Rajbman [N. S. Raibman]. North-Holland Publishing Co., Amsterdam-New York, 1978. pp. i-ix and 635-1365. ISBN 0-444-85113-5 (Editors) 80d:93010b 93-06 (93E10, 93E12)

★Identification and system parameter estimation. Part 3. Proceedings of the Fourth IFAC Symposium, held in Tbilisi, September 21-27, 1976. Edited by N. S. Rajbman [N. S. Raibman]. North-Holland Publishing Co., Amsterdam-New York, 1978. pp. i-ix and 1367-2178. ISBN 0-444-85114-3 (Editors) 80d:93010c 93-06 (93E10, 93E12)

#### IEEE Conference:

**Acoustics, Speech and Signal Processing** ★IEEE International Conference on Acoustics, Speech & Signal Processing. Held at Tulsa, Okla., April 10-12, 1978. Institute of Electrical and Electronics Engineers, Inc. (IEEE), New York, 1978. xxii + 847 pp. (Editors) 80a:68002 68-06 (94A12)

#### IEEE Symposium:

**Circuits and Systems** ★1978 IEEE International Symposium on Circuits and Systems. Proceedings. Held in New York, May 17-19, 1978. Institute of Electrical and Electronics Engineers, Inc. (IEEE), New York, 1978. xxvi + 1125 pp. (Editors) 80a:94041 94Cxx (68-06, 94-06)

**Computer Arithmetic** See Proceedings: IEEE Symposium on Computer Arithmetic, 80c:68001

**Foundations of Computer Science** ★19th Annual Symposium on Foundations of Computer Science. Held in Ann Arbor, Mich., October 16-18, 1978. IEEE Computer Society, Long Beach, Calif., 1978. v + 290 pp. (Editors) 80d:68008 68-06 (68Cxx)

#### IFAC Symposium:

**Control of Distributed Parameter Systems** See Control of distributed parameter systems, 80c:93003

**Identification and System Parameter Estimation** See Identification and system parameter estimation, 80d:93010a; Identification and system parameter estimation, 80d:93010b and Identification and system parameter estimation, 80d:93010c

**IFAC Workshop:** Information and Systems See Information and systems, 80a:94001

#### IFIP Conference:

**Computer System Modeling** See Computer performance, 80d:68002

**Formal Description of Programming Concepts** See Formal description of programming concepts, 80d:68004

**Modeling and Simulation of Land, Air and Water Resources Systems** See Modeling, identification and control in environmental systems, 80a:92004

**Modelling and Optimization of Complex Systems** See Modelling and optimization of complex systems, 80j:93006

#### IFORS Conference:

**Operational Research** See Operational research, 80a:90003

**Image analysis** See Geometrical probability and biological structures: Buffon's 200th anniversary, 80a:92003

**Imbedded manifolds** See Studies in the geometry of imbedded manifolds and projective geometry, 80m:53001

#### Index:

**History of natural science** See History of natural science: literature published in the USSR, 80d:00025

**Lecture Notes in Mathematics** ★An index and other useful information. Lecture Notes in Mathematics, 501-600. Springer-Verlag, Berlin-New York, 1977. i + 30 pp. (Editors) 80f:00000a 00A20

★An index and other useful information. Lecture Notes in Mathematics, 601-700. Springer-Verlag, Berlin-New York, 1979. i + 26 pp. (Editors) 80f:00000b 00A20

**Industrial revolution, education, science** ★Průmyslová revoluce, školství, věda. (Czech) [Industrial revolution, education, science] A collection of contributions from a session held February 21, 1977 in Prague. Edited by Luboš Nový. Práce z Dějin Přírodních Věd [Works in the History of Natural Sciences], 6. Československé Akademie Věd (ČSAV) Prague, 1978. 251 pp. (Editors) 80c:01007 01A55

**Infinite-dimensional spaces** See Probability distributions in infinite-dimensional spaces, 80j:60002

**Information dissemination** See Principles of the construction of information disseminating devices, 80a:94002

**Information linkage between applied mathematics and industry** ★Information linkage between applied mathematics and industry. Proceedings of the First Annual Workshop held at the Naval Postgraduate School, Monterey, Calif., February 23-25, 1978. Edited by Peter C. C. Wang. With the assistance of Arthur L. Schoenstadt, Bert I. Russak [I. Bert Russak] and Craig Comstock. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xiv + 661 pp. ISBN 0-12-734250-8 (Editors) 80c:00004 00A10 (00A69)

**Information networks and their analysis** ★Информационные сети и их анализ. (Russian) [Information networks and their analysis] Edited by A. D. Herkevič and V. A. Garmal. "Nauka", Moscow, 1978. 220 pp. (Editors) 80f:94031 94Cxx (68-06)

**Information processes in complex systems** ★Информационные процессы в сложных системах. (Russian) [Information processes in complex systems] Edited by V. A. Žozikavili. "Sintex", Kishinev, 1978. 168 pp. (Editors) 80c:93003 93-06

**Information science** See Semiotics and information science, 80d:00019; Mathematical foundations and applications of information science, 80c:68002 and Semiotics and information science, 80c:68001

**Information and systems** ★Information and systems. Proceedings of the IFAC Workshop, held in Compiègne, 25-27 October 1977. Edited by B. Dubuisson. Pergamon Press, Oxford-New York-Toronto, Ont., 1978. ix + 185 pp. ISBN 0-08-022440-7 (Editors) 80a:94001 94-06 (62-06, 93-06)

See also Ansätze zur Organisationstheorie rechnergestützter Informationssysteme, 80f:94001

**Information systems methodology** ★Information systems methodology. Proceedings of the Second Conference of the European Cooperation in Informatics held in Venice, October 10-12, 1978. Edited by Giampaio Bracchi and Peter Christian Lockemann. Lecture Notes in Computer Science, 65. Springer-Verlag, Berlin-New York, 1978. xii + 696 pp. ISBN 3-540-08934-9 (Editors) 80c:94001 94-06

**Information theory** See Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80a:62005; Languages algébriques, 80a:68003; Séries formelles en variables non commutatives et applications, 80c:68005; Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80d:62004a; Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80d:62004b and Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80k:60004

**Instabilities in dynamical systems** ★Instabilities in dynamical systems. Applications to celestial mechanics. Proceedings of the NATO Advanced Study Institute held at Cortina d'Ampezzo, July 30-August 12, 1978. Edited by Victor G. Szebehely. NATO Advanced Study Institute Series. Ser. C: Mathematical and Physical Sciences, 47. D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1979. xxiv + 314 pp. ISBN 90-271-0973-4 (Editors) 80k:70002 70-06 (70K20)

**Integer programming and related areas** ★Integer programming and related areas. A classified bibliography, 1976-1978. Edited by Dirk Hausmann. With a preface by Bernhard Korte. Lecture Notes in Economics and Mathematical Systems, 160. Springer-Verlag, Berlin-New York, 1978. xiv + 314 pp. ISBN 3-540-08939-X (Editors) 80c:90110 90C10 (00A15)

**Integral equations** See Differential and integral equations, 80c:00004; Singular integrals, integral equations and their applications, 80i:45001; Volterra equations, 80i:45002; Differential and integral equations, 80k:35004 and Solution methods for integral equations, 80m:65090

**Inverse and improperly posed problems in differential equations** ★Inverse and improperly posed problems in differential equations. Proceedings of the Conference on Mathematical and Numerical Methods held in Halle from May 29-June 2, 1979. Edited by Gottfried Anger. Mathematical Research, 1. Akademie-Verlag, Berlin, 1979. 296 pp. (loose errata). (Editors) 80d:35004 35-06

**Investigation and optimization of multiply connected systems** ★Исследование и оптимизация многосвязных систем. (Russian) [Investigation and optimization of multiply connected systems] Edited by M. V. Meerov. "Nauka", Moscow, 1979. 144 pp. (Editors) 80m:90001 90-06 (93A15)

**Investigation of questions in the theory of elasticity and plasticity** ★Исследование вопросов теории упругости и пластичности. Вып. 3. (Russian) [Investigation of questions in the theory of elasticity and plasticity. No. 3] Edited by F. G. Maksudov. "Elm", Baku, 1978. 112 pp. (Editors) 80k:73001 73-06

**Investigations in the theory of probability distributions** ★Исследования по теории вероятностных распределений. IV. (Russian) [Investigations in the theory of probability distributions. IV] Edited by V. N. Sudakov. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 85 (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. 248 pp. (Editors) 80c:60005 60-06 (62-06)

#### IRIA Séminaire:

**Langages et Traducteurs** See Languages et traducteurs, 80c:68002

**Isomorphisms and unbounded derivations** ★Isomorphisms and unbounded derivations. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, December 12-16, 1977. Sūrikaiseikikenkyūsho Kōkyūroku No. 320 (1978). Kyoto University, Research Institute

- for *Mathematical Sciences*, Kyoto, 1978. pp. i-ii and 1-184. (Editors) 80f:46004 46-06
- Itoji Nanki I Teiniki** See Current problems in mathematics, 80d:00008; Mathematical analysis, 80d:00011; Problems in geometry, 80d:53002; Mechanics of solid deformable bodies, 80d:73006; Mechanics of solid deformable bodies, 80d:73007; Engineering cybernetics, 80d:93009 and Algebra, Topology, Geometry, 80h:00001
- IUTAM Symposium:**  
Dynamics of Multibody Systems See Dynamics of multibody systems, 80b:76001  
Modern Problems in Elastic Wave Propagation See Modern problems in elastic wave propagation, 80d:73008
- Jablonska** See Stability and sensitivity in mechanical systems, 80e:93004 and Duality and complementarity in mechanics of solids, 80h:49001
- Jaca** See Nonlinear problems in theoretical physics, 80f:81002
- Jahrbuch Überblicke Mathematik** ★ *Jahrbuch Überblicke Mathematik*, 1978. Edited by Benno Fuchssteiner, Ulrich Kulisch, Detlef Laugwitz and Roman Liedl. Bibliographisches Institut, Mannheim, 1978. 224 pp. ISBN 3-411-01547-0 (Editors) 80c:00007 00A10  
★ *Jahrbuch Überblicke Mathematik*, 1979. Edited by S. D. Chatterji, Benno Fuchssteiner, Ulrich Kulisch, Detlef Laugwitz and Roman Liedl. Bibliographisches Institut, Mannheim, 1979. 206 pp. ISBN 3-411-01559-4 (Editors) 80c:00005 00A10
- Jahrestagung:**  
Gesellschaft für Angewandte Mathematik und Mechanik See Vorträge:  
Wissenschaftliche Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, 80c:65008  
Gesellschaft für Informatik, 7. ★ *GI—7. Jahrestagung*. Held in Nürnberg, September 26-28, 1977. Edited by H. J. Schneider (Hans-Jürgen Schneider). Informatik-Fachberichte, 10. Springer-Verlag, Berlin-New York, 1977. viii + 214 pp. ISBN 3-540-08425-8 (Editors) 80m:68072a 68-06 (68Fxx)
- Joensuu** See Complex analysis Joensuu 1978, 80h:30002
- Journées:**  
**Analyse Non Linéaire** ★ *Journées d'analyse non linéaire*. Proceedings of a Conference held in Besançon, June 1977. Edited by Philippe Benilan and Jacques Robert. Lecture Notes in Mathematics, 665. Springer-Verlag, Berlin-New York, 1978. viii + 256 pp. ISBN 3-540-08922-5 (Editors) 80a:46002 46-06 (35-06, 73-06)  
**Arithmétiques de Luminy** ★ *Journées Arithmétiques de Luminy*. Colloque International du Centre National de la Recherche Scientifique (CNRS) held at the Centre Universitaire de Luminy, Luminy, June 20-24, 1978. *Astérisque*, 61. Société Mathématique de France, Paris, 1979. 249 pp. (Editors) 80j:10003 10-06 (12-06)  
**Équations aux Dérivées Partielles** ★ *Journées: Équations aux Dérivées Partielles*. Held at Saint Jean de Monts, June 6-10, 1978. École Polytechnique, Centre de Mathématiques, Palaiseau, 1978. 34 pp. (not consecutively paged). (Editors) 80b:35003 35-06  
★ *Journées: Équations aux Dérivées Partielles*. Held at Saint-Cast, May 29-June 2, 1979. École Polytechnique, Centre de Mathématiques, Palaiseau, 1979. 102 pp. (not consecutively paged). (Editors) 80j:35003 35-06  
**Études sur la Propagation Acoustique** ★ *Journées d'Études sur la Propagation Acoustique*. Held at Marseille, May 30-31, 1978. Rev. CETHEDC No. 56 (1978). Centre d'Études Théoriques de la Détection et des Communications, Paris, 1978. pp. i-iii and 1-181. (Editors) 80c:76001 76-06 (76Q05)  
**Géométrie Algébrique de Rennes** ★ *Journées de Géométrie Algébrique de Rennes*. Vol. I. (French) Groupes formels, représentations galoisiennes et cohomologie des variétés de caractéristique positive. Held in Rennes, July 3-7, 1978. *Astérisque*, 63. Société Mathématique de France, Paris, 1979. i + 177 pp. (Editors) 80m:14001a 14-06  
★ *Journées de Géométrie Algébrique de Rennes*. Vol. II. (French) Groupes formels, représentations galoisiennes et cohomologie des variétés de caractéristique positive. Held in Rennes, July 3-7, 1978. *Astérisque*, 64. Société Mathématique de France, Paris, 1979. i + 202 pp. (Editors) 80m:14001b 14-06  
★ *Journées de Géométrie Algébrique de Rennes*. Vol. III. (French) Groupes formels, représentations galoisiennes et cohomologie des variétés de caractéristique positive. Held in Rennes, July 3-7, 1978. *Astérisque*, 65. Société Mathématique de France, Paris, 1979. i + 188 pp. (Editors) 80m:14001c 14-06  
**Synthèse, Manipulation et Transformation de Programmes** See Synthèse, manipulation et transformation de programmes, 80f:68011
- Journées Singulières** ★ *Journées Singulières de Dijon*. Held at the University of Dijon, Dijon, June 12-16, 1978. *Astérisque*, 59-60. Société Mathématique de France, Paris, 1978. 248 pp. (Editors) 80e:58001 58-06 (34-06)
- Jyväskylä** See Essays on mathematical and philosophical logic, 80f:03006
- Kozhithy** See Combinatorics, 80a:05002a and Combinatorics, 80a:05002b
- Kiev** See All-Union Symposium: Artificial Intelligence and the Automation of Investigations in Mathematics, 80d:68116 and Proceedings: Conference of Young Scientists of the Institute of Cybernetics, 80f:93004
- Kington, R.I.** See Differential games and control theory, 80d:90001; Differential games and control theory, 80f:90006a and Control theory in mathematical economics, 80f:90006b
- Klagenfurt** See Contributions to general algebra, 80d:00007
- Kleinian groups and Riemann surfaces** ★ *Kleinian groups and Riemann surfaces*. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, on December 19-21, 1977. *Sūrikaiseikikenkyūsho Kōkyūroku* No. 318 (1978). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1978. pp. i-ii and 1-162. (Editors) 80c:30003 30-06 (30F40)
- Knots and 3-manifolds** ★ *Knots and 3-manifolds*. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, September 4-6, 1978. *Sūrikaiseikikenkyūsho Kōkyūroku* No. 346 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-169. (Editors) 80g:57003 57-06
- Konferenz:**  
Bremer, Chemie See Proceedings: Bremer Konferenz zur Chemie, 80k:92018a and Proceedings: Bremer Konferenz zur Chemie, 80k:92018b
- Kyoto** See Theory of nonlinear waves, 80a:35004; B-valued analysis and nonstandard analysis, 80b:03002; Theory of statistical decision functions and measurement theory, 80b:62005; Algorithms in numerical computations, 80b:65003; Dynamical systems and applications of Boltzmann equations to astrophysics, 80c:85001; Proceedings: International Symposium on Stochastic Differential Equations, 80f:60006; Diophantine problems, 80e:10006; Seminar: Permutation Groups and Related Topics, 80e:20002; Extremal problems in function theory, 80c:30002; Kleinian groups and Riemann surfaces, 80c:30003; Family of countable product spaces, 80c:40002; Equivariant homotopy theory, 80e:55002; Mathematics for biology, 80e:92002; Combinatorial structures and graph theory, 80f:05003; Meromorphic functions and value-distributions of holomorphic curves, 80f:30017; Differential equations in the complex domain, 80f:34002; Isomorphisms and unbounded derivations, 80f:46004; Operator theory and its application, 80f:47001; Global analysis in geometry, 80f:58001; Mathematical study of multivariate statistical analysis, 80f:62004; Algorithms for numerical computations and computation, 80f:65003; Mathematical foundations for computer science, 80f:68003; Mixed boundary value problems in fluid dynamics, 80f:76001; Statistical fluid dynamics, 80f:76002; Solitons and holonomic quantum fields, 80f:81003; Theory of finite groups, 80g:20001; Qualitative research on stability of solutions of functional differential equations, 80g:34001; Linear operators on Hardy spaces, 80g:46003; Shape and infinite-dimensional manifolds, 80g:54039; Knots and 3-manifolds, 80g:57003; Topology of foliations, 80g:57004; Geometry and global analysis, L-functions. See Automorphic forms, representations and L-functions, 80g:10002a and Automorphic forms, representations and L-functions, 80g:10002b
- La Jolla, Calif.** See Topics in nonlinear dynamics, 80b:70002
- Langages algébriques** ★ *Langages algébriques*. Proceedings of the First Meeting on Information Theory held at Bonasere, April 1973. Edited by Jean-Pierre Crestin and Maurice Nivat. École Nationale Supérieure de Techniques Avancées, Paris, 1978. 281 pp. ISBN 2-7225-0424-3 (Editors) 80a:68003 68-06 (68Fxx)
- Langages et traducteurs** ★ *Langages et traducteurs*. Texts of the papers (exposés) of the Séminaire organized by the Institut de Recherche d'Informatique et d'Automatique (IRIA), Rocquencourt, 1977. Institut de Recherche d'Informatique et d'Automatique, Rocquencourt, 1977. 155 pp. ISBN 2-7261-0159-3 (Editors) 80c:68002 68-02
- Language theory** ★ *Language theory*. Theory and Decision 11 (1979), no. 11-140. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1979. pp. 1-142. (Editors) 80j:03004 03-06
- Languages** See Automata, languages and programming, 80c:68003 and Foundations of computer science, 80m:68006b
- Lattice dynamics** See Proceedings: International Conference on Lattice Dynamics, 80f:82001
- Lattices** See Ordered sets and lattices, 80f:06001
- Lawrence, Kan.** See Complex manifold techniques in theoretical physics, 80m:81004
- Laxenburg** See Nonsmooth optimization, 80d:49002
- Learning algorithms in control systems and in data processing systems** ★ *Обучающиеся алгоритмы в системах управления и обработки информации*. (Russian) [Learning algorithms in control systems and in data processing systems] Edited by A. V. Medvedev. "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. 128 pp. (Editors) 80d:62002 62-06
- Lectures:**  
**Combustion theory** ★ *Lectures on combustion theory*. Lectures given in a Seminar held during spring semester at the Courant Institute, New York University, New York, 1977. Edited by Samuel Z. Burstein, Peter D. Lax and Gary A. Sod. New York University, Courant Mathematics and Computing Laboratory, New York, 1978. vii + 317 pp. (Editors) 80b:76001 76-06  
**Computational statistics** See Computat. Lectures, 80f:62003  
**Qualitative Investigations in Nonlinear Discrete Systems** See Stability and sensitivity in mechanical systems, 80c:93004
- Leicester** See Recent theoretical developments in control, 80c:93004
- Leiden** See Computat, 80d:62004
- Leipzig** See Proceedings: International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics, 80a:47002
- Liblice** See Symposium: Mathematical Methods in the Theory of Elementary Particles, 80b:81003a; Symposium: Mathematical Methods in the Theory of Elementary Particles, 80b:81003b and Use of finite element method and finite difference method in geophysics, 80c:65007
- Lie groups** See Collection: Algebra, 80k:18017
- Lille** See Les arbres en algèbre et en programmation, 80j:68004
- Lima** See School: Latin-American, Mathematics, 80m:00005
- Linear algebra** See Computational methods in linear algebra, 80j:65003
- Linear differential equations** See Micro-local analysis of linear differential equations, 80c:35004
- Linear operators on Hardy spaces** ★ *Linear operators on Hardy spaces*. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, December 11-14, 1978. *Sūrikaiseikikenkyūsho Kōkyūroku* No. 350 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-147. (Editors) 80g:46003 46-06 (47-06)
- Linear partial differential equations** See Seminar: Singularities of Solutions of Linear Partial Differential Equations, 80f:35003
- Linguistics** See Logic and linguistics, 80b:03011a and Logic and linguistics, 80b:03011c
- Logic** See Colloquium: Logic, 80a:03003; Seminar: Cabal, 80b:03004; Essays on mathematical and philosophical logic, 80f:03006; Ontologie und Logik/Ontology and logic, 80f:03007; Philosophical logic, 80k:63003; Proceedings: International Symposium on Multiple-Valued Logic, 80k:94001; American Mathematical Society Translations, Ser. 2, 80m:00006 and Foundations of computer science, 80m:68006b
- Logic and data bases** ★ *Logic and data bases*. Proceedings of the Symposium held at the Centre d'Études et de Recherches de l'École Nationale Supérieure de l'Aéronautique et de l'Espace de Toulouse (C.E.R.T.), Toulouse, November 16-18, 1977. Edited by Hervé Gallaire and Jack Minker. Plenum Press, New York-London, 1978. viii + 458 pp. ISBN 0-306-40060-X (J. Paredaens) 80f:68009 68H05 (03-06, 68-06, 68B15)



**Logic and linguistics** ★Logic and linguistics. Part I. Synthese 38 (1978), no. 1. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. pp. 1-173. (Editors) 80b:03011a 03Bxx

★Logic and linguistics. Part II. Synthese 39 (1978), no. 1. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. pp. 1-164. (Editors) 80b:03011b 03Bxx

★Logic and linguistics. Part III. Synthese 40 (1979), no. 2. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1979. pp. 209-408. (Editors) 80b:03011c 03Bxx

**Logico-operational structure** See Physical theory as logico-operational structure, 80b:81001  
Loma-Koll See Proceedings: Symposium on the Foundations of Modern Physics, 80b:81002  
London See Special issue: Fuzzy reasoning, 80b:00005

Long Beach, Calif. See Hilbert space operators, 80a:47001

Low-dimensional manifolds See Topology of low-dimensional manifolds, 80g:57005

Lowell, Mass. See Geometric methods in mathematical physics, 80g:83001

Luminy See Journées: Arithmétiques de Luminy, 80j:10083

Madison, Wis. See Recent advances in numerical analysis, 80a:65016; Proceedings: Conference on the Design of Experiments, 80j:62003 and Numerical methods for partial differential equations, 80b:65008

Madras See Hyperbolic complex analysis, 80k:32001

Madrid See Applied numerical modelling, 80m:65002

Magdeburg See Tagung: Strömungsmechanik, 80m:76002

Manifolds See Complex analysis and manifolds, 80d:00004 and Shape and infinite-dimensional manifolds, 80g:54039

Mannheim See Symposium: Operations Research, 80d:90004b; Symposium: Operations Research, 80d:90004c; Symposium: Operations Research, 80d:90004d and Symposium: Operations Research, 80d:90004e

Many degrees of freedom in particle theory ★Many degrees of freedom in particle theory. Proceedings of the 1976 International Summer Institute of Theoretical Physics held at the University of Bielefeld, Bielefeld, August 23-September 4, 1976. Edited by H. Satz. NATO Advanced Study Institute Series, Ser. B: Physics, 31. Plenum Press, New York-London, 1978. viii + 566 pp. ISBN 0-306-35731-3 (From the preface) 80j:81006 81G25 (81-06)

Mappings See Metric questions of the theory of functions and mappings, 80c:30023 and Metric questions of the theory of functions and mappings, 80j:30003

Marseille See Journées: Études sur la Propagation Acoustique, 80e:76001; Feynman path integrals, 80j:81014; Actes: Colloque International DGRST-CNRS, 80j:62001 and Algèbres d'opérateurs et leurs applications en physique mathématique, 80k:46001  
Marseille-Luminy See Noncommutative harmonic analysis, 80g:22001

Mathematical analysis ★Математический анализ. Том 16. (Russian) [Mathematical analysis. Vol. 16] Edited by R. V. Gamkrelidze. Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR Vsesojuz. Inst. Nauch. Tehn. Informacii, Moscow, 1979. 151 pp. (Editors) 80d:00011 00A10 (44-06, 47-06, 49-06)

See also Proceedings: Conference on Mathematical Analysis and its Applications, 80a:00007

Mathematical analysis and probability theory ★Математический анализ и теория вероятностей. (Russian) [Mathematical analysis and probability theory] Edited by V. S. Koroljuk. "Naukova Dumka", Kiev, 1978. 224 pp. (Editors) 80k:30001 30-06 (60-06)

Mathematical analysis and related mathematical questions ★Математический анализ и смежные вопросы математики. (Russian) [Mathematical analysis and related mathematical questions] Edited by A. A. Borovkov. "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. 356 pp. (Editors) 80j:00007 00A10 (65-06)

Mathematical biology See Some mathematical questions in biology, 80a:92005; Some mathematical questions in biology, 80a:92006; Studies in mathematical biology, 80m:92005 and Studies in mathematical biology, 80m:92006

Mathematical economics See Symposium: Operations Research, 80d:90004d and Control theory in mathematical economics, 80f:90006b

Mathematical foundations and applications of information science ★Mathematical foundations and applications of information science. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, February 5-7, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 353 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-vi and 1-288. (Editors) 80f:68002 68-06

Mathematical foundations of computer science ★Mathematical foundations of computer science, 1978. Proceedings of the 7th Symposium held in Zakopane, September 4-8, 1978. Edited by Józef Winkowski. Lecture Notes in Computer Science, 64. Springer-Verlag, Berlin-New York, 1978. ix + 551 pp. ISBN 3-540-08921-7 (Editors) 80b:68004 68-06

★Mathematical foundations for computer science. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, February 1-2, 1978. Sūrikaiseikikenkyūsho Kōkyūroku No. 322 (1978). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1978. pp. i-ii and 1-285. (Editors) 80f:68003 68-06

Mathematical genetics See Symposium: Mathematical Genetics, 80a:92007

Mathematical logic See Studies in mathematical logic and the theory of algorithms, 80c:03006 and Studies in constructive mathematics and mathematical logic, 80j:03005

Mathematical methods and computer science in mining ★Математические методы и электронно-вычислительная техника в процессах горного производства. (Russian) [Mathematical methods and computer science in mining] Edited by S. Coi. "Nauka" Kazah. SSR, Alma-Ata, 1978. 230 pp. (Editors) 80d:90009 90C50

Mathematical methods of control of systems with distributed parameters

★Математические методы управления системами с распределенными параметрами. (Russian) [Mathematical methods of control of systems with distributed parameters] Edited by V. V. Aliferov. "Ilim", Frunze, 1978. 97 pp. (Editors) 80d:93041 93C20 (93-06)

Mathematical methods of cybernetics ★Математические методы кибернетики. (Russian) [Mathematical methods of cybernetics] Edited by V. L. Rvačev and V. P. Nazrova. Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev, 1978. 89 pp. (Editors) 80d:00013 90-06

Mathematical methods in operations research and reliability theory ★Математические методы исследования операций и теории надежности. (Russian) [Mathematical methods in operations research and reliability theory] Edited by Ju. M. Ermol'ev and I.

N. Kovalenko. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978. 94 pp. (Editors) 80m:90002 90-06

Mathematical methods of solution of economic problems ★Математические методы решения экономических задач. Сб. 8. (Russian) [Mathematical methods of solution of economic problems. No. 8] Edited by N. P. Fedorenko and E. G. Gol'stein. Supplement to Ekonom. i Mat. Metody. Seriya "Optimal'noye Planirovaniye i Upravleniye". [Optimal Planning and Control Series] "Nauka", Moscow, 1979. 140 pp. (Editors) 80m:90003 90-06

Mathematical modelling ★Математическое моделирование. (Russian) [Mathematical modeling] Edited by Ė. Ja. Grinberg. Latv. Gos. Univ., Riga, 1978. 127 pp. (Editors) 80d:94027 94Cxx (65-06, 68Jxx, 93E11)

Mathematical modeling of economic systems ★Математическое моделирование экономических систем. (Russian) [Mathematical modeling of economic systems] Edited by D. K. Zambickii. Mat. Issled. No. 52 (1979). "Shtiinca", Kishinev, 1979. pp. 1-228. (Editors) 80m:90004 90-06

Mathematical modeling and the theory of electrical circuits ★Математическое моделирование и теория электрических цепей. Вып. 16. (Russian) [Mathematical modeling and the theory of electrical circuits. No. 16] Edited by G. Ė. Pahov. "Naukova Dumka", Kiev, 1978. 127 pp. (Editors) 80k:94033a 94Cxx (94-06)

Mathematical models See Constructive approaches to mathematical models, 80k:00021

Mathematical models of behavior ★Математические модели поведения. Вып. 3. (Russian) [Mathematical models of behavior. No. 3] Edited by O. V. Šimel'nenig. Saratov. Gos. Univ., Saratov, 1978. 88 pp. (Editors) 80f:90152 90Dxx

Mathematical models and numerical methods ★Mathematical models and numerical methods. Papers from the Fifth Semester held at the Stefan Banach International Mathematical Center, Warsaw, February-June 1975. Edited by A. N. Tikhonov, F. Kuhnert, N. N. Kuznetsov, K. Moszyński and A. Wakulicz [Andrzej Wakulicz]. Banach Center Publications, 3. PWN—Polish Scientific Publishers, Warsaw, 1978. 391 pp. (Editors) 80a:65012 65-06

Mathematical and numerical methods See Inverse and improperly posed problems in differential equations, 80d:35004

Mathematical optimization See Hoffmann, A.; et al., 80c:90001 and Fortschritte in der mathematischen Optimierung, 80d:90003

Mathematical physics See Differential geometrical methods in mathematical physics, 80b:81056; Methods of functional analysis in problems of mathematical physics, 80k:00014; Application of computers to the solution of problems in mathematical physics and automatic control systems, 80e:65004; Numerical methods in mathematical physics, geophysics and optimal control, 80e:65006; Geometric methods in mathematical physics, 80g:83001; Group theoretical methods in physics, 80b:81002 and Boundary value problems of mathematical physics and related questions in the theory of functions, 80j:00006

Mathematical physics and physical mathematics ★Mathematical physics and physical mathematics. Proceedings of the International Symposium held in Warsaw, March 25-30, 1974. Edited by Krzysztof Maurin and Ryszard Rączka. Mathematical Physics and Applied Mathematics, 2. D. Reidel Publishing Co., Dordrecht-Boston, Mass.; PWN—Polish Scientific Publishers, Warsaw, 1976. xviii + 504 pp. ISBN 90-277-0537-2 (Editors) 80f:00006 00A10 (00A69)

Mathematical programming See Point-to-set maps and mathematical programming, 80j:90074

Mathematical questions in the theory of wave propagation ★Математические вопросы теории распространения волн. 9. (Russian) [Mathematical problems in the theory of wave propagation. 9] Edited by B. M. Babič. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 78 (1978). "Nauka", Leningrad. Otdel., Leningrad, 1978. 256 pp. (Editors) 80d:78001 78-06

★Математические вопросы теории распространения волн. 10. (Russian) [Mathematical questions in the theory of wave propagation. 10] Edited by V. M. Babič. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 89 (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. pp. 1-296. (Editors) 80k:78001 78-02

Mathematical statistics See Selected translations in mathematical statistics and probability, 80a:00008 and Studies in mathematical statistics, 80j:60003

Mathematical stereology See Geometrical probability and biological structures: Buffon's 200th anniversary, 80a:92003

Mathematical study of multivariate statistical analysis ★The mathematical study of multivariate statistical analysis. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, December 7-9, 1978. Sūrikaiseikikenkyūsho Kōkyūroku No. 345 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-71. (Editors) 80f:62004 62-06

Mathematical theory in computer design ★Математическая теория проектирования вычислительных машин. (Russian) [Mathematical theory in computer design] Edited by A. A. Letičevskii and A. B. Godlevskii. Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev, 1978. 93 pp. (Editors) 80d:68005 68-06

Mathematics for biology ★Mathematics for biology. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, on July 5-7, 1977. Sūrikaiseikikenkyūsho Kōkyūroku No. 317 (1978). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1978. pp. i-ii and 1-101. (Editors) 80c:92002 92-06

Mathematics in the East in the Middle Ages ★Математика на средневековом Востоке. (Russian) [Mathematics in the East in the Middle Ages] Edited by S. H. Sirazdinov. Izdat. "Fan", Uzbek. SSR, Tashkent, 1978. 199 pp. (Editors) 80f:01004 01A30 (01-06)

Mathematics of finite elements and applications ★The mathematics of finite elements and applications. III. MAFELAP 1978. Proceedings of the Third Conference held at Brunel University, Uxbridge, April 18-21, 1978. Edited by John Robert Whiteman. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1979. xv + 513 pp. ISBN 0-12-74253-3 (Editors) 80a:65005 65-06 (73-06, 76-06)

Mathematics today ★Mathematics today. Twelve informal essays. Edited by Lynn Arthur Steen. Springer-Verlag, New York-Heidelberg, 1978. viii + 367 pp. ISBN 0-387-90305-4 (K. E. Hirst) 80b:00007 00A25 (00A06)

- Mathematik für Ingenieure, Naturwissenschaftler, Ökonomen, Landwirte** ★Mathematik für Ingenieure, Naturwissenschaftler, Ökonomen, Landwirte. Bände 1-21/2. 1973-1978. BSB B. G. Teubner Verlagsgesellschaft, Leipzig, 1999. (Editors) 80d:00033 00A69 (00A06, 35-01, 60-01, 62-01, 90-01)
- Maximum entropy formalism** ★The maximum entropy formalism. A Conference held at the Massachusetts Institute of Technology, Cambridge, Mass., May 2-4, 1978. Edited by Raphael D. Levine and Myron Tribus. MIT Press, Cambridge, Mass.-London, 1979. xiii + 498 pp. ISBN 0-262-12080-1 (Editors) 80d:82001 82-06
- Measure** See Proceedings: Conference Topology and Measure, 80d:28002a and Proceedings: Conference Topology and Measure, 80d:28002b
- Measure theory applications to stochastic analysis** ★Measure theory applications to stochastic analysis. Proceedings of a Conference held at the Mathematical Research Institute, Oberwolfach, July 3-9, 1977. Edited by G. Kallianpur and D. Kölzow. Lecture Notes in Mathematics, 695. Springer-Verlag, Berlin-New York, 1978. xii + 261 pp. ISBN 3-540-09098-3 (Editors) 80c:60006 60-06
- Measurement theory** See Theory of statistical decision functions and measurement theory, 80b:62005
- Measuring, modelling and evaluating computer systems** ★Measuring, modelling and evaluating computer systems. Proceedings of the Third International Symposium (Workshop) held in Bad Godesberg, October 3-5, 1977. Edited by Heinz Beilner and E. Gelenbe. North-Holland Publishing Co., Amsterdam-New York, 1977. ix + 470 pp. ISBN 0-444-85058-9 (Editors) 80c:68004 68-06 (68A05, 68Jxx)
- Mechanical systems** See Stability and sensitivity in mechanical systems, 80c:93004
- Mechanics** See Nonlinear analysis and mechanics: Heriot-Watt Symposium, 80d:00015
- Mechanics of deformable bodies** See Duality and complementarity in mechanics of solids, 80d:49001
- Mechanics and physics in the second half of the 18th century** ★Механика и физика второй половины XVIII в. (Russian) [Mechanics and physics in the second half of the 18th century] Edited by O. M. Bogoljubov. "Nauka", Moscow, 1978. 199 pp. (Editors) 80d:01003 01-06 (01A50, 70-03)
- Mechanics of solid deformable bodies** ★Механика деформируемого твёрдого тела. Том 11. (Russian) [Mechanics of a solid deformable body. Vol. 11] Edited by L. I. Sedov. Itogi Nauki i Tekhniki. [Progress in Science and Technology] Akad. Nauk SSSR Vsesojuz. Inst. Nauch. Tehn. Informacii, Moscow, 1978. 252 pp. (Editors) 80d:73006 73-06
- ★Механика деформируемого твёрдого тела. Том 12. (Russian) [Mechanics of a solid deformable body. Vol. 12] Edited by L. I. Sedov. Itogi Nauki i Tekhniki. [Progress in Science and Technology] Akad. Nauk SSSR Vsesojuz. Inst. Nauch. Tehn. Informacii, Moscow, 1978. 196 pp. (Editors) 80d:73007 73-06 (73K99)
- Mechanics of solids** See Duality and complementarity in mechanics of solids, 80d:49001
- Meeting:**
- Algebraic Geometry** See Algebraic geometry, 80d:14001
- American Statistical Association, Business and Economic Statistics Section** See Proceedings: Business and Economic Statistics Section, American Statistical Association, 80d:62003
- Elliptische Differentialgleichungen** See Elliptische Differentialgleichungen, 80d:35003
- European, Statisticians** See Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80a:62005
- Information Theory** See Langages algebriques, 80c:68003
- Numerical Treatment of Differential Equations in Applications** See Numerical treatment of differential equations in applications, 80a:65014
- Numerische Methoden der Approximationstheorie** See Numerische Methoden der Approximationstheorie, 80a:65015
- Recent Methods in Nonlinear Analysis** See Proceedings: International Meeting on Recent Methods in Nonlinear Analysis, 80c:49001
- Meromorphic functions and value-distributions of holomorphic curves** ★Value distribution of holomorphic curves and meromorphic functions. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, December 20-22, 1978. Sūrikaiseikikenkyūsho Kōkyūroku No. 348 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. i-ii and 1-197 pp. (Editors) 80f:30017 30Dxx (30-06, 32-06)
- Methodological developments in social sciences** ★Methodological developments in social sciences. Theory and Decision 10 (1979), no. 1-4. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1979. pp. 1-398. (Editors) 80j:00016 00A69 (92-06)
- Methodology and the attempt to develop the problem of automating quality control** ★Методология и опыт разработки проблем автоматизации управления качеством. (Russian) [Methodology and the attempt to develop the problem of automating quality control] Edited by Ja. A. Dubrov [Ja. O. Dubrov]. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978. 96 pp. (Editors) 80a:68004 68-06
- Methods in continuum mechanics** ★Методы механики сплошной среды. (Russian) [Methods in continuum mechanics] Edited by È. A. Bondarev and N. M. Ohlovkov. Akad. Nauk SSSR Sibirsk. Otdel. Yakutsk. Filial, Yakutsk, 1977. 128 pp. (Editors) 80m:76001 76-02
- Methods of functional analysis in problems of mathematical physics** ★Методы функционального анализа в задачах математической физики. (Russian) [Methods of functional analysis in problems of mathematical physics] Edited by Ju. M. Berezans'kii. Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1978. 183 pp. (Editors) 80d:00014 00A10
- Metric questions of the theory of functions and mappings** ★Метрические вопросы теории функций и отображений. Вып. VII. (Russian) [Metric questions of the theory of functions and mappings. No. VII] Proceedings of the Fourth Donetsk Colloquium on Quasiconformal Mappings and their Generalizations, Donetsk, 1974. Edited by G. D. Suvorov and V. I. Belyi [V. I. Bilii]. "Naukova Dumka", Kiev, 1975. 212 pp. (Editors) 80c:30023 30C06
- ★Метрические вопросы теории функций и отображений. Вып. VI. (Russian) [Metric questions of the theory of functions and mappings. No. VI] Edited by G. D. Suvorov and V. I. Belyi [V. I. Bilii]. "Naukova Dumka", Kiev, 1975. 136 pp. (Editors) 80j:30003 30-06 (41-06)
- Metric theory of mappings** See Questions in the metric theory of mappings and its application, 80j:30004
- Micro-local analysis** See Seminar: Micro-local Analysis, 80d:35005
- Micro-local analysis of linear differential equations** ★Micro-local analysis of linear differential equations. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, January 16-18, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 355 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-138. (Editors) 80d:35004 35-06 (58-06)
- Microprocessors** See Dictionary: Microprocessors, 80j:00011
- Mixed boundary value problems in fluid dynamics** ★Mixed boundary value problems in fluid dynamics. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, July 11-13, 1977. Sūrikaiseikikenkyūsho Kōkyūroku No. 335 (1978). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1978. pp. i-ii and 1-183. (Editors) 80f:76001 76-06
- Modelling** See Measuring, modelling and evaluating computer systems, 80c:68004
- Modelling complex systems** See Questions of modeling complex systems, 80j:90055
- Modelling and control in evolving systems** ★Моделирование и управление в развивающихся системах. (Russian) [Modeling and control in evolving systems] Edited by Ja. Z. Cypkin. "Nauka", Moscow, 1978. 263 pp. (Editors) 80d:93011 93-06 (90A05)
- Modeling, identification and control in environmental systems** ★Modeling, identification and control in environmental systems. Proceedings of the IFIP Working Conference on Modeling and Simulation of Land, Air and Water Resources Systems held in Ghent, August 30-September 2, 1977. Edited by Ghislain C. Vansteenkiste. North-Holland Publishing Co., Amsterdam-New York, 1978. xviii + 1028 pp. ISBN 0-444-85180-1 (Editors) 80a:92004 92-06
- Modelling and optimization of complex systems** ★Modelling and optimization of complex systems. Proceedings of the IFIP-TC 7 Working Conference held in Novosibirsk, July 3-9, 1978. Edited by G. I. Marchuk [G. I. Marčuk]. Lecture Notes in Control and Information Sciences, 18. Springer-Verlag, Berlin-New York, 1979. vi + 293 pp. ISBN 3-540-09612-4 (Editors) 80j:93006 93-06
- Modern geometry** ★Современная геометрия. (Russian) [Modern geometry] Edited by I. Ja. Bakel'man. Leningrad. Gos. Ped. Inst., Leningrad, 1978. 158 pp. (Editors) 80d:53001 53-06
- Modern problems in elastic wave propagation** ★Modern problems in elastic wave propagation. Proceedings of an International Union of Theoretical and Applied Mechanics Symposium held at Northwestern University, Evanston, Ill., September 12-15, 1977. Edited by Julius Miklowitz and Jan D. Achenbach. A Wiley-Interscience Publication. John Wiley & Sons, New York-Chichester-Brisbane, 1978. x + 561 pp. ISBN 0-471-04696-5 (Editors) 80d:73008 73-06
- Module theory** ★Module theory. Proceedings of the Special Session sponsored by the American Mathematical Society at the University of Washington, Seattle, Wash., August 15-18, 1977. Edited by Carl Faith and Sylvia Wiegand. Lecture Notes in Mathematics, 700. Springer-Verlag, Berlin-New York, 1979. x + 239 pp. ISBN 3-540-09107-6 (Editors) 80b:16001 16-06
- Monte Carlo methods in statistical physics** ★Monte Carlo methods in statistical physics. Edited by Kurt Binder. Topics in Current Physics, 7. Springer-Verlag, Berlin-New York, 1979. xiv + 376 pp. ISBN 3-540-09018-5 (Editors) 80j:82010 82A15 (65C05)
- Monterey, Calif.** See Information linkage between applied mathematics and industry, 80c:00004
- Montpellier** See Colloque: Les Formes Quadratiques, 80b:15016
- Moscow** See All-Union Conference: Partial Differential Equations, 80f:35002; Studies in mathematical statistics, 80j:60003; Conference: Mathematical Problems of Quantum Field Theory and Quantum Statistics, 80m:81005a and Conference: Mathematical Problems of Quantum Field Theory and Quantum Statistics, 80m:81005b
- Multibody systems** See Dynamics of multibody systems, 80b:70001
- Multiple-valued logic** See Proceedings: International Symposium on Multiple-Valued Logic, 80d:94001
- Multiply connected systems** See Investigation and optimization of multiply connected systems, 80m:90001
- Multivariate approximation theory** ★Multivariate approximation theory. Proceedings of the Conference held at the Mathematical Research Institute at Oberwolfach, February 4-10, 1979. Edited by Walter Schempp and Karl Zeller. International Series of Numerical Mathematics, 51. Birkhäuser Verlag, Basel-Boston, Mass., 1979. 455 pp. ISBN 3-7643-1102-9 (Editors) 80b:65006 65-06 (41-06)
- Munich** See Dynamics of multibody systems, 80b:70001
- Mysore** See Proceedings: Conference on Mathematical Analysis and Its Applications, 80a:00007
- NATO Advanced Study Institute:**
- Instabilities in Dynamical Systems** See Instabilities in dynamical systems, 80k:70002
- Path Integrals and their Applications in Quantum, Statistical, and Solid State Physics** See Path integrals and their applications in quantum, statistical, and solid state physics, 80c:82019
- Pattern Recognition and Signal Processing** See Pattern recognition and signal processing, 80j:68076
- Polynomial and Spline Approximation** See Polynomial and spline approximation, 80f:41001
- Ring theory** See Ring theory, 80m:16001
- Natural science in Old Russia** See Ideas of natural science in Old Russia, 80g:01008
- Natural sciences** See History and methodology of the natural sciences, 80d:01001
- Navier-Stokes equations** See Turbulence and Navier-Stokes equations, 80m:76003
- New developments in the applications of Bayesian methods** ★New developments in the applications of Bayesian methods. Proceedings of the First European Conference held at Fontainebleau, June 1976. Edited by Ahmet Aykaç and Carlo Brumat. Contributions to Economic Analysis, 119. North-Holland Publishing Co., Amsterdam-New York, 1977. xxiv + 385 pp. ISBN 0-444-85059-7 (Charles F. Manski) 80a:62006 62A15 (62F15, 62P20)
- New York** See IEEE Symposium: Circuits and Systems, 80a:94041; Lectures: Combustion theory, 80b:76001; Fracture mechanics, 80c:73064; Conference: Combinatorial Mathematics, 80j:05003; Topics in graph theory, 80j:05056 and Bifurcation theory and applications in scientific disciplines, 80k:00007



- Nice *See Variétés analytiques compactes*, 80a:32002
- Nijmegen *See Proceedings: Conference on p-adic Analysis*, 80a:12021 and *Numerical analysis of singular perturbation problems*, 80j:65004
- Nomography collection ★ *Номографический сборник*. No. 12. (Russian) [Nomography collection. No. 12] Edited by G. S. Hovanskii. Akad. Nauk SSSR, Vychisl. Centr, Moscow, 1978. 115 pp. (Editors) 80a:65005 65-06 (65S05)
- Noncommutative harmonic analysis ★ *Noncommutative harmonic analysis*. Proceedings of the Third Colloquium held at Marseille-Luminy, June 26-30, 1978. Edited by Jacques Carmona and Michèle Vergne. Lecture Notes in Mathematics, 728. Springer-Verlag, Berlin-New York, 1979. iv + 244 pp. ISBN 3-540-09516-0 (Editors) 80g:22001 22-06 (32-06)
- Nonconvex Analysis *See Analyse non convexe*, 80m:49001
- Nonequilibrium systems *See Stochastic processes in nonequilibrium systems*, 80e:82001
- Nonlinear analysis *See Journées: Analyse Non Linéaire*, 80a:46002; *Proceedings: International Meeting on Recent Methods in Nonlinear Analysis*, 80c:49001 and *Applied nonlinear analysis*, 80d:00003
- Nonlinear analysis and mechanics: Heriot-Watt Symposium ★ *Nonlinear analysis and mechanics: Heriot-Watt Symposium*. Vol. III. Lectures delivered at Heriot-Watt University, Edinburgh, May 1977. Edited by R. J. Knops. Research Notes in Mathematics, 30. Pitman Publishing, Ltd., London-San Francisco, Calif., 1979. v + 173 pp. ISBN 0-273-08432-1 (Editors) 80d:00015 00A10 (35-06, 47-06, 73-06, 92-02)
- Nonlinear discrete systems *See Stability and sensitivity in mechanical systems*, 80e:93004
- Nonlinear dynamics *See Topics in nonlinear dynamics*, 80b:70002
- Nonlinear evolution equations solvable by the spectral transform ★ *Nonlinear evolution equations solvable by the spectral transform*. Lectures presented at the International Symposium held at the Accademia dei Lincei, Rome, June 15-18, 1977. Edited by F. Calogero. Research Notes in Mathematics, 26. Pitman Publishing, Ltd., London-San Francisco, Calif., 1978. xvii + 257 pp. ISBN 0-273-08402-X (Editors) 80a:35003 35-06 (00A10)
- Nonlinear operators *See Theory of nonlinear operators*, 80d:47002
- Nonlinear phenomena ★ *Physics and mechanics of nonlinear phenomena*, 80k:00008
- Nonlinear problems *See Numerical solution of highly nonlinear problems*, 80k:65010
- Nonlinear problems in theoretical physics ★ *Nonlinear problems in theoretical physics*. Proceedings of the IX G.I.F.T. International Seminar on Theoretical Physics held at the University of Zaragoza, Jaca, June 1978. Edited by Antonio F. Rahda. Lecture Notes in Physics, 98. Springer-Verlag, Berlin-New York, 1979. x + 216 pp. (1 plate). ISBN 3-540-09246-3 (Editors) 80d:81002 81-06
- Nonlinear (soliton) structure *See Solitons and condensed matter physics*, 80b:81002
- Nonlinear waves *See Theory of nonlinear waves*, 80a:35004
- Nonsmooth optimization ★ *Nonsmooth optimization*. Proceedings of an International Institute for Applied Systems Analysis Workshop, held in Laxenburg, March 28-April 8, 1977. Edited by Claude Lemaréchal and Robert Mifflin. IASA Proceedings Series, 3. Pergamon Press, Oxford-New York-Toronto, Ont., 1978. vii + 186 pp. ISBN 0-08-023428-3 (Editors) 80d:49002 49-06 (90-06, 93-06)
- Nonstandard analysis *See B-valued analysis and nonstandard analysis*, 80b:03002
- Norman, Okla. *See Proceedings: Topology Conference*, 80i:46002a and *Proceedings: Topology Conference*, 80i:46002b
- Novosibirsk *See Étude numérique des grands systèmes*, 80a:65011; *Numerical methods in mathematical physics, geophysics and optimal control*, 80c:65006; *Computational systems in linear algebra*, 80j:65003 and *Modelling and optimization of complex systems*, 80j:93006
- Nuclear forces *See Few body systems and nuclear forces*, 80m:81083a and *Few body systems and nuclear forces*, 80m:81083b
- Nuclear physics *See Progress in particle and nuclear physics*, 80m:81107
- Number theory *See Séminaire: Delange-Pisot-Poitou*, 80a:10002a; *Séminaire: Delange-Pisot-Poitou*, 80a:10002b; *Studies in algebra and number theory*, 80c:00011; *Studies in number theory (LOMI)*, 80d:10003; *Séminaire: Théorie des Nombres*, 80b:10004; *Séminaire: Delange-Pisot-Poitou*, 80i:10003a; *Séminaire: Delange-Pisot-Poitou*, 80i:10003b and *Algebra, number theory and their applications*, 80k:16004
- Numerical analysis ★ *Numerical analysis*. Lecture notes prepared for the American Mathematical Society Short Course held in Atlanta, Ga., January 3-4, 1978. Edited by Gene H. Golub and Joseph Oliger. Proceedings of Symposia in Applied Mathematics, XXII. American Mathematical Society, Providence, R.I., 1978. viii + 135 pp. ISBN 0-8218-0122-8 (Editors) 80c:65007 65-06
- ★ *Численный анализ*. (Russian) [Numerical analysis] Труды Научно-Исследовательского Вычислительного Центра Московского Государственного Университета и Буковского Университетского Вычислительного Центра. [Works of the Scientific Research Computing Center of Moscow State University and of the Budapest Computing Center for Universities] Edited by V. I. Dmitriev, E. A. Zogolev, D. Olah and T. Markuš. Computing Center for Universities, Budapest, 1978. 82 pp. ISBN 963-451-036-1 (Editors) 80k:65007 65-06
- See also Recent advances in numerical analysis*, 80a:65016; *Stability, bifurcation and buckling in nonlinear elasticity theory and numerical analysis*, 80g:73040 and *Proceedings: Army Numerical Analysis and Computers Conference*, 80m:65004
- Numerical analysis of singular perturbation problems ★ *Numerical analysis of singular perturbation problems*. Proceedings of the Conference held at the Mathematics Institute, Catholic University, Nijmegen, May 30-June 2, 1978. Edited by P. W. Hemker and J. J. H. Miller. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1979. xi + 499 pp. (loose errata). ISBN 0-12-340250-6 (Editors) 80j:65004 65-06
- Numerical computation *See Algorithms in numerical computations*, 80b:65003
- Numerical mathematics ★ *Numerical mathematics*. Symposium on the occasion of the retirement of Lothar Collatz held at the Institute for Applied Mathematics, University of Hamburg, Hamburg, January 25-26, 1979. Edited by R. Ansgore, K. Glaschoff and B. Werner. International Series of Numerical Mathematics, 49. Birkhäuser Verlag, Basel-Boston, Mass., 1979. 207 pp. ISBN 3-7643-1099-5 (Editors) 80m:65003 65-06
- See also Proceedings: Manitoba Conference on Numerical Mathematics and Computing*, 80g:65005
- Numerical methods *See Mathematical models and numerical methods*, 80a:65012

- Numerical methods in continuum mechanics ★ *Численные методы в механике сплошных сред*. (Russian) [Numerical methods in continuum mechanics] Edited by V. M. Paskonov and G. S. Rosjakov. Vychisl. Metody i Programirovanie No. 30 (1979). Moscow. Gos. Univ., Moscow, 1979. pp. 1-159. (Editors) 80k:76001 76-02
- Numerical methods in fluid dynamics ★ *Numerical methods in fluid dynamics*. Edited by Hans Jochen Wirz and J. J. Smolderen. A von Karman Institute Book. Series in Thermal and Fluids Engineering. Hemisphere Publishing Corp., Washington, D.C.-London; McGraw-Hill Book Co., New York, 1978. xiii + 399 pp. ISBN 0-07-071120-8 (Nima Geffen) 80c:76002 76-06 (65-06)
- See also Conference: Numerical Methods in Fluid Dynamics*, 80g:76002
- Numerical methods in mathematical physics, geophysics and optimal control ★ *Вычислительные методы в математической физике, геофизике и оптимальном управлении*. (Russian) [Numerical methods in mathematical physics, geophysics and optimal control] Symposium held in Novosibirsk from June 7-11, 1976. Edited by G. I. Marchuk [G. I. Marčuk] and Ž.-L. Lions [Jacques-Louis Lions]. "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. 237 pp. (Editors) 80c:65006 65-06 (86-06, 93-06)
- Numerical methods for partial differential equations ★ *Numerical methods for partial differential equations*. Proceedings of an Advanced Seminar held at the Mathematics Research Center, University of Wisconsin, Madison, Wis., October 23-25, 1978. Edited by Seymour V. Parter. Publication of the Mathematics Research Center, University of Wisconsin, 42. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1979. ix + 332 pp. ISBN 0-12-546050-3 (Editors) 80k:65008 65-06 (65Nxx)
- Numerical methods and programming ★ *Вычислительные методы и программирование*. Вып. 1. (Russian) [Numerical methods and programming. No. 1] Edited by N. P. Kucpov. Saratov. Gos. Univ., Saratov, 1977. 202 pp. (Editors) 80d:65011 65-06
- Numerical methods and questions in the organization of calculations ★ *Численные методы и вопросы организации вычислений*. (Russian) [Numerical methods and questions in the organization of calculations] Edited by V. N. Kublanovskaja and T. N. Smirnova. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 80 (1978). "Nauka", Leningrad. Otdel., Leningrad, 1978. pp. 3-271. (Editors) 80a:65013 65-06
- ★ *Численные методы и вопросы организации вычислений*, 3. (Russian) [Numerical methods and questions in the organization of calculations. 3] Edited by V. N. Kublanovskaja. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 90 (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. pp. 1-304. (Editors) 80k:65009 65-06
- Numerical modeling *See Applied numerical modelling*, 80m:65001 and *Applied numerical modelling*, 80m:65002
- Numerical models of a plasma *See Two-dimensional numerical models of a plasma*, 80k:82057
- Numerical software—needs and availability ★ *Numerical software—needs and availability*. Proceedings of a Conference held at the University of Sussex, Brighton, September 19-22, 1977. Edited by David A. H. Jacobs. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1978. xviii + 408 pp. ISBN 0-12-378660-6 (Editors) 80k:68009 68Bxx (65-04)
- Numerical solution of highly nonlinear problems ★ *Numerical solution of highly nonlinear problems*. Fixed point algorithms and complementarity problems. Collection of articles based on the lectures presented at the Symposium held at the University of Southampton, Southampton, July 3-5, 1979. Edited by Walter Forster. North-Holland Publishing Co., Amsterdam-New York, 1980. xiii + 439 pp. ISBN 0-444-85427-4 (Editors) 80k:65010 65-06 (55-06)
- Numerical study of large systems *See Étude numérique des grands systèmes*, 80a:65011
- Numerical treatment of differential equations in applications ★ *Numerical treatment of differential equations in applications*. Proceedings of a Meeting held at the Mathematical Research Center, Oberwolfach, December 12-16, 1977. Edited by Rainer Ansgore and Willi Törnig. Lecture Notes in Mathematics, 679. Springer-Verlag, Berlin-New York, 1978. ix + 163 pp. ISBN 3-540-08940-3 (Editors) 80a:65014 65-06
- Numerische Behandlung von Eigenwertaufgaben ★ *Numerische Behandlung von Eigenwertaufgaben*. Band 2. Meeting held at the Technische Universität Clausthal, Clausthal, May 18-20, 1978. Edited by J. Albrecht and L. Collatz. Internationale Schriftenreihe zur Numerischen Mathematik, 43. Birkhäuser Verlag, Basel-Boston, Mass., 1979. 203 pp. ISBN 3-7643-1067-1 (Editors) 80k:65002 65-06
- Numerische Methoden der Approximationstheorie ★ *Numerische Methoden der Approximationstheorie*. Band 4. Selected papers of a meeting held at the Mathematisches Forschungsinstitut, Oberwolfach, November 13-19, 1977. Edited by Lothar Collatz, G. Meinardus and H. Werner [Helmut Werner]. Internationale Schriftenreihe zur Numerischen Mathematik, 42. Birkhäuser Verlag, Basel-Stuttgart, 1978. iii + 344 pp. ISBN 3-7643-1025-1 (Editors) 80a:65015 65-06
- Numerische Methoden bei graphentheoretischen und kombinatorischen Problemen ★ *Numerische Methoden bei graphentheoretischen und kombinatorischen Problemen*. Band 2. Tagung held at the Mathematisches Forschungsinstitut, Oberwolfach, May 7-12, 1978. Edited by Lothar Collatz, G. Meinardus and W. Wetterling. International Series of Numerical Mathematics, 46. Birkhäuser Verlag, Basel-Boston, Mass., 1979. 255 pp. ISBN 3-7643-1078-2 (Editors) 80m:05003 05-06 (68E10)
- Nuremberg *See Jahrestagung: Gesellschaft für Informatik*, 7. 80m:68072a
- Oberwolfach *See Higher set theory*, 80a:03005; *Numerical treatment of differential equations in applications*, 80a:65014; *Numerische Methoden der Approximationstheorie*, 80a:65015; *Measure theory applications to stochastic analysis*, 80c:60006; *Probability in Banach spaces*, 80d:60004; *Probability measures on groups*, 80d:60005; *Ergodic theory*, 80g:28002; *Multivariate approximation theory*, 80k:65006; *Numerische Methoden bei graphentheoretischen und kombinatorischen Problemen*, 80m:05003 and *Free and mixed boundary value problems*, 80m:35001
- Obituary: Almeida Costa, Antonio *See Abellanas, Pedro*, 80c:01009
- Amanov, T. I. T. I. Amanov. (Russian) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1978, no. 5, 91. (Editors) 80g:01035b 01A70
- T. I. Amanov. (Russian) *Vestnik Akad. Nauk Kazah. SSR* 1978, no. 8, 72. (Editors) 80g:01035a 01A70
- Baranyai, Zsolt *See Katona, G. O. H.*, 80c:01015

Obituary: (continued)

- Bořev, L. N. Login Nikolaevič Bořev. (Russian) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 1, 144-145. (Editors) 80m:01041 01A70
- Brumer, Richard Dagobert See Green, J. A., 80g:01024 and Felt, Walter, 80m:01033
- Cummingham, Ebenezer See McCrea, W. H., 80m:01036
- Demidovič, B. P. See Efimov, N. V.; et al., 80a:01031
- Dodge, Harold F. See Tukey, John W., 80m:01038
- Erdélyi, Arthur See Colton, David, 80h:01028
- Fil'čakov, P. F. Pavel Feodorovič Fil'čakov. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 6, 855. (Editors) 80m:01032 01A70
- Fisher, Ronald A. See Box, Joan Fisher, 80i:62002
- Fréchet, Maurice René Maurice Fréchet (1878-1973). (Bulgarian) *Fiz.-Mat. Spis. B'lgar. Akad. Nauk.* 21(54) (1978), no. 4, 327-328 (1979). (Editors) 80h:01032b 01A70
- Gillespie, Robert P. See Martin, D., 80h:01022
- Godeaux, Lucien See Penkov, B., 80e:01028
- Gödel, Kurt Gödel. (German) *Monatsh. Math.* 86 (1978/79), no. 1, 1. (Editors) 80h:01029 01A70 (03-03)
- Graham, Thomas S. See Rankin, R. A., 80h:01024
- Guaracchi, Giacinto See Rizzitelli, Giuseppe, 80h:01025
- Hermelin, Heinrich See Scriba, Christoph J., 80m:01035b and Folkerts, M.; et al., 80m:01035c
- Hermelin, Heinrich See Kennedy, E. S., 80m:01035a
- Hohlov, R. V. To the memory of Rem Viktorovič Hohlov (1926-1977). (Russian) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 4, 3-6 (1 plate). (Editors) 80m:01042 01A70
- Jack, Henry See Sands, Arthur D., 80m:01036
- Julia, Gaston See Cousin, Jean, 80g:01020
- Kaliski, Sylwester Prof. Sylwester Kaliski Ph.D., editor-in-chief of the Journal of Technical Physics, 1925-1978. *J. Tech. Phys.* 19 (1978), no. 3, 281-282. (Editors) 80j:01036 01A70
- Keldyš, M. V. Academician Mstislav Vsevolodovič Keldyš (1911-1978). (Bulgarian) *Fiz.-Mat. Spis. B'lgar. Akad. Nauk.* 21(54) (1978), no. 4, 324-325 (1979). (Editors) 80j:01037d 01A70
- Academician Mstislav Vsevolodovič Keldyš. (Russian) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 3, 106-107. (Editors) 80j:01037b 01A70
- The academician Mstislav Vsevolodovič Keldyš. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 5(203), 3-5 (1 plate). (Editors) 80j:01037a 01A70
- See also Guseinov, A. L.; et al., 80j:01037c
- Lingenberg, Rolf Obituary: Rolf Lingenberg. *J. Geom.* 13 (1979), no. 1, 1. (From the text) 80m:01043 01A70
- Littlewood, John Edensor See Offord, A. C., 80g:01028 and Burkhill, J. C., 80h:01027
- Louell, Georgiou To the memory of George Loulles. *Bull. Soc. Math. Grèce (N.S.)* 19 (1978), no. 2, 153. (1 plate). (Editors) 80h:01030 01A70
- Marschak, Jacob See Stone, Richard, 80d:01021 and Klein, L. R., 80e:01025
- Morse, Marston See Cairns, Stewart S., 80e:01011 and 80d:01020
- Naimark, M. A. Mark Aronovič Naimark. (Russian) *Funkcional. Anal. i Priložen.* 13 (1979), no. 2, i. (Editors) 80e:01033 01A70
- O'Donnell, Michael Patrick See Davis, C. S., 80a:01030
- Oka, Kiyosi See NISHINO, T., 80e:01034
- Picone, Mauro See Bobbio, Norberto, 80e:01023
- Pierucci, Mariano See Pignedoli, Antonio, 80h:01023
- Rabinović, I. M. See Reizip, L.; et al., 80a:01042
- Rajagopal, Cadinbhatir Thiruvankatachari See Sitarman, Y., 80a:01044
- Scheffé, Henry See Brillinger, David R., 80e:01024
- Scherrer, Willy See Hadwiger, H., 80j:01027
- Schmidt, Friedrich Karl See Puppe, Dieter, 80j:01034
- Segre, Beniamino See Vessintini, Edoardo, 80a:01047 and Bobbio, Norberto, 80e:01023
- Šikola, Břetislav See Pítl, Milan, 80j:01033
- Sokolovski, V. V. V. V. Sokolovski (1912-1978). *Arch. Mech. (Arch. Mech. Stos.)* 30 (1978), no. 6, 687. (Editors) 80j:01038 01A70
- Stampacchia, Guido See Mangenot, Enrico; et al., 80e:01016
- Subbaokator, M. A. See Babadžanov, P. B.; et al., 80a:01027
- Togliatti, Eugenio Giuseppe See Bobbio, Norberto, 80e:01023
- Ulm, Sulev In memoriam: Sulev Ulm. (Russian) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* 28 (1979), no. 1, 92. (Editors) 80h:01036 01A70
- Veselovski, I. N. See Rozenfeld, B. A., 80g:01030
- Vranceanu, Gheorghe Academician Professor Gheorghe Vranceanu. (Romanian) *Stud. Cerc. Mat.* 31 (1979), no. 3, 383-386. (Editors) 80h:01037a 01A70
- See also Cristescu, Romulus; et al., 80h:01037b

- Ontologie und Logik/Ontology and logic ★Ontologie und Logik/Ontology and logic. Proceedings of an International Colloquium held in Salzburg, September 21-24, 1976. Edited by Paul Weingartner and Edgar Morscher. *Duncker & Humblot, Berlin*, 1979. 286 pp. ISBN 3-428-04339-1 (Editors) 80j:03007 03-06 (03A05)
- Operations Research Verfahren See Symposium: Operations Research, 80d:90004c
- Operating systems See Selected papers: Operating systems: theory and practice, 80d:69007
- Operating systems: theory and practice ★Operating systems: theory and practice. Proceedings of the Second International Symposium, held at Rocquencourt, October 2-4, 1978. Edited by Didier Lanciaux. *North-Holland Publishing Co., Amsterdam-New York*, 1979. viii + 397 pp. ISBN 0-444-85300-6 (Editors) 80j:68005 68-06 (68B20)
- Operational calculus See Generalized functions and operational calculus, 80f:46003
- Operational research ★Operational research '78. Proceedings of the Eighth IFORS International Conference on Operational Research, held in Toronto, Ont., June 19-23, 1978. Edited by K. B. Haley. *North-Holland Publishing Co., Amsterdam-New York*, 1979. xxvi + 1114 pp. ISBN 0-444-85230-1 (Editors) 80a:90003 90-06
- Operations research See Handbook: Operations research, 80a:90047 and Mathematical methods in operations research and reliability theory, 80m:90002

- Operations research (models, systems, solutions) ★Исследование операций (модели, системы, решения). Вып. 6. (Russian) [Operations research (models, systems, solutions), No. 6] Edited by Ju. G. Evtushenko. *Akad. Nauk SSSR, Vyčisl. Centr, Moscow*, 1978. 155 pp. (Editors) 80d:90031 90Bxx
- Operations Research Verfahren ★Operations Research Verfahren, 30. *Verlag Anton Hain, Meisenheim*, 1979. iv + 214 pp. ISBN 3-445-01908-8 (Editors) 80f:90007 90-06
- See also Symposium: Operations Research, 80d:90004a; Symposium: Operations Research, 80d:90004b; Symposium: Operations Research, 80d:90004c and Symposium: Operations Research, 80d:90004d
- Operator algebras See Proceedings: International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics, 80a:47002; Algèbres d'opérateurs, 80g:46002 and Algèbres d'opérateurs et leurs applications en physique mathématique, 80k:46001
- Operator algebras and their applications ★Operator algebras and their applications. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, March 19-21, 1979. *Sūrikaiseikenkyūsho Kōkyūroku No. 356* (1979). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1979. pp. i-ii and 1-93. (Editors) 80i:46001 46-06
- Operator equations See Qualitative and approximate methods for the investigation of operator equations, 80g:47002 and Qualitative and approximate methods for the investigation of operator equations, 80j:47002
- Operator theory See Spectral theory of operators, 80j:47003
- Operator theory and its application ★Operator theory and its application. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, September 27-29, 1978. *Sūrikaiseikenkyūsho Kōkyūroku No. 338* (1978). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1978. pp. i-ii and 1-107. (Editors) 80i:47001 47-06
- Optimal control See Numerical methods in mathematical physics, geophysics and optimal control, 80e:65006
- Optimization See Coding theory and the optimization of complex systems, 80b:94001 and Structural optimization, 80h:73049
- Optimization of complex systems See Modelling and optimization of complex systems, 80j:93006
- Optimization of multiply connected systems See Investigation and optimization of multiply connected systems, 80m:90001
- Optimizing methods in statistics ★Optimizing methods in statistics. Proceedings of an International Conference held at the Indian Institute of Technology, Bombay, December 20-22, 1977. Dedicated to Henry Scheffé. Edited by Jagdish S. Rustagi. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London*, 1979. xx + 556 pp. (1 plate). ISBN 0-12-604580-1 (Editors) 80d:62003 62-06
- Ordered sets and lattices ★Упорядоченные множества и решетки. Вып. 5. (Russian) [Ordered sets and lattices. No. 5] Edited by V. N. Salii. *Saratov. Gos. Univ., Saratov*, 1978. 119 pp. (Editors) 80j:06001 06Axx
- Ordinary differential equations See Berichte: Tagung Numerische Behandlung gewöhnlicher Differentialgleichungen, 80d:65009
- Orléans See Combes, F.; et al., 80d:46107
- Orsay See Problèmes combinatoires et théorie des graphes, 80e:05005
- Oslo See Generalized recursion theory, 80a:03004
- Otaniemi See Volterra equations, 80i:45002
- Outlines on the history of mathematics and physics in the Ukraine ★Очерки по истории математики и физики на Украине. (Russian) [Outlines on the history of mathematics and physics in the Ukraine] Edited by I. Z. Štokalo. *"Naukova Dumka", Kiev*, 1978. 176 pp. (Editors) 80m:01044 01A72
- Oxford See Solitons and condensed matter physics, 80h:81002
- p-adic analysis See Proceedings: Conference on p-adic Analysis, 80a:12021
- Padé approximation and its applications ★Padé approximation and its applications. Proceedings of a Conference held at the University of Antwerp, Antwerp, April 4-6, 1979. Edited by L. Wuytack. *Lecture Notes in Mathematics*, 765. *Springer-Verlag, Berlin-New York*, 1979. vi + 392 pp. ISBN 3-540-09717-1 (Editors) 80m:41001 41-06 (41A21, 65-06, 65D99)
- Palaiseau See Première classe de Chern et courbure de Ricci: preuve de la conjecture de Calabi, 80j:53064
- Panel data See Colloque: CNRS, Économétrie des Données Individuelles Temporelles, 80a:62003
- Papers: Kalman, Peter J. See Kalman, Peter J., 80d:90018
- Papers in mathematics ★Papers in mathematics. Edited by Paul R. Meyer. *Annals of the New York Academy of Sciences*, 321. *New York Academy of Sciences, New York*, 1979. iv + 101 pp. ISBN 0-89766-026-9 (Editors) 80f:00004 00A10
- Paris See Colloque: CNRS, Économétrie des Données Individuelles Temporelles, 80a:62003; Geometrical probability and biological structures: Buffon's 200th anniversary, 80a:92003; Groupe d'Étude: Théories Stables, 80b:03003; Séminaire: Théorie du Potentiel, 80d:31001; Séminaire: Théorie du Potentiel, 80e:31001; Proceedings: International Conference on Lattice Dynamics, 80f:82001; Biomathematics and cell kinetics, 80f:92009; Séminaire: Delange-Pisot-Poitou, 80i:10003a; Séminaire: Delange-Pisot-Poitou, 80i:10003b; Pattern recognition and signal processing, 80j:68076 and Séminaire: Algèbre Paul Dubreil, 80m:13001
- Park City, Utah See Partial differential equations and geometry, 80d:58002
- Partial differential equations See Contemporary developments in continuum mechanics and partial differential equations, 80a:73003; Journées: Équations aux Dérivées Partielles, 80b:35003; Équations aux dérivées partielles, 80b:35001; Direct and inverse problems for partial differential equations and their applications, 80d:35002; All-Union Conference: Partial Differential Equations, 80f:35002; Journées: Équations aux Dérivées Partielles, 80f:35003; Boundary value problems for partial differential equations, 80i:35003; Séminaire: Goulaouic-Schwartz, 80j:35001; Séminaire: Paul Krée, 80j:46001 and Numerical methods for partial differential equations, 80k:65008
- Partial differential equations and geometry ★Partial differential equations and geometry. Proceedings of a Conference held in Park City, Utah, February 19-23, 1977. Edited by



- Christopher I. Byrnes. Lecture Notes in Pure and Applied Mathematics, 48. Marcel Dekker, Inc., New York-Basel, 1979. x + 323 pp. ISBN 0-8247-6775-6 (Editors) 80d:58002 58-06 (35-06, 53-06)
- Particle physics. See Many degrees of freedom in particle theory, 80j:81086 and Progress in particle and nuclear physics, 80m:81107
- Path integrals and their applications in quantum, statistical, and solid state physics. ★Path integrals and their applications in quantum, statistical, and solid state physics. Proceedings of a NATO Advanced Study Institute held at the State University of Antwerp, Antwerp, July 17-30, 1977. Edited by George J. Papadopoulos and Jozef T. Devreese. NATO Advanced Study Institute Series, Ser. B: Physics, 34. Plenum Press, New York-London, 1978. x + 515 pp. ISBN 0-306-40017-0 (Editors) 80c:82019 82A15 (82-06)
- Pattern recognition and signal processing. ★Pattern recognition and signal processing. Proceedings of the NATO Advanced Study Institute held at the E.N.S.T. (Dept. of Electronics), Paris, June 25-July 4, 1978. Edited by C. H. Chen. NATO Advanced Study Institute Series, Ser. E: Applied Sciences, 29. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn, 1978. xi + 655 pp. ISBN 90-286-0978-4 (Editors) 80j:68076 68G10 (94A05)
- Pan. See Analyse non convexe, 80m:49001
- Permutation groups. See Seminar: Permutation Groups and Related Topics, 80c:20002
- Pfaff systems. See Equations différentielles et systèmes de Pfaff dans le champ complexe, 80f:34003
- Philosophical logic. ★Philosophical logic. Synthèse 42 (1979), no. 2. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1979. pp. 223-351. (Editors) 80k:03003 03-06 (03A05)
- Physical and technical applications of boundary value problems. ★Физико-технические приложения краевых задач. (Russian) [Physical and technical applications of boundary value problems] Edited by V. S. Koroljuk. "Naukova Dumka", Kiev, 1978. 244 pp. (loose errata) (Editors) 80a:00006 00A10
- Physical theory as logico-operational structure. ★Physical theory as logico-operational structure. Edited by Clifford Alan Hooker. University of Western Ontario Series in Philosophy of Science, 7. D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1979. xvii + 334 pp. ISBN 90-277-0711-1 (Editors) 80b:81001 81-06 (03A05, 81B05)
- Physico-technological questions in cybernetics. ★Физико-технологические вопросы кибернетики. (Russian) [Physico-technological questions in cybernetics] Edited by V. P. Derkač and V. M. Korsunskii. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978. 92 pp. (Vadim Komkov) 80j:80004a 80A20
- Physics. See Mechanics and physics in the second half of the 18th century, 80d:01003 and Proceedings: Symposium on the Foundations of Modern Physics, 80b:81002
- Physics and mechanics of nonlinear phenomena. ★Физика и механика нелинейных явлений. (Russian) [Physics and mechanics of nonlinear phenomena] Edited by A. I. Lur'e. "Naukova Dumka", Kiev, 1979. 212 pp. (Editors) 80k:00008 00A10
- Pittsburgh, Pa. See Constructive approaches to mathematical models, 80k:00021
- Plan-sur-Bex. See Algèbres d'opérateurs, 80g:46002
- Plasticity. See Investigation of questions in the theory of elasticity and plasticity, 80b:73001 and Studies in elasticity and plasticity, 80d:73004
- Poços de Caldas. See Proceedings: Brazilian Mathematical Colloquium, 80c:00008; Proceedings: Brazilian Mathematical Colloquium, 80c:00009; Proceedings: Brazilian Mathematical Colloquium, 80c:00010a; Proceedings: Brazilian Mathematical Colloquium, 80c:00010b; Proceedings: Brazilian Mathematical Colloquium, 80c:00017a and Proceedings: Brazilian Mathematical Colloquium, 80d:00017b
- Point-to-set maps and mathematical programming. ★Point-to-set maps and mathematical programming. Edited by P. Huard. Math. Programming Stud. No. 10 (1979). North-Holland Publishing Co., Amsterdam, 1979. pp. i-viii and 1-190. (Editors) 80j:90074 90Cxx
- Polyhedral combinatorics. ★Polyhedral combinatorics. Dedicated to the memory of Delbert Ray Fulkerson. Edited by M. L. Balinski and A. J. Hoffman. Math. Programming Stud. No. 8 (1978). North-Holland Publishing Co., Amsterdam, 1978. pp. i-viii + 1-234. (1 plate). (Editors) 80c:05003 05-06 (01A70, 90-06)
- Polynomial and spline approximation. ★Polynomial and spline approximation. Theory and applications. Proceedings of the NATO Advanced Study Institute held at the University of Calgary, Calgary, Alta., August 26-September 2, 1978. Edited by Badri N. Sahney. NATO Advanced Study Institute Series, Ser. C: Mathematical and Physical Sciences, 49. D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1979. vii + 321 pp. ISBN 90-277-0984-X (Editors) 80f:41001 41-06
- Portfolio theory, 25 years after. ★Portfolio theory, 25 years after. Essays in honor of Harry Markowitz. Edited by E. J. Elton and M. J. Gruber. Studies in the Management Sciences, 11. North-Holland Publishing Co., Amsterdam-New York, 1979. viii + 256 pp. ISBN 0-444-85279-4 (Editors) 80k:90001 90-06 (90A99)
- Potential theory. See Séminaire: Théorie du Potentiel, 80d:31001 and Séminaire: Théorie du Potentiel, 80c:31001
- Prague. See Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80a:62005; Industrial revolution, education, science, 80c:01007; Equidiff, 80c:34002; Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80d:62004a; Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80d:62004b and Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80c:60004
- Preliminary study of mathematical methods in the problem of train scheduling. A preliminary study of mathematical methods in the problem of train scheduling. (Chinese) Acta Math. Appl. Sinica 1 (1978), no. 2, 91-105. (Robert Chen) 80d:90090 90B35
- Première classe de Chern et courbure de Ricci: preuve de la conjecture de Calabi. ★Première classe de Chern et courbure de Ricci: preuve de la conjecture de Calabi. Lectures presented at a Séminaire held at the Centre de Mathématiques de l'École Polytechnique, Palaiseau, March-June 1978. Astérisque, 58. Société Mathématique de France, Paris, 1978. 169 pp. (H. Wu) 80j:53064 53C55 (32C10)
- Princeton, N.J. See Seminar: Singularities of Solutions of Linear Partial Differential Equations, 80g:35003
- Principes physiques et mathématiques de la télé-détection. ★Principes physiques et mathématiques de la télé-détection. Notes on the lectures delivered at the Summer School of Space Physics in Strasbourg, August 18-September 15, 1978. Département des Affaires Universitaires, Centre National d'Études Spatiales, Toulouse, 1979. xix + 833 pp. (Editors) 80k:86012 86A35 (68-06)
- Principles of the construction of information disseminating devices. ★Принципы построения устройств распределения информации. (Russian) [Principles of the construction of information disseminating devices] Edited by V. G. Lazarev and N. Ja. Parlenkov. Автоматы и Управление. [Automata and Control] "Nauka", Moscow, 1978. 163 pp. (Editors) 80a:94002 94-06
- Probabilistic analysis and related topics. ★Probabilistic analysis and related topics. Vol. 2. Edited by Albert T. Bharucha-Reid. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. ix + 207 pp. ISBN 0-12-095602-0 (Editors) 80j:60001 60-06 (82A05, 93E20)
- Probability. See Selected translations in mathematical statistics and probability, 80a:00000; École d'Été: Probabilités de Saint-Flour, 80a:60005; Studies in probability and ergodic theory, 80b:28001; École d'Été: Calcul des Probabilités de Saint-Flour, 80d:60003; Séminaire: Probabilités, 80d:60007; Séminaire: Probabilités, 80f:60003 and Proceedings: National Symposium on Probability and Statistics, 80j:62004
- Probability on Banach spaces. ★Probability on Banach spaces. Edited by James Kuelbs. Advances in Probability and Related Topics, 4. Marcel Dekker, Inc., New York-Basel, 1978. ix + 521 pp. ISBN 0-8247-6799-3 (Editors) 80c:60007 60-06
- ★Probability in Banach spaces. II. Proceedings of the Second International Conference, Oberwolfach, June 18-24, 1978. Edited by Anatole Beck. Lecture Notes in Mathematics, 709. Springer-Verlag, Berlin-New York, 1979. iv + 205 pp. ISBN 3-540-09242-0 (Editors) 80d:60004 60-06 (28-06)
- Probability distributions. See Investigations in the theory of probability distributions, 80c:60005
- Probability distributions in infinite-dimensional spaces. ★Вероятностные распределения в бесконечномерных пространствах. (Russian) [Probability distributions in infinite-dimensional spaces] Edited by A. V. Skorohod. Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1978. 179 pp. (Editors) 80j:60002 60-06
- Probability measures on groups. ★Probability measures on groups. Proceedings of the Fifth Conference held in Oberwolfach, January 29-February 4, 1978. Edited by Herbert Heyer. Lecture Notes in Mathematics, 706. Springer-Verlag, Berlin-New York, 1979. xiii + 348 pp. ISBN 3-540-09124-6 (Editors) 80d:60005 60-06 (43-06)
- Probability processes and control. ★Вероятностные процессы и управление. (Russian) [Probability processes and control] Edited by V. I. Arkin. "Nauka", Moscow, 1978. 205 pp. (Editors) 80d:93012 93-06 (93E20)
- Probability theory. ★Probability theory. Papers presented at the VIIIth Semester at the Stefan Banach International Mathematical Center, Warsaw, February 11-June 11, 1976. Edited by Zbigniew Ciesielski. Banach Center Publications, 5. PWN—Polish Scientific Publishers, Warsaw, 1979. 289 pp. ISBN 83-01-01492-X (Editors) 80m:60003 60-06
- See also Studies in probability theory, 80c:60007; Mathematical analysis and probability theory, 80i:30001; Studies in mathematical statistics, 80j:60003 and Analytic function methods in probability theory, 80m:60002
- Probability theory on vector spaces. ★Probability theory on vector spaces. Proceedings of a Conference held at Trzebiezowice, September 1-7, 1977. Edited by Aleksander Weron. Lecture Notes in Mathematics, 656. Springer-Verlag, Berlin-New York, 1978. viii + 274 pp. ISBN 3-540-08846-6 (Editors) 80c:60008 60-06 (28-06, 46-06, 60Bxx)
- Problem analysis in science and engineering. ★Problem analysis in science and engineering. Outgrowth of the Interdisciplinary Conference held at the University of Waterloo, Waterloo, Ont., in May 1975. Edited by F. H. Brannin, Jr. and K. Hueylin. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1977. xiii + 514 pp. ISBN 0-12-125550-6 (A. A. Mullin) 80k:00004 00A69 (22E99, 58C28, 90A16)
- Problem, method, solution: Techniques of creative thinking. ★Zadanie, metoda, rozwiązanie. (Polish) [Problem, method, solution] Techniki twórczego myślenia zbior [Techniques of creative thinking]. 2. Edited by Andrzej Góralski. Wydawnictwa Naukowo-Techniczne (WNT), Warsaw, 1978. 200 pp. (loose errata; foldout). (Editors) 80a:00015 00A25
- Problems: Combinatorics. Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976). pp. 437-443, Colloques Internat. CNRS, 260, CNRS, Paris, 1978. (Editors) 80g:05001 05-XX (05Bxx, 05Cxx)
- Problèmes combinatoires et théorie des graphes. ★Problèmes combinatoires et théorie des graphes. Colloque International CNRS held at the Université d'Orsay, Orsay, July 9-13, 1976. Colloques Internationaux du Centre National de la Recherche Scientifique, 260. Éditions du Centre National de la Recherche Scientifique (CNRS), Paris, 1978. xiv + 443 pp. ISBN 2-222-02070-0 (Editors) 80c:05005 05-06
- Problems: Algebraic combinatorics. See Unsolved problems, 80j:05001
- Combinatorics. Problems. Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976). Vol. II, pp. 1189-1220, Colloq. Math. Soc. János Bolyai, 18, North-Holland, Amsterdam, 1978. (Editors) 80c:05003 05-02
- Graph theory. Unsolved problems. Graph theory and related topics (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977), pp. 357-371, Academic Press, New York, 1979. (Editors) 80g:05029 05Cxx (05-02)
- Module theory. Problems. Module theory (Proc. Special Session, Amer. Math. Soc., Univ. Washington, Seattle, Wash., 1977), pp. 215-239, Lecture Notes in Math., 700, Springer, Berlin, 1979. (Editors) 80k:16003 16-02 (13-02)
- Problems of continuum mechanics. ★Некоторые задачи механики сплошных сред. (Russian) [Problems of continuum mechanics] Edited by P. F. Fil'akov. Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1978. 177 pp. (Editors) 80d:73009 73-06
- Problems in the diffraction and propagation of waves. ★Проблемы дифракции и распространения волн. XVI. (Russian) [Problems in the diffraction and propagation of waves. No. 16] Edited by É. M. Gjunninen. Leningrad. Univ., Leningrad, 1978. 271 pp. (Editors) 80j:78002 78-06
- Problems of electrodynamics and continuum mechanics. ★Вопросы электродинамики и механики сплошных сред. IV. (Russian) [Problems of electrodynamics and continuum mechanics. IV] Edited by Ju. Ja. Mikeřon [J. Mikeřon]. Lato. Gar. Univ., Riga, 1978. 143 pp. (Editors) 80g:73005 73-06 (78-06)

**Problems in geometry** ★Проблемы геометрии. Том 10. (Russian) [Problems in geometry. Vol. 10] Edited by R. V. Gamkrelidze. Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR Vsesojuz. Inst. Nauch. Tehn. Informacii, Moscow, 1978. 224 pp. (errata insert). (Editors) 80d:53002 53-06

**Problems of group theory and homological algebra** ★Вопросы теории групп и гомологической алгебры. Вып. 1. (Russian) [Problems of group theory and homological algebra. No. 1] Edited by A. L. Oniščik. Jaroslavl. Gos. Univ., Jaroslavl, 1977. 222 pp. (Editors) 80g:00006 00A10

**Problems of Mathematical Analysis** See Boundary value problems. Spectral theory, 80k:35003

**Problems of quantum physics** ★Проблемы квантовой физики. (Russian) [Problems of quantum physics] Edited by Ju. I. Zaparovannyi. Univ. Družby Narodov im. Patrisa Lumumby, Moscow, 1977. 106 pp. (Editors) 80m:81068 81E99

#### Proceedings:

**Annual Southeastern Symposium on System Theory** ★Proceedings of the Eleventh Annual Southeastern Symposium on System Theory. Held at Clemson University, Clemson, S.C., March 12-13, 1979. Institute of Electrical and Electronics Engineers, Inc. (IEEE), New York, 1979. vii + 249 pp. (Editors) 80j:93007 93-06 (94-06)

**Army Numerical Analysis and Computers Conference** ★Proceedings of the 1979 Army Numerical Analysis and Computers Conference. Held at the White Sands Missile Range, White Sands, N.M., February 14-16, 1979. ARO Report 79, 3. U. S. Army Research Office, Research Triangle Park, N.C., 1979. xiii + 483 pp. (Editors) 80m:65004 65-06

**Bicentennial Congress Wiskundig Genootschap** ★Proceedings. Bicentennial Congress Wiskundig Genootschap. Part I. Held with the 14th Dutch Mathematical Congress at the Vrije Universiteit, Amsterdam, March 29-31, 1978. Edited by P. C. Baayen, D. van Dulst and J. Oosterhoff. Mathematical Centre Tracts, 100. Mathematisch Centrum, Amsterdam, 1979. xiv + 212 pp. (6 plates). ISBN 90-6196-168-8 (Editors) 80d:00016a 00A10

★Proceedings. Bicentennial Congress Wiskundig Genootschap. Part II. Held with the 14th Dutch Mathematical Congress at the Vrije Universiteit, Amsterdam, March 29-31, 1978. Edited by P. C. Baayen, D. van Dulst and J. Oosterhoff. Mathematical Centre Tracts, 101. Mathematisch Centrum, Amsterdam, 1979. pp. 213-431. ISBN 90-6196-169-6 (Editors) 80d:00016b 00A10

**Brazilian Mathematical Colloquium** ★Atas do Oitavo Colóquio Brasileiro de Matemática. (Portuguese) [Proceedings of the Eighth Brazilian Mathematical Colloquium] Held at Poços de Caldas, July 5-23, 1971. Instituto de Matemática Pura e Aplicada, Rio de Janeiro, 1977. i + 150 pp. (Editors) 80c:00008 00A10

★Atas do Nono Colóquio Brasileiro de Matemática. Vol. I. (Portuguese) [Proceedings of the Ninth Brazilian Mathematical Colloquium. Vol. I] Held at Poços de Caldas, July 9-28, 1973. Instituto de Matemática Pura e Aplicada, São Paulo, 1977. 231 pp. (Editors) 80d:00017a 00A10

★Atas do Nono Colóquio Brasileiro de Matemática. Vol. II. (Portuguese) [Proceedings of the Ninth Brazilian Mathematical Colloquium. Vol. II] Held at Poços de Caldas, July 9-28, 1973. Instituto de Matemática Pura e Aplicada, São Paulo, 1977. pp. 233-437. (Editors) 80d:00017b 00A10

★Atas do Décimo Colóquio Brasileiro de Matemática. Vol. I. (Portuguese) [Proceedings of the Tenth Brazilian Mathematical Colloquium. Vol. I] Held at Poços de Caldas, July 7-26, 1975. Conselho Nacional de Desenvolvimento Científico e Tecnológico, Instituto de Matemática Pura e Aplicada, Rio de Janeiro, 1978. vi + 320 pp. (Editors) 80c:00009a 00A10

★Atas do Décimo Colóquio Brasileiro de Matemática. Vol. II. (Portuguese) [Proceedings of the Tenth Brazilian Mathematical Colloquium. Vol. II] Held at Poços de Caldas, July 7-26, 1975. Conselho Nacional de Desenvolvimento Científico e Tecnológico, Instituto de Matemática Pura e Aplicada, Rio de Janeiro, 1978. pp. i-vi and 321-632. (Editors) 80c:00009b 00A10

★Atas do Décimo Primeiro Colóquio Brasileiro de Matemática. Vol. I. (Portuguese) [Proceedings of the Eleventh Brazilian Mathematical Colloquium. Vol. I] Held at Poços de Caldas, July 11-23, 1977. Instituto de Matemática Pura e Aplicada, Rio de Janeiro, 1978. iv + 452 pp. (Editors) 80c:00010a 00A10

★Atas do Décimo Primeiro Colóquio Brasileiro de Matemática. Vol. II. (Portuguese) [Proceedings of the Eleventh Brazilian Mathematical Colloquium. Vol. II] Held at Poços de Caldas, July 11-23, 1977. Instituto de Matemática Pura e Aplicada, Rio de Janeiro, 1978. pp. i-iv and 453-904. (Editors) 80c:00010b 00A10

**Bremer Konferenz zur Chemie** ★Proceedings of Bremer Konferenz zur Chemie. Part I. Held at the Universität Bremen, Bremen, June 12-16, 1978. Edited by P. J. Plath. Match No. 6 (1979). Max-Planck-Institut für Kohlenforschung, Institut für Strahlenchemie, Mülheim, 1979. pp. i-v and 1-279. (Editors) 80k:92018a 92A40

★Proceedings of Bremer Konferenz zur Chemie. Part II. Held at the Universität Bremen, Bremen, June 12-16, 1978. Edited by P. J. Plath. Match No. 7 (1979). Max-Planck-Institut für Kohlenforschung, Institut für Strahlenchemie, Mülheim, 1979. pp. i-iv and 1-355. (Editors) 80k:92018b 92A40

**Brescia Mathematical Seminar** ★Rendiconti del Seminario Matematico di Brescia. Vol. 3. (Italian) [Proceedings of the Brescia Mathematical Seminar. Vol. 3] Vita e Pensiero. [Life and Thought] Università Cattolica del Sacro Cuore, Milan, 1979. 180 pp. (Editors) 80m:00003 00A10

**Business and Economic Statistics Section, American Statistical Association** ★1978 Proceedings of the Business and Economic Statistics Section, American Statistical Association. Papers presented at the Annual Meeting held in San Diego, Calif., August 14-17, 1978. American Statistical Association, Washington, D.C., 1978. xiii + 872 pp. (Editors) 80k:62003 62-06

**CERN School of Physics** ★Proceedings of the 1978 CERN School of Physics. Held in Austerlitz-Zeist, June 4-17, 1978. CERN, 78-10. CERN—Organisation Européenne pour la Recherche Nucléaire, Geneva, 1978. ix + 123 pp. (Editors) 80k:81119a 81E15

**Commemorative Meeting for the Second Centennial of the Birth of Carl Friedrich Gauss and the 150th Anniversary of the Death of Pierre Simon Laplace** ★Atti del Convegno Celebrativo del 2° Centenario della Nascita di Carl Friedrich Gauss e del 150° Anniversario della Morte di Pierre Simon de Laplace 24 Ottobre 1977.

(Italian) [Proceedings of the Meeting to Commemorate the Second Centennial of the Birth of Carl Friedrich Gauss, and the 150th Anniversary of the Death of Pierre Simon de Laplace, October 24, 1977] Held at the Accademia delle Scienze, Turin, October 24, 1977. In commemoration of the bicentennial of the birth of Amadeo Avogadro, December 15, 1977. Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur. 112 (1978), suppl. Accademia delle Scienze di Torino, Turin, 1978. 115 pp. (Editors) 80j:01901 01-06 (01A70)

**Conference on the Design of Experiments** ★Proceedings of the Twenty-Fourth Conference on the Design of Experiments. Held at the Mathematics Research Center, University of Wisconsin, Madison, Wis., October 4-6, 1978. ARO Report 79, 2. U. S. Army Research Office, Research Triangle Park, N.C., 1979. xv + 416 pp. (Editors) 80j:62003 62-06

**Conference on Mathematical Analysis and its Applications** ★Proceedings of the Conference on Mathematical Analysis and its Applications. Held at the Institution of Engineers, Mysore, September 7-10, 1977. Edited by N. R. Ranganathan. Matscience Report, 91. MATSCIENCE—The Institute of Mathematical Sciences, Madras, 1978. iii + M189 + P96 pp. (Editors) 80a:00007 00A10

**Conference on p-adic Analysis** ★Proceedings of the Conference on p-adic Analysis. Held in Nijmegen, January 16-20, 1978. Report, 7806. Katholieke Universiteit, Mathematisch Instituut, Nijmegen, 1978. ii + 224 pp. (Editors) 80a:12021 12B40

**Conference Topology and Measure** ★Proceedings of the Conference Topology and Measure. I. Part I. Held in Zinnowitz, October 21-25, 1974. Edited by J. Flachsmeier, Z. Frolik and F. Terpe. Wissenschaftliche Beiträge. Ernst-Moritz-Arndt-Universität, Greifswald, 1978. vii + 198 pp. (Editors) 80d:2001a 28-06

★Proceedings of the Conference Topology and Measure. I. Part 2. Held in Zinnowitz, October 21-25, 1974. Edited by J. Flachsmeier, Z. Frolik and F. Terpe. Wissenschaftliche Beiträge. Ernst-Moritz-Arndt-Universität, Greifswald, 1978. pp. i-iv and 199-402. (Editors) 80d:2002b 28-06

**Conference of Young Scientists of the Institute of Cybernetics** ★Proceedings of the Conference of Young Scientists of the Institute of Cybernetics, Academy of Sciences of the Ukrainian SSR, dedicated to 18th Congress of the Young Communist League. Dedicated to the 18th Congress of the Young Communist League. Avtomatika II (1978), no. 5, 3-50. Soviet Automat. Control 11 (1978), no. 51-41. Scripta Publishing Co., Washington, D.C., 1979. ii + 75 pp. (Editors) 80f:93004 93-06

**Congress of Mathematicians** ★Proceedings of the International Congress of Mathematicians. Vol. 1, 2. Held in Helsinki, August 15-23, 1978. Edited by Olli Lehto. Academia Scientiarum Fennica, Helsinki, 1980. 1022 pp. (the two volume set). ISBN 951-41-0352-1 (Editors) 80m:00004 00A10

**Franco-Southeast Asian Mathematical Conference** ★Proceedings of the First Franco-Southeast Asian Mathematical Conference. Held at Nanyang University, Singapore, May 14-June 1, 1979. Southeast Asian Bull. Math. 1979, Special Issue a. Southeast Asian Mathematical Society, Singapore, 1979. pp. 1-171. (Editors) 80k:00009 00A10

**IEEE Symposium on Computer Arithmetic** ★Proceedings of the 4th IEEE Symposium on Computer Arithmetic. Held in Santa Monica, Calif., October 25-27, 1978. Dedicated to Antonin Svoboda. IEEE Computer Society Publications Office, Long Beach, Calif., 1978. xi + 274 pp. (1 plate). (Editors) 80c:68001 68-06 (68Bxx)

**International Conference on Lattice Dynamics** ★Proceedings of the International Conference on Lattice Dynamics. Held in Paris, September 5-9, 1977. Edited by Minko Balkanski. Flammarion Sciences, Paris, 1978. xvi + 794 pp. ISBN 2-257-15014-7 (Editors) 80f:82001 82-06

**International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics** ★Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics. Held at Leipzig, September 12-20, 1977. Edited by Hellmut Baumgärtel, G. Lassner, Albrecht Pletsch and A. Uhlmann. Teubner-Texte zur Mathematik. BSB B. G. Teubner Verlagsgesellschaft, Leipzig, 1978. 376 pp. (Editors) 80a:47002 47-06 (46-06, 81-06)

**International Meeting on Recent Methods in Nonlinear Analysis** ★Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis. Edited by Ennio De Giorgi, Enrico Magenes and Umberto Mosco. Piagora Editrice, Bologna, 1979. iv + 669 pp. (Editors) 80c:49001 49-06

**International Symposium on Multiple-Valued Logic** ★Proceedings of the Ninth International Symposium on Multiple-Valued Logic. Held at Bath, 1979. IEEE Computer Society Publications Office, Long Beach, Calif., 1979. v + 303 pp. (Editors) 80k:94001 94-06 (03B50, 68-06)

**International Symposium on Stochastic Differential Equations** ★Proceedings of the International Symposium on Stochastic Differential Equations. Held at the Research Institute for Mathematical Sciences, Kyoto Univ., Kyoto, July 9-14, 1978. Edited by Kiyosi Itô. A Wiley-Interscience Publication. John Wiley & Sons, New York-Chichester-Brisbane, 1978. xxx + 507 pp. ISBN 0-471-05375-9 (Editors) 80d:60006 60-06

**Manitoba Conference on Numerical Mathematics and Computing** ★Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing. Held at the University of Manitoba, Winnipeg, Man., September 28-30, 1978. Edited by D. McCarthy [David McCarthy] and H. C. Williams. Congressus Numerantium, XXII. Utilitas Mathematica Publishing, Inc., Winnipeg, Man., 1979. vi + 487 pp. ISBN 0-919628-22-2 (Editors) 80g:65005 65-06

**National Symposium on Probability and Statistics** ★Atas do 3° Simpósio Nacional de Probabilidade e Estatística. (Portuguese) [Proceedings of the 3rd National Symposium on Probability and Statistics] Held at the Instituto de Matemática e Estatística, Universidade de São Paulo, São Paulo, July 24-28, 1978. Universidade de São Paulo, Instituto de Matemática e Estatística, São Paulo, 1979. vi + 199 pp. (Editors) 80j:62004 62-06 (60-06)

**Rolf Nevanlinna Symposium on Complex Analysis** ★Proceedings of the Rolf Nevanlinna Symposium on Complex Analysis. Held at the Mathematical Research Institute of the University of Istanbul in Silivri, September 20-25, 1976. Publication of the Mathematical Research Institute, Istanbul, 7. University of Istanbul, Mathematical Research Institute, Istanbul, 1978. iv + 142 pp. (Editors) 80c:30004 30-06



## Proceedings: (continued)

- Seminar on Differential Equations** ★Труды семинара по дифференциальным уравнениям. Вып. 3. (Russian) [Proceedings of a Seminar on Differential Equations. No. 3] Edited by V. V. Strygin and L. M. Berković. *Kybyšev. Gos. Univ., Kybyšev*, 1977. 151 pp. (Editors) **80k:34002** 34-06 (35-06)
- Southeastern Conference on Combinatorics, Graph Theory and Computing** ★Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing. Held at Florida Atlantic University, Boca Raton, Fla., January 30-February 2, 1978. Edited by Frederick Hoffman, D. McCarthy, Ronald C. Mullin and Ralph G. Stanton. Congressus Numerantium, XXI. *Utilitas Mathematica Publishing, Inc., Winnipeg, Man.*, 1978. x + 694 pp. (1 plate). ISBN 0-919628-21-4 (Editors) **80a:05004** 05-06 (68E10, 94C15)
- Symposium on the Foundations of Modern Physics** ★Proceedings of the Symposium on the Foundations of Modern Physics. Held in Loma-Koli, August 11-18, 1977. Edited by Veikko Karimäki. Publications of the University of Joensuu, Series BI, 14. *University of Joensuu, Joensuu*, 1978. xi + 316 pp. ISBN 951-696-176-2 (Editors) **80h:81002** 81-06
- Symposium on Graph Theory** ★Proceedings of the Symposium on Graph Theory. Held at the Indian Statistical Institute, Calcutta, December 20-25, 1976. Edited by A. Ramachandra Rao. ISI Lecture Notes, 4. *Macmillan Co. of India, Ltd., New Delhi*, 1979. vii + 304 pp. ISBN 0-33390-273-4 (Editors) **80j:05055** 05Cxx (05-06)
- Symposium on Modular Representations of Finite Groups** ★Proceedings of the Symposium on Modular Representations of Finite Groups. Held at the Mathematics Institute, University of Aarhus, Aarhus, August 24-30, 1978. Various Publications Series, 29. *Matematisk Institut, Aarhus Universitet, Aarhus*, 1978. ii + 47 pp. (Editors) **80d:20002** 20-06 (20C20)
- Symposium on Semigroups** ★Proceedings of the 2nd Symposium on Semigroups. Held at Tokyo Gakugei University, Tokyo, October 1978. *Tokyo Gakugei University, Tokyo*, 1978. 80 pp. (Editors) **80e:20069** 20Mxx (20-06)
- Topology Conference** ★The Proceedings of the 1977 Topology Conference. I. Held at Louisiana State University, Baton Rouge, La., 1977. Edited by Włodzimierz Kuperberg, G. M. Reed and Philip Zenor. Topology Proc. 2 (1977), no. 1 (1978). *Auburn University, Mathematics Department, Auburn, Ala.*, 1978. pp. 1-370. (Editors) **80i:54001a** 54-06
- ★The Proceedings of the 1977 Topology Conference. II. Held at the Louisiana State University, Baton Rouge, La., 1977. Edited by Włodzimierz Kuperberg, G. M. Reed and Philip Zenor. Topology Proc. 2 (1977), no. 2 (1979). *Auburn University, Mathematics Department, Auburn, Ala.*, 1978. pp. 371-690. (Editors) **80i:54001b** 54-06
- ★The Proceedings of the 1978 Topology Conference. I. Held at the University of Oklahoma, Norman, Okla., 1978. Edited by Włodzimierz Kuperberg, G. M. Reed and Philip Zenor. Topology Proc. 3 (1978), no. 1 (1979). *Auburn University, Mathematics Department, Auburn, Ala.*, 1979. pp. 1-300. (Editors) **80i:54002a** 54-06
- ★The Proceedings of the 1978 Topology Conference. II. Held at the University of Oklahoma, Norman, Okla., 1978. Edited by Włodzimierz Kuperberg, G. M. Reed and Philip Zenor. Topology Proc. 3 (1978), no. 2 (1979). *Auburn University, Mathematics Department, Auburn, Ala.*, 1979. pp. 301-548. (Editors) **80i:54002b** 54-06
- Proceedings of Symposia in Applied Mathematics** See Numerical analysis, **80c:65007**
- Proceedings of Symposia in Pure Mathematics** See Relations between combinatorics and other parts of mathematics, **80a:05005**; Algebraic and geometric topology, **80d:57001a**; Algebraic and geometric topology, **80d:57001b**; Harmonic analysis in Euclidean spaces, **80f:42001a**; Harmonic analysis in Euclidean spaces, **80f:42001b**; Automorphic forms, representations and L-functions, **80g:10002a** and Automorphic forms, representations and L-functions, **80g:10002b**
- Programiersprachen** ★Programiersprachen. 5. Fachtagung der Gesellschaft für Informatik (GI) held at Braunschweig, March 8-9, 1978. Edited by Klaus Alber. Informatik-Fachberichte, 12. *Springer-Verlag, Berlin-New York*, 1978. vi + 179 pp. ISBN 3-540-08680-3 (Editors) **80j:68010** 68Bxx
- Programming. See Automata, languages and programming, 80c:68003**; Numerical methods and programming, **80d:65011**; Synthèse, manipulation et transformation de programmes, **80f:68011** and Semi-infinite programming, **80j:90005**
- Programming concepts** See Formal description of programming concepts, **80d:68004**
- Programming languages** See Programiersprachen, **80f:68010**
- Programming methodology** ★Programming methodology. A collection of articles by members of IFIP WG2.3. Edited by David Gries. Texts and Monographs in Computer Science. *Springer-Verlag, New York-Heidelberg*, 1978. xiv + 437 pp. ISBN 0-387-90329-1 (From the preface) **80i:68005** 68Bxx (68-01)
- Programming systems** See Questions in the construction of programming systems, **80c:68006**
- Progress in cybernetics and systems research** ★Progress in cybernetics and systems research. Vol. V. Organization and management, organic problem-solving in management, system approach in urban and regional planning, computer performance, control and evaluation, computer linguistics. Edited by Robert Trappi, F. de P. Hanika and Franz R. Pichler. *Hemisphere Publishing Corp., Washington, D.C.-London; John Wiley & Sons, New York-Chichester-Brisbane*, 1979. xv + 683 pp. ISBN 0-470-26553-1 (Editors) **80c:68005** 68-06 (90A05, 93-06)
- Progress in particle and nuclear physics** ★Progress in particle and nuclear physics. Vol. 2. Edited by Denys Wilkinson. *Pergamon Press, Oxford-New York-Toronto, Ont.*, 1979. iii + 293 pp. ISBN 0-08-023052-0 (Editors) **80m:81107** 81G35
- Projective geometry** See Studies in the geometry of imbedded manifolds and projective geometry, **80m:53001**
- Quadratic forms** See Colloque: Les Formes Quadratiques, **80k:15016**
- Qualitative and approximate methods for the investigation of operator equations** ★Качественные и приближенные методы исследования операторных уравнений. Вып. 2. (Russian) [Qualitative and approximate methods for the investigation of operator equations. No. 2] Edited by P. P. Zabreiko. *Jaroslavl. Gos. Univ., Yaroslavl*, 1977. 215 pp. (Editors) **80g:47002** 47-06
- ★Качественные и приближенные методы исследования операторных уравнений. Вып. 3. (Russian) [Qualitative and approximate methods for the investigation of operator equations. No. 3] Edited by P. P. Zabreiko. *Jaroslavl. Gos. Univ., Yaroslavl*, 1978. 211 pp. (Editors) **80g:47002** 47-06 (34-06)
- Qualitative research on stability of solutions of functional differential equations** ★Qualitative research on stability of solutions of functional differential equations. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, December 9-11, 1976. *Sōrikaisenkyōkyūshō Kōkyōroku No. 288* (1977). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1977. 106 pp. (Editors) **80g:34001** 34-06
- Quantum field theory** See Questions in quantum field theory and statistical physics, **80c:81001**; Algebraic analysis of quantum field theory, **80c:81001**; Conference: Mathematical Problems of Quantum Field Theory and Quantum Statistics, **80m:81005a** and Conference: Mathematical Problems of Quantum Field Theory and Quantum Statistics, **80m:81005b**
- Quantum physics** See Path integrals and their applications in quantum, statistical, and solid state physics, **80c:82019** and Problems of quantum physics, **80m:81068**
- Quantum statistics** See Conference: Mathematical Problems of Quantum Field Theory and Quantum Statistics, **80m:81005a** and Conference: Mathematical Problems of Quantum Field Theory and Quantum Statistics, **80m:81005b**
- Quasiconformal mappings** See Romanian-Finnish Seminar on Complex Analysis, **80i:30002**
- Quasigroups and loops** ★Квазигруппы и лупы. (Russian) [Quasigroups and loops] Edited by I. I. Valucă. *Mat. Issled.* No. 51 (1979). "Štince", *Kishinev*, 1979. 167 pp. (Editors) **80e:20087** 20N05 (20-06)
- Questions in the construction of programming systems** ★Вопросы построения систем программирования. (Russian) [Questions in the construction of programming systems] Edited by E. L. Jučenko [K. L. Jučenko] and V. V. Križanovskii. *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1978. 104 pp. (Editors) **80d:68006** 68-06
- Questions in the dynamical theory of seismic wave propagation** ★Вопросы динамической теории распространения сейсмических волн. Вып. XVIII. (Russian) [Questions in the dynamical theory of seismic wave propagation. No. 18] Edited by A. P. Volin and L. A. Molotkov. "Nauka", *Leningrad. Otdel., Leningrad*, 1978. 248 pp. (R. S. Andersen) **80m:73033a** 73D99 (73D20, 86A15)
- Questions of engineering cybernetics** ★Вопросы технической кибернетики. (Russian) [Questions of engineering cybernetics] Edited by Ju. A. Mahmudov. "Ėlm", *Baku*, 1977. 170 pp. (Editors) **80a:93176a** 93A10
- Questions of mathematical cybernetics and applied mathematics** ★Вопросы математической кибернетики и прикладной математики. Вып. 3. (Russian) [Questions of mathematical cybernetics and applied mathematics. No. 3] Edited by Dž. Ė. Allahverdiev. "Ėlm", *Baku*, 1978. 152 pp. (Editors) **80g:93002** 93-06 (90Cxx)
- Questions in the metric theory of mappings and its application** ★Вопросы метрической теории отображений и ее применение. (Russian) [Questions in the metric theory of mappings and its application] Proceedings of the Fifth Colloquium on Quasiconformal Mappings, their Generalizations and Applications held in Donetsk, 1976. Edited by G. D. Suvorov and V. I. Bilii. "Naukova Dumka", *Kiev*, 1978. 188 pp. (Editors) **80j:30004** 30-06 (30C60)
- Questions of modeling complex systems** ★Вопросы моделирования сложных систем. (Russian) [Questions of modeling complex systems] Edited by T. P. Marjanović and L. L. Ponomarenko. *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1978. 80 pp. (Editors) **80j:90055** 90Bxx (68J10)
- Questions in quantum field theory and statistical physics** ★Вопросы квантовой теории поля и статистической физики. (Russian) [Questions in quantum field theory and statistical physics] Edited by P. P. Kulish and V. N. Popov. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 77 (1978). "Nauka", *Leningrad. Otdel., Leningrad*, 1978. pp. 1-232. (Editors) **80c:81001** 81-06
- C. P. Ramanujan—a tribute** ★C. P. Ramanujan—a tribute. Edited by K. G. Ramanathan. *Tata Institute of Fundamental Research Studies in Mathematics, B. Springer-Verlag, Berlin-New York*, 1978. x + 361 pp. (3 plates). ISBN 3-540-08770-2 (Editors) **80d:00018** 00A10 (14-06)
- Random processes** See Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, **80c:62005**; Theory of random processes, **80d:60008**; Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, **80d:62004a**; Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, **80d:62004b**; Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, **80d:60004** and Theory of random processes, **80c:60004**
- Recent advances in numerical analysis** ★Recent advances in numerical analysis. Proceedings of a Symposium held at the Mathematics Research Center, University of Wisconsin, Madison, Wis., May 22-24, 1978. Edited by Carl de Boor and Gene H. Golub. Publication of the Mathematics Research Center, University of Wisconsin, 41. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London*, 1978. ix + 270 pp. (1 plate). ISBN 0-12-208360-1 (Editors) **80a:65016** 65-06
- Recent theoretical developments in control** ★Recent theoretical developments in control. Proceedings of a Conference held at the University of Leicester, Leicester, September 14th-16th, 1976. Edited by M. J. Gregson. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York*, 1978. xv + 672 pp. ISBN 0-12-301650-9 (Editors) **80c:93004** 93-06
- Recursion theory** See Generalized recursion theory, **80a:03004**
- Relations between combinatorics and other parts of mathematics** ★Relations between combinatorics and other parts of mathematics. Proceedings of the Symposium in Pure Mathematics of the American Mathematical Society held at the Ohio State University, Columbus, Ohio, March 20-23, 1978. Edited by Dijen K. Ray-Chaudhuri. Proceedings of Symposia in Pure Mathematics, XXXIV. *American Mathematical Society, Providence, R.I.*, 1979. xiii + 378 pp. ISBN 0-8218-1434-6 (Editors) **80a:05005** 05-06
- Reliability theory** See Mathematical methods in operations research and reliability theory, **80m:90002**
- Remote sensing** See Principes physiques et mathématiques de la télédétection, **80k:86012**
- Rennes** See Journées: Géométrie Algébrique de Rennes, **80m:14001a**; Journées: Géométrie Algébrique de Rennes, **80m:14001b** and Journées: Géométrie Algébrique de Rennes, **80m:14001c**
- Riemann surfaces** See Kleinian groups and Riemann surfaces, **80c:30003**

**Ring-theoretic constructions** ★Теоретико-кольцевые конструкции. (Russian)

[Ring-theoretic constructions] Edited by V. A. Andrunakievich. Mat. Issled. No. 49 (1979). "Sintex", Kishinev, 1979. 164 pp. (Editors) 80f:16001 16-06

**Ring theory** ★Ring theory. Proceedings of the Antwerp Conference, held at the

University of Antwerp, Antwerp, April 4-8, 1977. Edited by F. van Oystaeyen. Lecture Notes in Pure and Applied Mathematics, 40. Marcel Dekker, Inc., New York-Basel, 1978. vii + 207 pp. ISBN 0-8247-6814-0 (Editors) 80a:16001 16-06

★Ring theory. Waterloo 1978. Proceedings of a Conference held at the University of Waterloo, Waterloo, Ont., June 12-16, 1978. Edited by David Handelman and John Lawrence. Lecture Notes in Mathematics, 734. Springer-Verlag, Berlin-New York, 1979. xi + 352 pp. ISBN 3-540-09529-2 (Editors) 80g:16001 16-06

★Ring theory. Proceedings of the Antwerp Conference (NATO Advanced Study Institute) held at the University of Antwerp, Antwerp, August 1-12, 1978. Edited by F. van Oystaeyen. Lecture Notes in Pure and Applied Mathematics, 51. Marcel Dekker, Inc., New York-Basel, 1979. 801 pp. ISBN 0-8247-6854-X (Editors) 80m:16001 16-06

Rio de Janeiro See Advances in holomorphy, 80a:46001 and Contemporary developments in continuum mechanics and partial differential equations, 80a:73003

Rocquencourt See Languages et traducteurs, 80c:68002; Operating systems: theory and practice, 80j:68005 and Symposium: Systems Optimization and Analysis, 80m:49002

Romanian-Finnish Seminar on Complex Analysis ★Romanian-Finnish Seminar on

Complex Analysis. Proceedings of the Seminar held in Bucharest, June 27-July 2, 1976. Edited by Călin Andreian Cazacu, Aurel Cornea, Martin Jurchescu and Ion Suciu. Lecture Notes in Mathematics, 743. Springer-Verlag, Berlin-New York, 1979. xvi + 713 pp. ISBN 3-540-09550-0 (Editors) 80c:30002 30-06 (32-06)

Rome See Nonlinear evolution equations solvable by the spectral transform, 80a:35003 and Proceedings: International Meeting on Recent Methods in Nonlinear Analysis, 80c:49001

Rostock See Elliptische Differentialgleichungen, 80d:35003 and Tagung: Diskrete Mathematik und ihre Anwendungen in der Mathematischen Kybernetik, 80f:68006

St. Andrews, N.B. See Formal description of programming concepts, 80d:68004

Saint-Cast See Journées: Équations aux Dérivées Partielles, 80f:35003

Saint-Flour See École d'Été: Probabilités de Saint-Flour, 80c:60005 and École d'Été: Calcul des Probabilités de Saint-Flour, 80d:60003

Saint Hippolyte, Que. See Branching processes, 80c:60004

Saint Jean de Monts See Journées: Équations aux Dérivées Partielles, 80b:35003 and Équations aux dérivées partielles, 80c:35001

Saint Rémy (Provence) See Synthèse, manipulation et transformation de programmes, 80f:68011

Salzburg See Ontologie und Logik/Ontology and logic, 80f:03007

San Cristobal, N.M. See Conference: Deterministic Differential Equations and Stochastic Processes Models for Biological Systems, 80d:92001

San Diego, Calif. See Conference Record: Annual ACM Symposium on Theory of Computing, 80b:68003 and Proceedings: Business and Economic Statistics Section, American Statistical Association, 80b:62003

Santa Monica, Calif. See Proceedings: IEEE Symposium on Computer Arithmetic, 80c:68001

São Paulo See Proceedings: National Symposium on Probability and Statistics, 80j:62004

Scheveningen See Differential equations and applications, 80a:35002

School:

CERN, Physics See Proceedings: CERN School of Physics, 80k:81119a

Latin-American, Mathematics ★IV Escuela Latinoamericana de Matemática.

(Spanish) [4th Latin-American School of Mathematics] Análisis y sus aplicaciones.

Actas. [Analysis and its applications. Proceedings] Held in Lima, July 10-21,

1978. IV Escuela Latinoamericana de Matemática, Lima, 1979. 342 pp. (Editors)

80m:00005 00A10

Statistical Mechanics See Stochastic processes in nonequilibrium systems, 80c:82001

School-Conference:

Duality in Problems of the Mechanics of Deformable Bodies See Duality and complementarity in mechanics of solids, 80k:49001

Science of matter See Festschrift: Wu, Ta You, 80f:81006

Search algorithms See Vorträge: Codierungstheorie und Theorie der Suchalgorithmen, 80d:94018

Seattle, Wash. See Module theory, 80b:16001

Selected papers:

Operating systems: theory and practice ★Selected papers on operating systems: theory

and practice. Lectures delivered at the Visegrád Winter School, Visegrád, 1978.

Edited by Mátys Arató and Előd Knuth. Számítógéptudományi Kutató Intézet,

Budapest, 1978. 420 pp. (Editors) 80d:68007 68-06 (68B20)

Selected translations in mathematical statistics and probability ★Selected translations in

mathematical statistics and probability. Vol. 14. American Mathematical Society,

Providence, R.I., 1978. v + 296 pp. ISBN 0-8218-1464-8 (Editors) 80a:00006 00A10

(60-06)

Self-organization of cybernetic systems ★Самоорганизация кибернетических систем.

(Russian) [Self-organization of cybernetic systems] Edited by A. G. Ivahnenko and G.

I. Krotov. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978. 84 pp. (Editors)

80k:93014 93A99 (68Gxx)

Self-tuned regulation of discrete linear stochastic systems ★Diszkrét lineáris sztochasztikus

rendszerek önhangoló szabályozása. (Hungarian) [Self-tuned regulation of discrete linear

stochastic systems] Tanulmányok—MTA Számítástech. Automat. Kutató Int. Budapest

No. 101 (1980). MTA Számítástech. Automat. Kutató Intézet, Budapest, 1980. pp. 1-100.

(Editors) 80j:93149 93E99

Semantics See Foundations of computer science, 80m:68006

Semigroups See Algebraic theory of semigroups, 80d:20001; Theory of semigroups and its

applications, 80d:20049 and Proceedings: Symposium on Semigroups, 80c:20069

Semi-infinite programming ★Semi-infinite programming. Proceedings of a Workshop,

Bad Honnef, August 30-September 1, 1978. Edited by R. Hettich. Lecture Notes in

Control and Information Sciences, 15. Springer-Verlag, Berlin-New York, 1979.

x + 178 pp. ISBN 3-540-09479-2 (Editors) 80j:90005 90-06 (90Cxx)

**Séminaire:**

Bourbaki ★Séminaire Bourbaki. Vol. 1976/77, 29e année: Exposés 489-506. Lecture Notes in Mathematics, 677. Springer-Verlag, Berlin-New York, 1978. iv + 264 pp. ISBN 3-540-08937-3 (Editors) 80a:00009 00A10

★Séminaire Bourbaki. Vol. 1977/78, 30e année: Exposés 507-524. With an author index for 1967/68-1977/78. Lecture Notes in Mathematics, 710. Springer-Verlag, Berlin-New York, 1979. iv + 328 pp. ISBN 3-540-09243-9 (Editors) 80k:00010 00A10

Brelot-Choquelet-Deny See Séminaire: Théorie du Potentiel, 80d:31001 and Séminaire: Théorie du Potentiel, 80c:31001

Delange-Pisot-Poitou ★Séminaire Delange-Pisot-Poitou. 18e année: 1976/1977. Théorie des nombres. Fascicule 1: Exposés 1 à 16. Secrétariat Mathématique, Paris, 1977. iv + 115 pp. (not consecutively paged). ISBN 2-85926-256-3 (Editors)

80i:10003a 10-06 (12-06)

★Séminaire Delange-Pisot-Poitou. 18e année: 1976/77. Théorie des nombres. Fascicule 2: Exposés 17 à 29 et Groupe d'étude. Secrétariat Mathématique, Paris, 1977. iv + 122 pp. (not consecutively paged). ISBN 2-85926-257-1 (Editors)

80i:10003b 10-06 (12-06)

★Séminaire Delange-Pisot-Poitou, 19e année: 1977/78. Théorie des nombres. Fascicule 1: Exposés 1 à 22. Secrétariat Mathématique, Paris, 1978. 163 pp. (not consecutively paged). ISBN 2-85926-264-4 (Editors) 80a:10002a 10-06 (12-06)

★Séminaire Delange-Pisot-Poitou, 19e année: 1977/78. Théorie des nombres. Fascicule 2: Exposés 23 à 45. Secrétariat Mathématique, Paris, 1978. 159 pp. (not consecutively paged). ISBN 2-85926-265-2 (Editors) 80a:10002b 10-06

Dubreil, P. See Séminaire: Algèbre Paul Dubreil, 80m:13001

Goulaouic-Schwartz ★Séminaire Goulaouic-Schwartz 1978/1979: Équations aux dérivées partielles. École Polytechnique, Centre de Mathématiques, Palaiseau, 1979. ii + 277 pp. (not consecutively paged). (Editors) 80j:35001 35-06

See also Malgrange, B., 80f:58003

Paul Krée ★Séminaire Paul Krée 4e année: 1977-1978. Équations aux dérivées partielles en dimension infinie. Secrétariat Mathématique, Paris, 1979. 137 pp. (not consecutively paged). ISBN 2-85926-270-9 (Editors) 80f:46001 46-06 (32-06, 81-06)

Pierre Lelong-Henri Skoda (Analyse) ★Séminaire Pierre Lelong-Henri Skoda (Analyse). Année 1976/77. Edited by Pierre Lelong and Henri Skoda. Lecture Notes in Mathematics, 694. Springer-Verlag, Berlin-New York, 1978. iii + 334 pp. ISBN 3-540-09101-7 (Editors) 80a:32001 32-06

François Norguet See Fonctions de plusieurs variables complexes, 80g:32001

Algèbre Paul Dubreil ★Séminaire d'Algèbre Paul Dubreil, 31ème année. Held in Paris, 1977-1978. Edited by Marie-Paule Malliavin. Lecture Notes in Mathematics, 740. Springer-Verlag, Berlin-New York, 1979. v + 456 pp. ISBN 3-540-09537-3 (Editors) 80m:13001 13-06 (16-06)

Algèbres d'Opérateurs See Algèbres d'opérateurs, 80g:46002

Analyse Fonctionnelle ★Séminaire d'Analyse Fonctionnelle (1978-1979). École Polytechnique, Centre de Mathématiques, Palaiseau, 1979. 365 pp. (not consecutively paged). (Editors) 80k:46002 46-06

See also Combes, F.; et al., 80d:46107

Analyse Harmonique ★Séminaire d'Analyse Harmonique (1977-1978). Publications Mathématiques d'Orsay 78, 12. Université de Paris-Sud, Département de Mathématique, Orsay, 1978. ii + 79 pp. (Editors) 80j:42003 42-06

Choquet ★Séminaire Choquet. 17e année: 1977/78. Initiation à l'analyse. Fasc. I: Exposés 1 à 15. Secrétariat Mathématique, Paris, 1978. 109 pp. (not consecutively paged). ISBN 2-85926-267-9 (Editors) 80c:26001a 26-06

Choquet ★Séminaire Choquet. 17e année: 1977/78. Initiation à l'analyse. Fasc. II: Exposés 16 à 25, Communications C1 à C14, et Index cumulatifs, Ire à 17e années. Secrétariat Mathématique, Paris, 1978. 111 pp. (not consecutively paged). ISBN 2-85926-269-5 (Editors) 80c:26001b 26-06

Équations Différentielles et Systèmes de Pfaff dans le Champ Complexe See Équations différentielles et systèmes de Pfaff dans le champ complexe, 80f:34003

Probabilités ★Séminaire de Probabilités. XII. Held at the University of Strasbourg, Strasbourg, 1976/1977. Edited by C. Dellacherie, P. A. Meyer and M. Weil. Lecture Notes in Mathematics, 649. Springer-Verlag, Berlin-New York, 1978. viii + 805 pp. ISBN 3-540-08761-3 (Editors) 80d:60007 60-06

★Séminaire de Probabilités. XIII. Held at the Université de Strasbourg, Strasbourg, 1977/78. Edited by Claude Dellacherie, P. A. Meyer and M. Weil. Lecture Notes in Mathematics, 721. Springer-Verlag, Berlin-New York, 1979. vii + 647 pp. ISBN 3-540-09505-5 (Editors) 80f:60003 60-06

Théorie des Nombres ★Séminaire de Théorie des Nombres 1977-1978. Held at the Université de Bordeaux I, Talence, during the academic year 1977-1978. Centre National de Recherche Scientifique (CNRS), Laboratoire de Théorie des Nombres, Talence, 1978. 205 pp. (not consecutively paged). (Editors) 80h:10004 10-06

(12-06)

Théorie du Potentiel ★Séminaire de Théorie du Potentiel, Paris, No. 3. Held in 1976/1977. Edited by Francis Hirsch and Gabriel Mokobodzki. Lecture Notes in Mathematics, 681. Springer-Verlag, Berlin-New York, 1978. vii + 294 pp. ISBN 3-540-08947-0 (Editors) 80d:31001 31-06

★Séminaire de Théorie du Potentiel, No. 4. Held in Paris 1977-1978. Edited by F. Hirsch and G. Mokobodzki. Lecture Notes in Mathematics, 713. Springer-Verlag, Berlin-New York, 1979. vii + 281 pp. ISBN 3-540-09252-8 (Editors) 80c:31001 31-06

Seminar:

Algebraische Methoden der Automatentheorie See Vorträge: Problemsseminar, Algebraische Methoden der Automatentheorie, 80d:68009

All India, Hyperbolic Complex Analysis See Hyperbolic complex analysis, 80k:32001

Arbeitsseminar auf dem Gebiete der Diskreten Mathematik See Tagung: Diskrete Mathematik und ihre Anwendungen in der Mathematischen Kybernetik, 80f:68006

Brescia Mathematical See Proceedings: Brescia Mathematical Seminar, 80c:00013

Cabal ★Cabal Seminar 76-77. Proceedings of the Caltech-UCLA Logic Seminar 1976-77. Edited by Alexander S. Kechris and Yiannis N. Moschovakis. Lecture

Seminari:

N

I

Caltech

Codice

Game

Coast

Se

Diff

G.L.F.

Holo

Micro

St

T

(5)

Name

P

Perm

R

S

K

Roma

A

Sing

Si

U

A

0-

Semiotics

[Semi

SSSR

(Edit

★

scienc

Tehn.

Series for

varial

Printe

Edite

d'Info

ISBN

Session:

Medu

Set theory

Sets See

Several co

Shape an

(Japae

Mathe

Shriks

for Me

Sheet thec

SIAM-AN

Signal pro

80c:64

Silvri Si

Singapore

Single-can

40 (1

pp. 40

Singular

myrry

equati

Razm

(Edito

Singular p

80j:65

Singularit

of Lin

Stigm S

Smoothing

Proce

and N

York,

Social che

Social scie

Software

(Russ

Prep

(Edit

Software

succe

"Nau

half de

Mech

Solid state

state

Salm



## Seminar: (continued)

- Notes in Mathematics, 689. Springer-Verlag, Berlin-New York, 1978. iii + 282 pp. ISBN 3-540-09086-X (Editors) 80b:03004 03-06
- Catech-UCLA Logic See Seminar: Cahal, 80b:03004
- Codierungstheorie und Theorie der Suchalgorithmen See Vorträge: Codierungstheorie und Theorie der Suchalgorithmen, 80d:94018
- Continuity and Stability in Problems of Probability Theory and Mathematical Statistics See Studies in mathematical statistics, 80j:60003
- Differential Equations See Proceedings: Seminar on Differential Equations, 80k:34002
- G.L.F.T., Theoretical Physics See Nonlinear problems in theoretical physics, 80f:81002
- Game Theory and Related Topics See Game theory and related topics, 80j:90003
- Holomorphy See Advances in holomorphy, 80a:46001
- Micro-local Analysis ★Seminar on Micro-local Analysis. Annals of Mathematics Studies, 93. Princeton University Press, Princeton, N.J.; University of Tokyo Press, Tokyo, 1979. vii + 137 pp. ISBN 0-691-08228-6 (Editors) 80k:35005 35-06 (58-06)
- Numerical Methods for Partial Differential Equations See Numerical methods for partial differential equations, 80k:65008
- Permutation Groups and Related Topics ★Seminar on Permutation Groups and Related Topics. (Japanese) Held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, January 10-13, 1978. Sūrikaiseikenyūsho Kōkyūroku No. 325 (1978). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1978. pp. i-v and 1-222. (Editors) 80c:20002 20Bxx (20-06)
- Romanian-Finnish, Complex Analysis See Romanian-Finnish Seminar on Complex Analysis, 80i:30002
- Singularities of Solutions of Linear Partial Differential Equations ★Seminar on Singularities of Solutions of Linear Partial Differential Equations. Held at the Institute for Advanced Study, Princeton, N.J., 1977/78. Edited by Lars Hörmander. Annals of Mathematics Studies, 91. Princeton University Press, Princeton, N.J.; University of Tokyo Press, Tokyo, 1979. ix + 283 pp. ISBN 0-691-08221-9, 0-691-08213-8 (Editors) 80k:35003 35-06 (58-06)
- Semiotics and information science ★Семiotика и информатика. Вып. 11. (Russian) [Semiotics and information science. No. 11] Edited by A. I. Mikhailov. Akad. Nauk SSSR, Vsesojuz. Inst. Naučn. i Tehn. Informacii, Moscow, 1979. 192 pp. (errata insert). (Editors) 80d:00019 94-06 (03-06)
- ★Семiotика и информатика. Вып. 12. (Russian) [Semiotics and information science. No. 12] Edited by A. I. Mikhailov. Akad. Nauk SSSR, Vsesojuz. Inst. Naučn. i Tehn. Informacii, Moscow, 1979. 251 pp. (errata insert). (Editors) 80d:08001 68-06
- Séries formelles en variables non commutatives et applications ★Séries formelles en variables non commutatives et applications. Proceedings of the Fifth École de Printemps d'Informatique Théorique, held at Vieux-Boucau les Bains, May 23-27, 1977. Edited by Jean Berstel. École Nationale Supérieure de Techniques Avancées, Laboratoire d'Informatique Théorique et Programmation, Paris, 1978. vi + 260 pp. ISBN 2-7225-0426-X (Editors) 80a:68005 68-06
- Session:
- Module Theory See Module theory, 80b:16001
- Set theory See Higher set theory, 80a:03005
- Sets See Ordered sets and lattices, 80f:06001
- Several complex variables. See Fonctions de plusieurs variables complexes, 80c:32001
- Shape and infinite-dimensional manifolds ★Shape and infinite-dimensional manifolds. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, November 7-10, 1978. Sūrikaiseikenyūsho Kōkyūroku No. 342 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i and 1-51. (Editors) 80g:54039 54F43
- Sheaf theory See Applications of sheaves, 80j:18001
- SIAM-AMS Proceedings See Fracture mechanics, 80c:73064
- Signal processing. See IEEE Conference: Acoustics, Speech and Signal Processing, 80a:68002 and Pattern recognition and signal processing, 80j:68076
- Silviri See Proceedings: Rolf Nevanlinna Symposium on Complex Analysis, 80c:30004
- Singapore See Proceedings: Franco-Southeast Asian Mathematical Conference, 80c:00009
- Single-case probabilities ★Single-case probabilities. Edited by James H. Fetzer. Synthese 40 (1979), no. 3409-506. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1979. pp. 409-514. (Editors) 80b:03009 03A05
- Singular integrals, integral equations and their applications ★Сингулярные интегралы, интегральные уравнения и их приложения. (Russian) [Singular integrals, integral equations and their applications] Edited by B. V. Hvelididze. Trudy Tbiliss. Mat. Inst. Razmadze Akad. Nauk Gruzii. SSR 61 (1979). "Mecniereba", Tbilisi, 1979. pp. 1-92. (Editors) 80i:45001 45-06 (73C99)
- Singular perturbation problems See Numerical analysis of singular perturbation problems, 80j:65004
- Singularities See Journées Singulières, 80c:58001 and Seminar: Singularities of Solutions of Linear Partial Differential Equations, 80k:35003
- Stages See Stochastic processes in nonequilibrium systems, 80c:82001
- Smoothing techniques for curve estimation ★Smoothing techniques for curve estimation. Proceedings of a Workshop held in Heidelberg, April 2-4, 1979. Edited by Th. Gasser and M. Rosenblatt. Lecture Notes in Mathematics, 757. Springer-Verlag, Berlin-New York, 1979. iii + 245 pp. ISBN 3-540-09706-6 (Editors) 80m:62002 62-06
- Social choice See Game theory, social choice, and ethics, 80j:90004a
- Social sciences See Methodological developments in social sciences, 80j:00016
- Software for control systems ★Математическое обеспечение систем управления. (Russian) [Software for control systems] Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 17 (1978). Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978. pp. 1-38. (Editors) 80k:93002 93-02
- Software for cosmic experiments ★Математическое обеспечение космических экспериментов. (Russian) [Software for cosmic experiments] Edited by P. E. El'jasberg. "Nauka", Moscow, 1978. 279 pp. (Editors) 80b:85001 85-06
- Solid deformable bodies See Mechanics of solid deformable bodies, 80d:73006 and Mechanics of solid deformable bodies, 80d:73007
- Solid state physics See Path integrals and their applications in quantum, statistical, and solid state physics, 80c:82019
- Solitons See Special issue: Solitons in physics, 80f:81004

- Solitons and condensed matter physics ★Solitons and condensed matter physics. Proceedings of the Symposium on Nonlinear (Soliton) Structure and Dynamics in Condensed Matter held in Oxford, June 27-29, 1978. Edited by Alan R. Bishop and Toni Schneider. Springer Series in Solid-State Sciences, 8. Springer-Verlag, Berlin-New York, 1978. xi + 341 pp. ISBN 3-540-09138-6 (Editors) 80b:81002 81-06 (35Q20)
- Solitons and holonomic quantum fields ★Solitons and holonomic quantum fields. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, December 22-26, 1978. Sūrikaiseikenyūsho Kōkyūroku No. 349 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-106. (Editors) 80f:81003 81-06 (58-06)
- Solution methods for integral equations ★Solution methods for integral equations. Theory and applications. Edited by Michael A. Golberg. Mathematical Concepts and Methods in Science and Engineering, 18. Plenum Press, New York-London, 1979. ix + 350 pp. ISBN 0-306-40254-8 (Editors) 80m:65090 65R20
- Solutions of the Einstein equations Solutions of the Einstein equation: list of publications. Gen. Relativity Gravitation 10 (1979), no. 9, 761-806. (Editors) 80f:83001 83-XX (00A15)
- Some mathematical questions in biology ★Some mathematical questions in biology. IX. Proceedings of the Eleventh Symposium on Mathematical Biology held in Denver, Colo., February 24-25, 1977. Edited by Simon A. Levin. Lectures on Mathematics in the Life Sciences, 10. American Mathematical Society, Providence, R.I., 1978. ix + 244 pp. ISBN 0-8218-1160-6 (Editors) 80a:92005 92-06
- ★Some mathematical questions in biology. X. Proceedings of the Twelfth Symposium on Mathematical Biology held in Washington, D.C., February 14, 1978. Edited by Simon A. Levin. Lectures on Mathematics in the Life Sciences, 11. American Mathematical Society, Providence, R.I., 1979. viii + 179 pp. ISBN 0-8218-1161-4 (Editors) 80a:92006 92-06
- Southampton See Numerical solution of highly nonlinear problems, 80k:65010 and Applied numerical modelling, 80m:65001
- Space physics See Principes physiques et mathématiques de la télédétection, 80k:96012
- Special issue:
- Kunugui, Kinjirō ★Special issue in memory of the late Professor Kinjirō Kunugi. Math. Japon. 23 (1978), no. 3. Special issue. Association for Mathematical Japonica, Osaka, 1978. pp. 263-334. (1 plate). (Editors) 80a:00010 00A10 (01A70)
- Automatic analog fault diagnosis ★Special issue on automatic analog fault diagnosis. Edited by Samuel D. Bedrosian. IEEE Trans. Circuits and Systems 26 (1979), no. 7409-583. Institute of Electrical and Electronics Engineers, Inc. (IEEE), New York, 1979. pp. 409-596. (Editors) 80c:94002 94-06
- Distributed process control system ★Special issue on distributed process control system. (Japanese) Systems and Control 23 (1979), no. 9. Japan Association of Automatic Control Engineers, Kyoto, 1979. pp. 483-544. (Editors) 80j:93004 93-02
- Fuzzy reasoning ★Special issue on fuzzy reasoning. Papers presented at a Workshop held at Queen Mary College, London, September 1978. Edited by E. H. Mamdani. Internat. J. Man-Mach. Stud. 11 (1979), no. 4. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1979. pp. 405-545. (Editors) 80c:00005 00A10 (03-06, 03B52)
- Mathematical Society of Japan ★(Special issue on the 100th anniversary of the Mathematical Society of Japan). Sūgaku 30 (1978), no. 2. Mathematical Society of Japan, Tokyo, 1978. pp. 97-157. (Editors) 80j:00006 00A10 (01A60)
- Mathematics of biological rhythms ★Special issue: Mathematics of biological rhythms. Symposium held at Christ's College, Cambridge, July 2, 1975. Bull. Inst. Math. Appl. 12 (1976), no. 11-26. Institute of Mathematics and its Applications, Southend-on-Sea, 1976. pp. 1-32. (Editors) 80d:92002 92-06
- Solitons in physics ★(Special issue on solitons in physics). Phys. Scripta 20 (1979), no. 3-4. Royal Swedish Academy of Sciences, Stockholm, 1979. pp. 289-562. (Editors) 80f:81004 81-06 (35-06)
- Sōgakuishi Kenkyū ★(Special issue on the 20th anniversary of Sōgakuishi Kenkyū). (Japanese) Sōgakuishi Kenkyū No. 80 (1979), 1-89. Fuji Junior College, The History of Mathematics Society of Japan, Tokyo, 1979. pp. 1-130. (Editors) 80b:01004 01A27 (01A74)
- Theory and practice for categorical data analysis ★Special issue on theory and practice for categorical data analysis. Edited by Nariaki Sugita. Comm. Statist. A—Theory Methods 7 (1978), no. 10. Marcel Dekker, Inc., New York-Basel, 1978. pp. 905-1005. (Graham J. G. Upton) 80d:62042 62H17 (60I80, 62F03)
- Spectral theory See Functional analysis, 80j:47001 and Boundary value problems. Spectral theory, 80k:35003
- Spectral theory of operators ★Спектральная теория операторов. (Russian) [Spectral theory of operators] Proceedings of the Second All-Union Mathematical Summer School held in Baku, April 19-May 3, 1975. Edited by O. A. Ladyženskaja, F. G. Maksudov and M. G. Gasymov. "Elm", Baku, 1979. 197 pp. (Editors) 80j:47003 47-06
- Spectral transforms. See Nonlinear evolution equations solvable by the spectral transform, 80a:35003
- Speech See IEEE Conference: Acoustics, Speech and Signal Processing, 80a:68002
- Spline approximation See Polynomial and spline approximation, 80f:41001
- Stability, bifurcation and buckling in nonlinear elasticity theory and numerical analysis ★Stability, bifurcation and buckling in nonlinear elasticity theory and numerical analysis. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, December 12-15, 1978. Sūrikaiseikenyūsho Kōkyūroku No. 343 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-124. (Editors) 80g:73040 73H05 (65N30)
- Stability and sensitivity in mechanical systems ★Staceczność i wrażliwość w układach mechanicznych. (Polish) [Stability and sensitivity in mechanical systems] Lectures on Qualitative Investigations in Nonlinear Discrete Systems held at Jabłonna, December 4-14, 1978. Edited by Agnieszka Muszyńska. Zakład Narodowy im. Ossolińskich—Wydawnictwo Polskiej Akademii Nauk (Ossolinensium), Wrocław, 1978. ii + 183 pp. (Editors) 80c:93004 93-06

- Stable theories** See Groupe d'Étude: Théories Stables, 80b:03003
- Stanford, Calif.** See Algebraic and geometric topology, 80d:57001a and Algebraic and geometric topology, 80d:57001b
- Statistical analysis** See Mathematical study of multivariate statistical analysis, 80f:62004
- Statistical decision functions** See Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80a:62005; Theory of statistical decision functions and measurement theory, 80b:62005; Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80d:62004a; Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80d:62004b and Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80b:60004
- Statistical estimation theory** See Studies in statistical estimation theory, 80f:62005
- Statistical fluid dynamics** ★Statistical fluid dynamics. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, January 17-19, 1978. Sūrikaisikenkyūsho Kōkyūroku No. 326 (1978). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1978. pp. i-ii and 1-213. (Editors) 80f:76002 76-06
- Statistical mechanics** See Stochastic processes in nonequilibrium systems, 80e:82001
- Statistical physics** See Path integrals and their applications in quantum, statistical, and solid state physics, 80c:82019; Questions in quantum field theory and statistical physics, 80e:81001 and Monte Carlo methods in statistical physics, 80j:82010
- Statistics** See Optimizing methods in statistics, 80d:62003; Symposium: Operations Research, 80d:90004c; Studies in statistics, 80c:62002; Developments in statistics, 80j:62002; Proceedings: National Symposium on Probability and Statistics, 80j:62004 and Analytic function methods in probability theory, 80a:60002
- Stochastic analysis** ★Stochastic analysis. Proceedings of the International Conference held at Northwestern University, Evanston, Ill., April 10-14, 1978. Edited by Avner Friedman and Mark Pinsky. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1978. xii + 340 pp. ISBN 0-12-268380-3 (Editors) 80b:60006 60-06 (60Hxx)
- See also Measure theory applications to stochastic analysis, 80c:60006
- Stochastic behavior in classical and quantum Hamiltonian systems** ★Stochastic behavior in classical and quantum Hamiltonian systems. Volta Memorial Conference held at Como, 1977. Edited by Giulio Casati and Joseph Ford. Lecture Notes in Physics, 93. Springer-Verlag, Berlin-New York, 1979. vi + 375 pp. ISBN 3-540-09120-3 (Editors) 80h:70004 70-06 (58F13, 81-06)
- Stochastic control theory and stochastic differential systems** ★Stochastic control theory and stochastic differential systems. Proceedings of a Workshop of the Sonderforschungsbereich 72 der Deutschen Forschungsgemeinschaft an der Universität Bonn held at Bad Honnef, January 1979. Edited by Michael Kohlmann and Walter Vogel. Lecture Notes in Control and Information Sciences, 16. Springer-Verlag, Berlin-New York, 1979. xii + 615 pp. ISBN 3-540-09480-6 (Editors) 80f:60004 60-06 (93-06)
- Stochastic differential equations** See Proceedings: International Symposium on Stochastic Differential Equations, 80d:60006
- Stochastic differential systems** See Stochastic control theory and stochastic differential systems, 80f:60004
- Stochastic processes** See Conference: Stochastic Processes and their Applications, 80b:60005
- Stochastic processes models** See Conference: Deterministic Differential Equations and Stochastic Processes Models for Biological Systems, 80d:92001
- Stochastic processes in nonequilibrium systems** ★Stochastic processes in nonequilibrium systems. Lectures of the Fifth Sites International School of Statistical Mechanics, held at Sitges, June 11-23, 1978. Edited by L. Garrido, P. Seglar and P. J. Shepherd. Lecture Notes in Physics, 84. Springer-Verlag, Berlin-New York, 1978. xi + 357 pp. (1 plate). ISBN 3-540-08942-X (Editors) 80c:82001 82-06
- Strasbourg** See Séminaire: Probabilités, 80d:60007; Équations différentielles et systèmes de Pfaff dans le champ complexe, 80f:34003; Séminaire: Probabilités, 80f:60003 and Principes physiques et mathématiques de la télé-détection, 80b:86012
- Structural optimization** ★Structural optimization. Edited by Pierre Brousse. CISM Courses and Lectures, 237. Springer-Verlag, Vienna, 1978. viii + 210 pp. ISBN 3-211-81376-4 (Edward J. Haug, Jr.) 80h:73049 73K99 (49B34)
- Structural stability in physics** ★Structural stability in physics. Proceedings of two International Symposia on Applications of Catastrophe Theory and Topological Concepts in Physics held at the Institute for Information Sciences, University of Tübingen, Tübingen, May 2-6 and December 11-14, 1978. Edited by Werner Güttinger and Horst Eikemeier. Springer Series in Synergetics, 4. Springer-Verlag, Berlin-New York, 1979. viii + 311 pp. ISBN 3-540-09463-6 (Editors) 80j:00017 00A69 (58C28, 82-06, 92-06)
- Structure of groups and properties of their subgroups** ★Строение групп и свойства их подгрупп. (Russian) [Structure of groups and properties of their subgroups] Edited by S. N. Černikov [S. M. Černikov]. Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev, 1978. 149 pp. (Editors) 80d:20024 20Exx
- Structure and mechanisms of turbulence** ★Structure and mechanisms of turbulence. I. Proceedings of the Symposium on Turbulence held at the Technische Universität Berlin, Berlin, August 1-5, 1977. Edited by Heinrich Fiedler. Lecture Notes in Physics, 75. Springer-Verlag, Berlin-New York, 1978. xx + 295 pp. ISBN 3-540-08765-6 (Editors) 80h:76021a 76F99 (76-06)
- ★Structure and mechanisms of turbulence. II. Proceedings of the Symposium on Turbulence held at the Technische Universität Berlin, Berlin, August 1-5, 1977. Edited by Heinrich Fiedler. Lecture Notes in Physics, 76. Springer-Verlag, Berlin-New York, 1978. xx + 406 pp. ISBN 3-540-08767-2 (Editors) 76h:76021b 76F99 (76-06)
- Studies in algebra and number theory** ★Studies in algebra and number theory. Edited by Gian-Carlo Rota. Advances in Mathematics, Supplementary Studies, 6. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xi + 369 pp. ISBN 0-12-599153-3 (Editors) 80c:00011 00A10
- Studies in algebraic topology** ★Studies in algebraic topology. Edited by Gian-Carlo Rota. Advances in Mathematics, Supplementary Studies, 5. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xi + 263 pp. ISBN 0-12-599152-5 (Editors) 80c:00012 00A10
- Studies in analysis** ★Studies in analysis. Edited by Gian-Carlo Rota. Advances in Mathematics, Supplementary Studies, 4. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xi + 322 pp. ISBN 0-12-599150-9 (Editors) 80f:00006 00A10
- Studies in constructive mathematics and mathematical logic** ★Исследования по конструктивной математике и математической логике. VIII. (Russian) [Studies in constructive mathematics and mathematical logic. VIII.] Edited by Ju. V. Maizanis and A. O. Slisenko. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 8 (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. pp. 1-252. (Editors) 80j:03005 03-06 (03F65)
- Studies in elasticity and plasticity** ★Исследования по упругости и пластичности. Вып. 12. (Russian) [Studies in elasticity and plasticity. No. 12] Edited by V. V. Novozhilov. Leningrad. Univ., Leningrad, 1978. 222 pp. (Editors) 80d:73004 73-02 (53B50, 73E99, 83C99)
- Studies in foundations and combinatorics** ★Studies in foundations and combinatorics. Edited by Gian-Carlo Rota. Advances in Mathematics, Supplementary Studies, 1. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. x + 265 pp. ISBN 0-12-599101-0 (Editors) 80b:00004 00A10
- Studies in functional analysis** ★Исследования по функциональному анализу. (Russian) [Studies in functional analysis] Edited by L. N. Sevrin. Ural. Gos. Univ., Sverdlovsk, 1978. 130 + vi pp. (Editors) 80k:47001 47-06 (46-06)
- Studies in functional analysis and differential equations** ★Исследования по функциональному анализу и дифференциальным уравнениям. (Russian) [Studies in functional analysis and differential equations] Edited by B. A. Ščerbakov. "Štšinec", Kishinev, 1978. 80 pp. (Editors) 80d:00020 00A10
- Studies in the geometry of imbedded manifolds and projective geometry** ★Исследования по геометрии погруженных многообразий и проективной геометрии. (Russian) [Studies in the geometry of imbedded manifolds and projective geometry] Edited by V. T. Bazylev and A. L. Verner. Leningrad. Gos. Ped. Inst., Leningrad, 1979. 132 pp. (Editors) 80m:53001 53-06
- Studies in mathematical biology** ★Studies in mathematical biology. Part I. Cellular behavior and the development of pattern. Edited by Simon A. Levin. MAA Studies in Mathematics, 15. Mathematical Association of America, Washington, D.C., 1978. xiv + 315 + 120 pp. ISBN 0-88385-115-6 (Gail A. Carpenter) 80m:92005 92A09 (92-06)
- ★Studies in mathematical biology. Part II. Populations and communities. Edited by Simon A. Levin. MAA Studies in Mathematics, 16. Mathematical Association of America, Washington, D.C., 1978. pp. i-xx + 317-624 + 11-120. ISBN 0-88385-116-4 (Gail A. Carpenter) 80m:92006 92A15 (92-06)
- Studies in mathematical logic and the theory of algorithms** ★Исследования по математической логике и теории алгоритмов. (Russian) [Studies in mathematical logic and the theory of algorithms] Edited by Š. S. Phakadze and L. G. Magnaradze. Izdat. Tbilis. Univ., Tbilisi, 1978. 54 pp. (Editors) 80c:03006 03-06
- Studies in mathematical statistics** ★Исследования по математической статистике. 3. (Russian) [Studies in mathematical statistics. 3] Papers presented at the Third Seminar on Continuity and Stability in Problems of Probability Theory and Mathematical Statistics (Moscow, December 5-9, 1977). Edited by V. M. Zolotarev, I. A. Ibragimov and L. A. Halpin. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 8 (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. pp. 1-216. (Editors) 80j:60003 60-06 (62-06)
- Studies in number theory** (LOMI) ★Исследования по теории чисел. 5. (Russian) [Studies in number theory. 5] Edited by A. V. Mal'nev. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 82 (1979). "Nauka", Leningrad. Otdel., Leningrad, 1979. 168 pp. (Editors) 80d:10003 10-06
- Studies in probability and ergodic theory** ★Studies in probability and ergodic theory. Edited by Gian-Carlo Rota. Advances in Mathematics, Supplementary Studies, 2. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xiii + 293 pp. ISBN 0-12-599102-9 (Editors) 80b:28001 28-06 (60-06)
- Studies in probability theory** ★Studies in probability theory. Edited by Murray Rosenblatt. MAA Studies in Mathematics, 18. Mathematical Association of America, Washington, D.C., 1978. xi + 268 pp. ISBN 0-88385-118-0 (Editors) 80b:60007 60-06 (28-06, 62-06)
- Studies in some questions of the constructive theory of functions and differential equations** ★Исследования по некоторым вопросам конструктивной теории функций и дифференциальных уравнений. (Russian) [Studies in some questions of the constructive theory of functions and differential equations] Edited by R. G. Mamedov. Azerbaidžan. Inst. Nefti i Himii, Baku, 1974. 211 pp. (Editors) 80d:00021 00A10 (35-06, 41-06, 45-06, 46-06, 73-06)
- Studies in statistical estimation theory** ★Исследования по статистической теории оценивания. II. (Russian) [Studies in statistical estimation theory. II] Edited by I. A. Ibragimov and M. S. Nikulin. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 79 (1978). "Nauka", Leningrad. Otdel., Leningrad, 1978. 103 pp. (Editors) 80f:62005 62-06 (60-06)
- Studies in statistics** ★Studies in statistics. Edited by Robert V. Hogg. MAA Studies in Mathematics, 19. Mathematical Association of America, Washington, D.C., 1978. xiii + 213 pp. ISBN 0-88385-119-9 (Lionel Weiss) 80f:62002 62-02
- Studies in the theory of approximation of functions and their applications** ★Исследования по теории приближения функций и их приложения. (Russian) [Studies in the theory of approximation of functions and their applications] Edited by V. K. Dzjad'k. Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1978. 195 pp. (Editors) 80j:41005 41-06
- Studies in the theory of differentiable functions of several variables and its applications** ★Исследования по теории дифференцируемых функций многих переменных и ее приложениям. VII. (Russian) [Studies in the theory of differentiable functions of several variables and its applications. VII] Edited by S. M. Nikol'skii. Trudy Mat. Inst. Steklov. 150 (1979). "Nauka", Moscow, 1979. 324 pp. (Editors) 80c:46001 46-06 (35-06)
- Studies in the theory of functions of several real variables** ★Исследования по теории функций многих вещественных переменных. Вып. 2. (Russian) [Studies in the theory of functions of several real variables. No. 2] Edited by Ju. A. Brudnyi. Joroslav. Gos. Univ., Yaroslavl, 1978. 244 pp. (Editors) 80k:00011 00A10



**Studies in topology** ★Исследования по топологии. III. (Russian) [Studies in topology. III] A collection of articles edited by A. A. Ivanov. Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 83 (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. 104 pp. (Editors) 80c:57001 57-06

**Summer Institute:**

**Theoretical Physics** See Many degrees of freedom in particle theory, 80j:81086

**Summer Research Institute:**

**American Mathematical Society** See Algebraic and geometric topology, 80d:57001a; Algebraic and geometric topology, 80d:57001b; Automorphic forms, representations and L-functions, 80g:10002a and Automorphic forms, representations and L-functions, 80g:10002b

**Australian Mathematical Society** See Topics in algebra, 80a:00011

**Summer School:**

**Space Physics** See Principes physiques et mathématiques de la télédétection, 80k:86012  
**Theory of Nonlinear Operators** See Theory of nonlinear operators, 80d:47002  
**Use of Finite Element Method and Finite Difference Method in Geophysics** See Use of finite element method and finite difference method in geophysics, 80e:65007

**Summer Workshop:**

**Algebraic Combinatorics** See Unsolved problems, 80j:05001

**Summer School:**

**Functional Differential Equations and Approximation of Fixed Points** See Functional differential equations and approximation of fixed points, 80g:00005  
**Surveys in general topology** ★Surveys in general topology. Edited by George M. Reed. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. xiii + 557 pp. ISBN 0-12-584960-5 (Editors) 80m:54001 54-06

**Symposia:**

**Applications of Catastrophe Theory and Topological Concepts in Physics** See Structural stability in physics, 80j:00017

**Symposium:**

**Algebraic Analysis of Quantum Field Theory** See Algebraic analysis of quantum field theory, 80k:81001

**Algebraic Geometry** See Algebraic geometry, 80c:14002

**Algorithms in Numerical Computations** See Algorithms in numerical computations, 80b:65003

**Algorithms for Numerical Computations and Computers** See Algorithms for numerical computations and computers, 80f:65003

**Analysis** See Contributions to analysis, 80j:30002

**Applications of Sheaf Theory to Logic, Algebra and Analysis** See Applications of sheaves, 80j:18001

**Applied Time Series** See Applied time series analysis, 80c:62002

**Approximation Theory** See Approximation theory and functional analysis, 80i:41004

**B-Valued Analysis and Nonstandard Analysis** See B-valued analysis and nonstandard analysis, 80b:03002

**Buffon Bicentenary** See Geometrical probability and biological structures: Buffon's 200th anniversary, 80a:92003

**Combinatorial Structures and Graph Theory** See Combinatorial structures and graph theory, 80f:05003

**Computational Statistics** See Compstat, 80a:62004

**Computer Performance Modeling, Measurement and Evaluation** See Computer performance, 80d:68002

**Computing Methods in Applied Sciences and Engineering** See Computing methods in applied sciences and engineering, 80d:65010a and Applied sciences, 80d:65010b

**Contemporary Developments in Continuum Mechanics and Partial Differential Equations** See Contemporary developments in continuum mechanics and partial differential equations, 80a:73003

**Current Trends in the Theory of Fields** See Current trends in the theory of fields, 80c:81002

**Differential Equations in the Complex Domain** See Differential equations in the complex domain, 80f:34002

**Diophantine Problems** See Diophantine problems, 80e:10006

**Paul A. M. Dirac** See Current trends in the theory of fields, 80c:81002

**Dynamical Systems and Applications of Boltzmann Equations to Astrophysics** See Dynamical systems and applications of Boltzmann equations to astrophysics, 80c:85001

**Equivariant Homotopy Theory** See Equivariant homotopy theory, 80e:55002

**Étude Numérique des Grands Systèmes** See Étude numérique des grands systèmes, 80a:65011

**Extremal Methods and Systems Analysis** See Extremal methods and systems analysis, 80m:00011

**Extremal Problems in Function Theory** See Extremal problems in function theory, 80c:30002

**Family of Countable Product Spaces** See Family of countable product spaces, 80c:54002

**Fixed Point Algorithms and Complementarity Problems** See Numerical solution of highly nonlinear problems, 80k:65010

**Foundations of Modern Physics** See Proceedings: Symposium on the Foundations of Modern Physics, 80b:81002

**Generalized Recursion Theory** See Generalized recursion theory, 80a:03004

**Geometrical Probability, Image Analysis, Mathematical Stereology and their Relevance to the Determination of Biological Structures** See Geometrical probability and biological structures: Buffon's 200th anniversary, 80a:92003

**Geometry and Global Analysis** See Geometry and global analysis, 80g:58002

**Global Analysis in Geometry** See Global analysis in geometry, 80f:58001

**Graph Theory** See Proceedings: Symposium on Graph Theory, 80j:05055

**Harmonic Analysis in Euclidean Spaces** See Harmonic analysis in Euclidean spaces, 80f:42001a and Harmonic analysis in Euclidean spaces, 80f:42001b

**Helsinki, Integral Equations** See Volterra equations, 80i:45002

**Heriot-Watt, Nonlinear Analysis and Mechanics** See Nonlinear analysis and mechanics: Heriot-Watt Symposium, 80d:00015

**Homological and Combinatorial Techniques in Group Theory** See Homological group theory, 80m:20001

**Isomorphisms and Unbounded Derivations** See Isomorphisms and unbounded derivations, 80f:46004

**Kleinian Groups and Riemann Surfaces** See Kleinian groups and Riemann surfaces, 80c:30003

**Knots and 3-manifolds** See Knots and 3-manifolds, 80g:57003

**Linear Operators on Hardy Spaces** See Linear operators on Hardy spaces, 80g:46003

**Logic and Data Bases** See Logic and data bases, 80i:68009

**Mathematical Biology** See Some mathematical questions in biology, 80a:92005 and

Some mathematical questions in biology, 80a:92006

**Mathematical Foundations and Applications of Information Science** See Mathematical foundations and applications of information science, 80i:68002

**Mathematical Foundations of Computer Science** See Mathematical foundations of computer science, 80b:68004 and Mathematical foundations for computer science, 80f:68003

**Mathematical Genetics** ★Symposium on mathematical genetics. Sixth Annual

Symposium held at King's College, Cambridge, April 10-11, 1978. Adv. in Appl. Probab. 11 (1979), no. 11-13. Applied Probability Trust, Sheffield, 1979. pp. 1-255. (Editors) 80a:92007 92-06

**Mathematical Methods in the Theory of Elementary Particles** ★Symposium on Mathematical Methods in the Theory of Elementary Particles. Held at Liblice, June 18-23, 1978. Czechoslovak J. Phys. B 29 (1979), no. 1. Academia, Prague, 1979. pp. 1-128. (1 plate). (Editors) 80b:81003a 81-06

★Symposium on Mathematical Methods in the Theory of Elementary Particles. II. Held at Liblice, June 18-23, 1978. Czechoslovak J. Phys. B 29 (1979), no. 3, pp. 245-322. Academia, Prague, 1979. pp. 245-360. (Editors) 80b:81003b 81-06

**Mathematical Physics and Physical Mathematics** See Mathematical physics and physical mathematics, 80i:00006

**Mathematical Study of Multivariate Statistical Analysis** See Mathematical study of multivariate statistical analysis, 80f:62004

**Mathematics of Biological Rhythms** See Special issue: Mathematics of biological rhythms, 80d:92002

**Mathematics for Biology** See Mathematics for biology, 80e:92002

**Measuring, Modelling and Evaluating Computer Systems** See Measuring, modelling and evaluating computer systems, 80c:68004

**Meromorphic Functions and Value-Distributions of Holomorphic Curves** See

Meromorphic functions and value-distributions of holomorphic curves, 80f:30017

**Micro-local Analysis of Linear Differential Equations** See Micro-local analysis of linear differential equations, 80i:35004

**Mixed Boundary Value Problems in Fluid Dynamics** See Mixed boundary value problems in fluid dynamics, 80f:76001

**Modular Representations of Finite Groups** See Proceedings: Symposium on Modular Representations of Finite Groups, 80d:20002

**Multiple-Valued Logic** See Proceedings: International Symposium on Multiple-Valued Logic, 80k:94001

**Rolf Nevanlinna, Complex Analysis** See Proceedings: Rolf Nevanlinna Symposium on Complex Analysis, 80c:30004

**Nonlinear Evolution Equations Solvable by the Spectral Transform** See Nonlinear evolution equations solvable by the spectral transform, 80a:35003

**Nonlinear (Soliton) Structure and Dynamics in Condensed Matter** See Solitons and condensed matter physics, 80b:81002

**Numerical Mathematics** See Numerical mathematics, 80m:65003

**Numerical Methods in Mathematical Physics, Geophysics and Optimal Control** See Numerical methods in mathematical physics, geophysics and optimal control, 80e:65006

**Operating Systems: Theory and Practice** See Operating systems: theory and practice, 80j:68005

**Operations Research** ★Third Symposium on Operations Research. Section 1.

Continuous Optimization. Held at the University of Mannheim, Mannheim, September 6-8, 1978. Edited by Werner Oettli [Karl Werner Oettli] and Franz Steffens. Operations Research Verfahren, 31. Verlag Anton Hain, Meisenheim, 1979. xvi + 752 pp. ISBN 3-445-01909-6 (Editors) 80d:90004a 90-06

★Third Symposium on Operations Research. Section 2. Discrete Optimization. Held at the University of Mannheim, Mannheim, September 6-8, 1978. Edited by Werner Oettli [Karl Werner Oettli] and Franz Steffens. Operations Research Verfahren, 32. Verlag Anton Hain, Meisenheim, 1979. xx + 219 pp. ISBN 3-445-01910-X (Editors) 80d:90004b 90-06

★Third Symposium on Operations Research. Section 3. Applied Stochastics, Statistics and Econometrics. Held at the University of Mannheim, Mannheim, September 6-8, 1978. Edited by Werner Oettli [Karl Werner Oettli] and Franz Steffens. Operations Research Verfahren, 33. Verlag Anton Hain, Meisenheim, 1979. xxi + 472 pp. ISBN 3-445-01911-8 (Editors) 80d:90004c 90-06

★Third Symposium on Operations Research. Section 4. Mathematical Economics. Held at the University of Mannheim, Mannheim, September 6-8, 1978. Edited by Werner Oettli [Karl Werner Oettli] and Franz Steffens. Operations Research Verfahren, 34. Verlag Anton Hain, Meisenheim, 1979. xxi + 324 pp. ISBN 3-445-01912-6 (Editors) 80d:90004d 90-06

★Third Symposium on Operations Research. Section 5. Applications. Held at the University of Mannheim, Mannheim, September 6-8, 1978. Edited by Werner Oettli [Karl Werner Oettli] and Franz Steffens. Operations Research Verfahren, 35. Verlag Anton Hain, Meisenheim, 1979. xxi + 598 pp. ISBN 3-445-01991-6 (Editors) 80d:90004e 90-06

**Operator Algebras and their Applications** See Operator algebras and their applications, 80i:46001

**Operator Theory and its Application** See Operator theory and its application, 80f:47001

**Probability and Statistics** See Proceedings: National Symposium on Probability and Statistics, 80j:62004

**Qualitative Research on Stability of Solutions of Functional Differential Equations** See Qualitative research on stability of solutions of functional differential equations, 80g:34001

## Symposium: (continued)

- Recent Advances in Numerical Analysis** See Recent advances in numerical analysis, 80a:63016
- Scandinavian Logic** See Essays on mathematical and philosophical logic, 80f:03006
- Semigroups** See Proceedings: Symposium on Semigroups, 80e:20069
- Shape and Infinite-Dimensional Manifolds** See Shape and infinite-dimensional manifolds, 80g:54039
- SIAM-AMS, Applied Mathematics** See Fracture mechanics, 80e:73064
- Solitons and Holonomic Quantum Fields** See Solitons and holonomic quantum fields, 80f:81003
- Southeastern, System Theory** See Proceedings: Annual Southeastern Symposium on System Theory, 80j:93007
- Stability, Bifurcation and Buckling in Nonlinear Elasticity Theory and Numerical Analysis** See Stability, bifurcation and buckling in nonlinear elasticity theory and numerical analysis, 80g:73040
- Statistical Fluid Dynamics** See Statistical fluid dynamics, 80f:76002
- Stochastic Differential Equations** See Proceedings: International Symposium on Stochastic Differential Equations, 80d:60006
- Systems Optimization and Analysis** ★International Symposium on Systems Optimization and Analysis. Held at Rocquencourt, December 11–13, 1978. Edited by Alain Bensoussan and Jacques-Louis Lions. Lecture Notes in Control and Information Sciences, 14. Springer-Verlag, Berlin-New York, 1979. viii + 332 pp. ISBN 3-540-09447-4 (Editors) 80m:49002 49-06 (90-06, 93-06)
- Theory of Finite Groups** See Theory of finite groups, 80g:20003
- Theory of Nonlinear Waves** See Theory of nonlinear waves, 80a:35004
- Theory of Statistical Decision Functions and Measurement Theory** See Theory of statistical decision functions and measurement theory, 80b:62005
- Thermomechanics in Solids** See Thermomechanics in solids, 80e:73072
- Topology of Foliations** See Topology of foliations, 80g:57004
- Turbulence** See Structure and mechanisms of turbulence, 80h:76021a and Structure and mechanisms of turbulence, 80h:76021b
- Turbulence and Navier-Stokes equations** See Turbulence and Navier-Stokes equations, 80m:76003
- Synthèse, manipulation et transformation de programmes** ★Synthèse, manipulation et transformation de programmes. Journées d'études SESORI, held at Saint Rémy (Provence), May 10–12, 1978. Institut de Recherche d'Informatique et d'Automatique (IRIA), Rocquencourt, 1978. 262 pp. ISBN 2-7261-0178-X (Editors) 80f:68011 68Bxx
- Systems** See Current topics in cybernetics and systems, 80a:60001
- Systems analysis** See Extremal methods and systems analysis, 80m:00011
- Systems analysis applications to complex programs** ★Systems analysis applications to complex programs. Proceedings of the IFAC/IFORS/IIASA Workshop held in Bielefeld, June 1–6, 1977. Edited by K. Cichocki and A. Straszak. Published for the International Federation of Automatic Control (IFAC), Düsseldorf; by Pergamon Press, Oxford-New York-Toronto, Ont., 1978. xiv + 316 pp. ISBN 0-08-022029-0 (Editors) 80j:93000 93-06
- Systems analysis of industrial production** ★Системный анализ промышленного производства. (Russian) [Systems analysis of industrial production] Edited by V. I. Skurikhin and V. E. Kravchenko. Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev, 1978. 96 pp. (Editors) 80a:90048 90Bxx
- Systems in the natural sciences** ★Sisteme in stiintele naturii. (Romanian) [Systems in the natural sciences] Edited by Mircea Malița. With an English summary. Editura Academiei Republicii Socialiste România, Bucharest, 1979. 174 pp. (Editors) 80g:93003 93-06 (00A25)
- Systems optimization** See Symposium: Systems Optimization and Analysis, 80m:49002
- Systems research** See Progress in cybernetics and systems research, 80c:68005
- Systems theory** ★Teoria sistemelor. (Romanian) [Systems theory] Proceedings of a National Conference held at the Universitatea Brașov, Brașov, December 2–3, 1977. Edited by Claudia Simionescu and Iosif Benkő. Universitatea din Brașov, Brașov, 1978. 141 pp. (Editors) 80m:93002 93-06
- See also Asymptotic methods in systems theory, 80f:00002; Topics in systems theory, 80j:93005 and Proceedings: Annual Southeastern Symposium on System Theory, 80j:93007
- Szeged** See Algebraic theory of semigroups, 80d:20001
- Tables:**
- F- and related distributions with algorithms** See Mardia, K.; et al., 80e:62076
- Medieval astronomical** See Saliba, George, 80d:01009a
- Tagung:**
- Anlass des 200. Geburtstages von Carl Friedrich Gauss** See Festakt und Tagung aus Anlass des 200. Geburtstages von Carl Friedrich Gauss, 80i:01001
- Diskrete Mathematik und ihre Anwendungen in der Mathematischen Kybernetik** ★Tagung: Diskrete Mathematik und ihre Anwendungen in der mathematischen Kybernetik. 10. Arbeitsseminar held at the Wilhelm-Pieck-Universität Rostock, Rostock, April 23–26, 1978. Rostock. Math. Kolloq. No. 10 (1978). Wilhelm-Pieck-Universität, Rostock, 1978. pp. 1–125. (Editors) 80j:68006 68-06 (94-06)
- Fortschritte in der Mathematischen Optimierung** See Fortschritte in der mathematischen Optimierung, 80d:90003
- Geometrie und Anwendungen** See Vorträge: Geometrie und Anwendungen, 80d:51002
- Numerische Behandlung von Eigenwertaufgaben** See Numerische Behandlung von Eigenwertaufgaben, 80i:65002
- Numerische Behandlung gewöhnlicher Differentialgleichungen** See Berichte: Tagung Numerische Behandlung gewöhnlicher Differentialgleichungen, 80d:65009
- Numerische Methoden bei Graphentheoretischen und Kombinatorischen Problemen** See Numerische Methoden bei graphentheoretischen und kombinatorischen Problemen, 80m:65003
- Strömungsmechanik** ★Strömungsmechanik. Held in Magdeburg, September 3–6, 1979. Edited by Joachim Förste. With a loose supplementary issue containing six papers. Report 1979, 11. Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin, 1979. viii + 220 pp. (Editors) 80m:76002 76-06
- Tallahassee, Fla.** See Current trends in the theory of fields, 80c:81002
- Tbilisi** See Identification and system parameter estimation, 80d:93010a; Identification and system parameter estimation, 80d:93010b; Identification and system parameter estimation, 80d:93010c and Conference: Numerical Methods in Fluid Dynamics, 80g:76002
- Theoretical and applied problems of mathematics and mechanics** ★Теоретические и прикладные задачи математики и механики. (Russian) [Theoretical and applied problems of mathematics and mechanics] Edited by T. I. Amanov. "Nauka" Kazak SSR, Alma-Ata, 1979. 250 pp. (Editors) 80e:00012 00A10
- Theoretical ecology** See Golden age of theoretical ecology: 1923–1940, 80c:01021
- Theoretical physics** See Proceedings: International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics, 80a:47002; Nonlinear problems in theoretical physics, 80i:81002 and Complex manifold techniques in theoretical physics, 80m:81004
- Theory and applications of differentiable functions of several variables** ★Theory and applications of differentiable functions of several variables. VI. Cover to cover translation of Trudy Mat. Inst. Steklov. 140 (1976). Edited by S. M. Nikol'skii and E. A. Volkov. Proc. Steklov Inst. Math. 1979, no. 1. American Mathematical Society, Providence, R.I., 1979. pp. i–iv and 1–312. ISBN 0-8218-3039-2 (Editors) 80d:00021 00A10
- Theory of computing** See Conference Record: Annual ACM Symposium on Theory of Computing, 80b:68003
- Theory of elasticity** See Stability, bifurcation and buckling in nonlinear elasticity theory and numerical analysis, 80g:73040
- Theory of finite groups** ★Theory of finite groups. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, October 12–14, 1978. Sūrikaiseikikenkyūsho Kōkyūroku No. 344 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i–ii and 1–145. (Editors) 80g:20003 20-06
- Theory of functions** See Metric questions of the theory of functions and mappings, 80c:30023; Constructive theory of functions and functional analysis, 80d:00006; Studies in some questions of the constructive theory of functions and differential equations, 80d:00021; Metric questions of the theory of functions and mappings, 80j:30003 and Studies in the theory of functions of several real variables, 80k:00011
- Theory of functions and its applications** ★Теория функций и ее приложения. (Russian) [The theory of functions and its applications] Edited by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii] and V. K. Dzjadik [V. K. Dzjadik]. "Naukova Dumka", Kiev, 1979. 212 pp. (Editors) 80k:30001 30-06 (34-06, 41-06)
- Theory of nonlinear operators** ★Theory of nonlinear operators. Proceedings of the Fifth International Summer School held at the Central Institute of Mathematics and Mechanics of the Academy of Science of the GDR, Berlin, September 19–23, 1977. Edited by Reinhard Kluge. Abhandlungen der Akademie der Wissenschaften der DDR, Abteilung Mathematik, Naturwissenschaften, Technik, 1978, 6. Akademie-Verlag, Berlin, 1978. 410 pp. (Editors) 80d:47002 47-06 (47Hxx)
- Theory of nonlinear waves** ★Theory of nonlinear waves. Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, January 9–12, 1978. Sūrikaiseikikenkyūsho Kōkyūroku No. 332 (1978). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1978. pp. i and 1–242. (Editors) 80a:35004 35-06
- Theory and practice for categorical data analysis** See Special issue: Theory and practice for categorical data analysis, 80d:62042
- Theory of random processes** ★Теория случайных процессов. Вып. 6. (Russian) [Theory of random processes. No. 6] Edited by I. I. Gihman. "Naukova Dumka", Kiev, 1978. 136 pp. (Editors) 80d:60008 60-06
- ★Теория случайных процессов. Вып. 7. (Russian) [Theory of random processes. No. 7] Edited by I. I. Gihman. "Naukova Dumka", Kiev, 1979. 132 pp. (Editor) 80m:60004 60-06
- Theory of semigroups and its applications** ★Теория полугрупп и ее приложения. Вып. 4. (Russian) [Theory of semigroups and its applications. No. 4] Edited by V. V. Gnani. Saratov. Gos. Univ., Saratov, 1978. 120 pp. (Editors) 80d:20049 20Mxx
- Theory of statistical decision functions and measurement theory** ★Theory of statistical decision functions and measurement theory. (Japanese) Proceedings of a Symposium held at the Research Institute of Mathematical Sciences, Kyoto University, Kyoto, January 23–25, 1978. Sūrikaiseikikenkyūsho Kōkyūroku No. 327 (1978). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1978. pp. i–ii and 1–87. (Editors) 80b:62005 62-06
- Thermomechanics in solids** ★Thermomechanics in solids. Papers given at a Symposium held at the International Centre for Mechanical Sciences, Udine, July 22–25, 1974. Edited by W. Nowacki and I. N. Sneddon. CISM Courses and Lectures, 223. Springer-Verlag, Vienna, 1977. iv + 87 pp. ISBN 3-211-81343-8 (Alexander Ailenicyn) 80e:73072 73U05
- Time series analysis** See Applied time series analysis, 80c:62002
- Tokyo** See Proceedings: Symposium on Semigroups, 80e:20069
- Topics in algebra** ★Topics in algebra. Proceedings of the 18th Summer Research Institute of the Australian Mathematical Society, held at the Australian National University, Canberra, January 9–February 17, 1978. Edited by M. F. Newman. Lecture Notes in Mathematics, 697. Springer-Verlag, Berlin-New York, 1978. x + 229 pp. ISBN 3-540-09103-3 (Editors) 80a:00011 00A10
- Topics in artificial intelligence** ★Topics in artificial intelligence. Edited by Angelo Marzollo. CISM Courses and Lectures, 256. Springer-Verlag, Vienna, 1978. ii + 291 pp. ISBN 3-211-81466-3 (Editors) 80a:68102 68Gxx (68F05)
- Topics in functional analysis** ★Topics in functional analysis. Essays dedicated to M. G. Krein on the occasion of his 70th birthday. Edited by I. Gohberg and Mark Kač. Advances in Mathematics, Supplementary Studies, 3. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1978. xxi + 395 pp. (1 plate). ISBN 0-12-287150-2 (Editors) 80d:00023 00A10
- Topics in graph theory** ★Topics in graph theory. Meeting held in New York, May 2–4, 1977. Edited by Frank Harary. Annals of the New York Academy of Sciences, 328. New York Academy of Sciences, New York, 1979. ix + 208 pp. ISBN 0-89766-028-5 (Editors) 80j:05056 05Cxx (05-06)



**Topics in nonlinear dynamics** ★Topics in nonlinear dynamics. A tribute to Sir Edward Bullard. Proceedings of a Workshop held at the La Jolla Institute, La Jolla, Calif., December 27-29, 1977. Edited by Siebe Jorna. With a dedication by W. H. Munk. AIP Conference Proceedings, 46. American Institute of Physics, New York, 1978. x+404 pp. ISBN 0-88318-145-2 (Editors) 80b:70002 70-06 (58Fxx)

**Topics in systems theory** ★Topics in systems theory. Dedicated to Hans Blomberg on the occasion of his sixtieth birthday on December 18, 1979. Edited by Arne Halme, Raimo P. Härmäläinen and Olli Ristianiemi. Acta Polytech. Scand. Math. Comput. Sci. Ser. No. 31 (1979). Finnish Academy of Technical Sciences, Helsinki, 1979. pp. 1-191. (Editors) 80j:93005 93-02

**Topological concepts in physics** See Structural stability in physics, 80j:00017

**Topological spaces and algebraic systems** ★Топологические пространства и алгебраические системы. [Topological spaces and algebraic systems] Edited by Ju. M. Rjabuhin. Mat. Issled. No. 53 (1979). "Siniica", Kishinev, 1979. pp. 1-228. (Editors) 80m:54002 54-06

**Topology** See Algebraic topology, 80b:55002; Studies in topology, 80c:57001;

Proceedings: Conference Topology and Measure, 80d:28002a; Proceedings: Conference Topology and Measure, 80d:28002b; Geometric topology, 80d:57002; Categorical topology, 80i:18002; Algebra, Topology, Geometry, 80b:00001; Proceedings: Topology Conference, 80i:54001a; Proceedings: Topology Conference, 80i:54001b; Proceedings: Topology Conference, 80i:54002a; Proceedings: Topology Conference, 80i:54002b; Algebraic topology, 80k:55002 and Surveys in general topology, 80m:54001

**Topology of foliations** ★Topology of foliations. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, November 16-18, 1978. Sūrikaiseikenkyūsho Kōkyūroku No. 347 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-95. (Editors) 80g:57004 57-06

**Topology of low-dimensional manifolds** ★Topology of low-dimensional manifolds. Proceedings of the Second Sussex Conference held at The White House, Chelwood Gate, July 8-11, 1977. Edited by Roger A. Fenn. Lecture Notes in Mathematics, 722. Springer-Verlag, Berlin-New York, 1979. v+154 pp. ISBN 3-540-09506-3 (Editors) 80g:57005 57-06

**Topos theoretic methods in geometry** ★Topos-theoretic methods in geometry. Edited by Anders Kock. Various Publications Series, 30. Matematisk Institut, Aarhus Universitet, Aarhus, 1979. iv+219 pp. (Editors) 80i:18002 18-06 (58-06)

Toronto, Ont. See Operational research, 80a:90003

Toulouse See Logic and data bases, 80i:68089

**Towards global optimisation** ★Towards global optimisation. 2. Edited by L. C. W. Dixon and G. P. Szegő. North-Holland Publishing Co., Amsterdam-New York, 1978. vii+363 pp. ISBN 0-444-85171-2 (Editors) 80a:49002 49-06

**Transactions:**

**Conference of Army Mathematicians** ★Transactions of the Twenty-Third Conference of Army Mathematicians. Held at Langley Research Center, Hampton, Va., May 11-13, 1977. U.S. Army Research Office Rep. No. 78-1. ARO Report 78, 1. U. S. Army Research Office, Research Triangle Park, N.C., 1978. xv+654 pp. (Editors) 80a:00012 00A10

★Transactions of the Twenty-Fourth Conference of Army Mathematicians. Held at the University of Virginia, Charlottesville, Va., May 31-June 2, 1978. ARO Report, 79, 1. U. S. Army Research Office, Research Triangle Park, N.C., 1979. xv+496 pp. (Editors) 80b:00005 00A10

★Transactions of the Twenty-Fifth Conference of Army Mathematicians. Held at Johns Hopkins University, Baltimore, Md., June 6-8, 1979. ARO Report 80, 1. U. S. Army Research Office, Research Triangle Park, N.C., 1980. xxi+793 pp. (Editors) 80m:73002 73-06

**European Meeting of Statisticians** See Transactions: Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, 80a:62005

**Prague Conference on Information Theory, Statistical Decision Functions, Random Processes** ★Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians. Vol. B. Held at the Technical University of Prague, Prague, August 18-23, 1974. Academia [Publishing House of the Czechoslovak Academy of Sciences], Prague, 1978. 582 pp. (Editors) 80a:62005 62-06 (94-06)

★Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes. Vol. A. Held in Prague, August 28-September 1, 1978. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. 387 pp. ISBN 90-277-0912-2 (Editors) 80d:62004a 62-06 (60-06, 90-06, 93Exx, 94Axx)

★Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes. Vol. B. Held in Prague, August 28-September 1, 1978. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. 402 pp. ISBN 90-277-0913-0 (Editors) 80d:62004b 62-06 (60-06, 90-06, 93Exx, 94Axx)

★Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes. Vol. C. Held in Prague, August 28-September 1, 1978. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1979. 330 pp. ISBN 90-277-0938-6 (Editors) 80k:60004 60-06 (62-06, 94-06)

**Transactions of the Moscow Mathematical Society** ★Transactions of the Moscow Mathematical Society, 1978, Issue 1. Cover to cover translation of Trudy Moskov. Mat. Obšč. 33 (1976), prepared jointly by the American Mathematical Society and the London Mathematical Society. Trans. Moscow Math. Soc. 1978, no. 1. American Mathematical Society, Providence, R.I., 1978. iii+280 pp. (Editors) 80d:00024 00A10

★Transactions of the Moscow Mathematical Society, 1978, Issue 2. A cover to cover translation of Trudy Moskov. Mat. Obšč. 34 (1977). Trans. Moscow Math. Soc. 1978, no. 2. American Mathematical Society, Providence, R.I., 1978. pp. i-iii and 1-252. (Editors) 80k:00013 00A10

★Transactions of the Moscow Mathematical Society, 1979, Issue 1. A cover to cover translation of Trudy Moskov. Mat. Obšč. 35 (1976). Trans. Moscow Math. Soc. 1979, no. 1. American Mathematical Society, Providence, R.I., 1979. pp. i-iii and 1-267. (Editors) 80k:00014 00A10

★Transactions of the Moscow Mathematical Society, 1979, Issue 2. A cover to cover translation of Trudy Moskov. Mat. Obšč. 36 (1978). Trans. Moscow Math. Soc. 1979, no. 2 (1980). American Mathematical Society, Providence, R.I., 1980. pp. i-v and 1-298. (Editors) 80k:00015 00A10

**Trees in algebra and programming** See Les arbres en algèbre et en programmation, 80j:68004

**Tromsø** See Algebraic geometry, 80c:14002

**Trudy Mat. Inst. Steklov.** See Theory and applications of differentiable functions of several variables, 80d:00022; Sudakov, V. N., 80c:60052; Ryikov, S. S.; et al., 80i:10036; Conference: Mathematical Problems of Quantum Field Theory and Quantum Statistics, 80m:81005a and Conference: Mathematical Problems of Quantum Field Theory and Quantum Statistics, 80m:81005b

**Trzebieleszowice** See Probability theory on vector spaces, 80c:60008

**Tübingen** See Structural stability in physics, 80j:00017

**Tulsa, Okla.** See IEEE Conference: Acoustics, Speech and Signal Processing, 80a:68002 and Applied time series analysis, 80c:62002

**Turbulence** ★Turbulence. Edited by Peter Bradshaw. Second edition. Topics in Applied Physics, 12. Springer-Verlag, Berlin-New York, 1978. xi+339 pp. ISBN 3-540-08364-4 (Editors) 80d:76044 76F05 (76-06)

See also Structure and mechanisms of turbulence, 80b:76021a and Structure and mechanisms of turbulence, 80b:76021b

**Turbulence and Navier-Stokes equations** ★Turbulence and Navier-Stokes equations.

(Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, January 16-18, 1979. Sūrikaiseikenkyūsho Kōkyūroku No. 354 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-iii and 1-251. (Editors) 80m:76003 76-06 (76Fxx)

**Turin** See Proceedings: Commemorative Meeting for the Second Centennial of the Birth of Carl Friedrich Gauss and the 150th Anniversary of the Death of Pierre Simon Laplace, 80j:01001

**Two-dimensional numerical models of a plasma** ★Двумерные численные модели плазмы. (Russian) [Two-dimensional numerical models of a plasma] Edited by K. V. Bruilinskii. Akad. Nauk SSSR, Inst. Prikl. Mat., Moscow, 1979. 202 pp. (Editors) 80k:82057 82A45 (76W05)

**Udine** See Automata, languages and programming, 80c:68003 and Thermomechanics in solids, 80c:73072

**Unbounded derivations** See Isomorphisms and unbounded derivations, 80i:46004

**Unsolved problems** ★Unsolved problems. Summer Research Workshop in Algebraic Combinatorics held at Simon Fraser University, Burnaby, B.C., July, 1979. Simon Fraser University, Mathematics Department, Burnaby, B.C., 1979. iii+21 pp. (Editors) 80j:05001 05-XX

**Use of finite element method and finite difference method in geophysics** ★The use of finite element method and finite difference method in geophysics. Proceedings of a Summer School held at Liblice, May 30-June 11, 1977. Edited by Jiří Nedoma. Československé Akademie Věd, Geofyzikální Ústav, Prague, 1978. 365 pp. (Editors) 80c:65007 65-06 (86-06)

**Uxbridge** See Mathematics of finite elements and applications, 80b:65005

**Vancouver, B.C.** See Algebraic topology, 80b:55002 and Dynamic programming and its applications, 80d:90002

**Variétés analytiques compactes** ★Variétés analytiques compactes. Colloque held in Nice, September 19-23, 1977. Edited by Y. Hervier and A. Hirschowitz. Lecture Notes in Mathematics, 683. Springer-Verlag, Berlin-New York, 1978. ii+248 pp. ISBN 3-540-08949-7 (Editors) 80a:32002 32-06 (14-06)

**Varna** See Generalized functions and operational calculus, 80f:46003

**Vector spaces** See Probability theory on vector spaces, 80c:60008

**Venice** See Information systems methodology, 80c:94001

**Versailles** See Computing methods in applied sciences and engineering, 80d:65010a and Applied sciences, 80d:65010b

**Vieux-Boucau les Bains** See Séries formelles en variables non commutatives et applications, 80a:68005

**Vieigrid** See Selected papers: Operating systems: theory and practice, 80d:68007

**Volterra equations** ★Volterra equations. Proceedings of the Helsinki Symposium on Integral Equations held at Helsinki University of Technology, Otaniemi, August 11-14, 1978. Edited by Stig-Olof Londen and Olof J. Staffans. Lecture Notes in Mathematics, 737. Springer-Verlag, Berlin-New York, 1979. viii+314 pp. ISBN 3-540-09534-9 (Editors) 80k:45002 45-06

**Vorträge:**

**Codierungstheorie und Theorie der Suchalgorithmen** ★Vorträge aus dem Problemseminar Codierungstheorie und Theorie der Suchalgorithmen. Held in Weidling, 28 November-2 December 1977. Weiterbildungszentrum für Mathematische Kybernetik und Rechentechnik, Informationsverarbeitung, 30. Technische Universität Dresden, Dresden, 1978. 68 pp. (Editors) 80d:94018 94Bxx

**Geometrie und Anwendungen** ★Vorträge von der Tagung Geometrie und Anwendungen. Held in Gausgig, 31 October-4 November 1977. Weiterbildungszentrum für Mathematische Kybernetik und Rechentechnik, 28. Technische Universität Dresden, Dresden, 1978. 142 pp. (Editors) 80d:51002 51-06

**Problemseminar, Algebraische Methoden der Automatentheorie** ★Vorträge aus dem Problemseminar: Algebraische Methoden der Automatentheorie. Held in Altenberg, April 24-28, 1978. Vorträge zur Theorie der Automaten und Sprachen. Weiterbildungszentrum für Mathematische Kybernetik und Rechentechnik, Informationsverarbeitung, 35. Technische Universität Dresden, Dresden, 1978. 106 pp. (Editors) 80d:68009 68-06

**Wissenschaftliche Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik** ★Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik. Teil I. Held in Brussels, 28-31 March 1978. Z. Angew. Math. Mech. 59 (1979), no. 3. Akademie-Verlag, Berlin, 1979. pp. T1-T111. (Editors) 80c:65006 65-06

- Warsaw** See Mathematical models and numerical methods, 80a:65012; Mathematical physics and physical mathematics, 80i:00006; Approximation theory, 80i:41003 and Probability theory, 80m:60003
- Washington, D.C.** See Some mathematical questions in biology, 80a:92006 and ACM 78, 80j:68003
- Waterloo, Ont.** See Graph theory and related topics, 80e:05004; Ring theory, 80g:16001; Problem analysis in science and engineering, 80h:00004 and Algebraic topology, 80i:55002
- Wave propagation** See Modern problems in elastic wave propagation, 80d:73008; Mathematical questions in the theory of wave propagation, 80d:78001; Mathematical questions in the theory of wave propagation, 80k:78001 and Questions in the dynamical theory of seismic wave propagation, 80m:73033a
- Weißig** See Vorträge: Codierungstheorie und Theorie der Suchalgorithmen, 80d:94018
- White Sands, N.M.** See Proceedings: Army Numerical Analysis and Computers Conference, 80m:65004
- Williamstown, Mass.** See Harmonic analysis in Euclidean spaces, 80f:42001a and Harmonic analysis in Euclidean spaces, 80f:42001b
- Winnipeg, Man.** See Proceedings: Manitoba Conference on Numerical Mathematics and Computing, 80g:65005
- Winter School:**  
     Visegrad, Operating Systems See Selected papers: Operating systems: theory and practice, 80d:68007
- Workshop:**  
     Biomathematics and cell kinetics See Biomathematics and cell kinetics, 80f:92009  
     Complex Manifold Techniques in Theoretical Physics See Complex manifold techniques in theoretical physics, 80m:81004
- Fuzzy Reasoning** See Special issue: Fuzzy reasoning, 80e:00005
- Graphtheoretic Concepts in Computer Science** See Graphs, data structures, algorithms, 80m:68008
- IFAC/IFORS/IIASA** See Systems analysis applications to complex programs, 80j:93008
- Information Linkage Between Applied Mathematics and Industry** See Information linkage between applied mathematics and industry, 80e:00004
- International Institute for Applied Systems Analysis** See Nonsmooth optimization, 80d:49002
- Mathematical Optimization** See Hoffmann, A.; et al., 80c:90001
- Measuring, Modelling and Evaluating Computer Systems** See Measuring, modelling and evaluating computer systems, 80c:68004
- Nonlinear Dynamics** See Topics in nonlinear dynamics, 80b:70002
- Semi-infinite Programming** See Semi-infinite programming, 80j:90005
- Smoothing Techniques for Curve Estimation** See Smoothing techniques for curve estimation, 80m:62002
- Stochastic Control Theory and Stochastic Differential Systems** See Stochastic control theory and stochastic differential systems, 80f:60004
- Wrocław** See Colloquium: Logic, 80a:03003
- Yorktown Heights, N.Y.** See Computer performance, 80d:68002
- Zakopane** See Mathematical foundations of computer science, 80b:68004
- Zinnowitz** See Proceedings: Conference Topology and Measure, 80d:28002a and Proceedings: Conference Topology and Measure, 80d:28002b
- Zurich** See Contributions to analysis, 80j:30002



## ABBREVIATIONS OF NAMES OF JOURNALS

This list gives the form of references used in MATHEMATICAL REVIEWS and the complete title; the place of publication and other pertinent information are given in parentheses when desirable for clarity. An asterisk indicates that the journal has not previously been listed. A paragraph symbol (§) indicates a bibliographic journal.

- Abacus* Abacus. The Journal of The Mathematical Association of Nigeria. (Benin City)
- Abh. Braunschweig. Wiss. Ges.* Abhandlungen der Braunschweigischen Wissenschaftlichen Gesellschaft. (Göttingen)
- Abh. Math. Sem. Univ. Hamburg* Abhandlungen aus dem Mathematischen Seminar der Universität Hamburg. (Göttingen)
- Abh. Sächs. Akad. Wiss. Leipzig Math.-Natur. Kl.* Abhandlungen der Sächsischen Akademie der Wissenschaften zu Leipzig. Mathematisch-Naturwissenschaftliche Klasse. (Berlin)
- \**Abstracts Amer. Math. Soc.* Abstracts of Papers Presented to the American Mathematical Society. (Providence, R.I.) See *Notices Amer. Math. Soc.* (Beginning with the January, 1980 issue contains abstracts of papers presented at a meeting of the Society)
- \**Abstracts Bulgarian Sci. Lit. Math. Phys. Astronom. Geophys. Geodes.* Bulgarian Academy of Sciences. Centre of Scientific Information and Documentation. Abstracts of Bulgarian Scientific Literature. Mathematics, Physics, Astronomy, Geophysics, Geodesy. (Sofia)
- Acad. Roy. Belg. Bull. Cl. Sci. (5)* Académie Royale de Belgique. Bulletin de la Classe des Sciences. Koninklijke Belgische Académie. Mededelingen van de Klasse der Wetenschappen. 5e Série. (Brussels)
- Acad. Roy. Belg. Cl. Sci. Mém. Collect. 8° (2)* Académie Royale de Belgique. Classe des Sciences. Mémoires. Collection in-8°. Koninklijke Belgische Académie. Klasse der Wetenschappen. Verzameling in-8°. 2e Série. (Brussels)
- Acad. Serbe Sci. Arts Glas* Académie Serbe des Sciences et des Arts. Glas. Classe des Sciences Mathématiques et Naturelles. Nouvelle Série. (Belgrade)
- ACM Trans. Math. Software* Association for Computing Machinery. Transactions on Mathematical Software. (New York)
- Acta Acad. Åbo. Ser. B* Acta Academiae Åboensis. Ser. B. Mathematica et Physica. Matematik-Naturvetenskap-Teknik. (Åbo=Turku)
- Acta Acad. Paedagog. Civitate Pécs Ser. 6 Math. Phys. Chem. Tech.* Acta Academiae Paedagogicae in Civitate Pécs. Seria 6. Mathematica-Physica-Chemica-Technica. (Pécs)
- Acta Arith.* Polska Akademia Nauk. Instytut Matematyczny. Acta Arithmetica. (Warsaw)
- Acta Astronom. Sinica* Acta Astronomica Sinica. Tianmen Xuebao. (Peking) (Translated as: *Chinese Astronom.*)
- \**Acta Automat. Sinica* Acta Automatica Sinica. Zi Dong Hua Xuebao. (Peking)
- Acta Cienc. Indica* Acta Cientia Indica. (Meerut)
- Acta Cient. Compostelana* Acta Cientifica Compostelana. (Santiago de Compostela)
- Acta Cient. Venezolana* Acta Cientifica Venezolana. Asociación Venezolana para el Avance de la Ciencia. (Caracas)
- Acta Cryst. Sect. A* Acta Crystallographica. Section A. Crystal Physics, Diffraction, Theoretical and General Crystallography. (Copenhagen)
- Acta Cybernet.* Acta Cybernetica. (Szeged)
- Acta Fac. Rerum Natur. Univ. Comenian. Math.* Acta Facultatis Rerum Naturalium Universitatis Comenianae. Mathematica. (Bratislava)
- Acta Hist. Rerum Natur. Nec Non Tech.* Acta Historiae Rerum Naturalium Nec Non Technicarum. (Prague)
- \**Acta Human. Sci. Univ. Sangio Kyotien. Natur. Sci. Ser.* Acta Humanistica et Scientifica Universitatis Sangio Kyotiensis. Natural Science Series. (Kyoto)
- Acta Inform.* Acta Informatica. (Berlin)
- Acta Math.* Acta Mathematica. (Djursholm)
- Acta Math. Acad. Sci. Hungar.* Acta Mathematica Academiae Scientiarum Hungaricae. (Budapest)
- Acta Math. Appl. Sinica* Acta Mathematicae Applatae Sinica. Yingyong Shuxue Xuebao. (Peking)
- Acta Math. Sinica* Acta Mathematica Sinica. Shuxue Xuebao. (Peking)
- Acta Math. Vietnam.* Acta Mathematica Vietnamica. (Hanoi)
- Acta Mech.* Acta Mechanica. (Vienna)
- Acta Mech. Sinica (Peking)* Acta Mechanica Sinica. Lixue Xuebao. (Peking)
- Acta Mexicana Cienc. Tecn.* Instituto Politécnico Nacional. Acta Mexicana de Ciencia y Tecnología. (Mexico City)
- Acta Philos. Fenn.* Acta Philosophica Fennica. (Amsterdam)
- Acta Phys. Acad. Sci. Hungar.* Acta Physica Academiae Scientiarum Hungaricae. (Budapest)
- Acta Phys. Austriaca* Acta Physica Austriaca. (Vienna)
- Acta Phys. Polon. A* Polska Akademia Nauk. Instytut Fizyki. Acta Physica Polonica. A. (Warsaw)
- Acta Phys. Polon. B* Polska Akademia Nauk. Instytut Fizyki. Acta Physica Polonica. B. (Warsaw)
- Acta Phys. Sinica* Acta Physica Sinica. Wuli Xuebao. (Peking)
- Acta Phys. Slovaca* Acta Physica Slovaca. (Bratislava)
- Acta Polytech. Práce ČVUT (4)* Acta Polytechnica Práce ČVUT v Praze. (Prague)
- Acta Polytech. Scand. Math. Comput. Sci. Ser.* Acta Polytechnica Scandinavica. Mathematics and Computer Science Series. (Helsinki)
- Acta Sci. Math. (Szeged)* Acta Universitatis Szegediensis. Acta Scientiarum Mathematicarum. (Szeged)
- Acta Sci. Natur. Univ. Pekinensis* See *Beijing Daxue Xuebao*
- Acta Tech. Acad. Sci. Hungar.* Acta Technica Academiae Scientiarum Hungaricae. (Budapest)
- Acta Tech. ČSAV* Acta Technica. Československá Akademie Věd. (Prague)
- Acta Univ. Carolin.—Math. Phys.* Acta Universitatis Carolinae. Mathematica et Physica. (Prague)
- Acta Univ. Oulu. Ser. A Sci. Rerum Natur. Math.* Acta Universitatis Ouluensis. Series A. Scientiae Rerum Naturalium. Mathematica. (Oulu)
- Acta Univ. Tampere. Ser. A* Acta Universitatis Tampereensis. Series A. (Tampere)
- Acta Univ. Wratislav.* Acta Universitatis Wratislaviensis. (Wrocław) (Continued as: *Acta Univ. Wratislav. Mat. Fiz. Astronom.*)
- \**Acta Univ. Wratislav. Mat. Fiz. Astronom.* Acta Universitatis Wratislaviensis. Matematika, Fizyka, Astronomia. (Wrocław) (Formerly: *Acta Univ. Wratislav.*)
- Acustica* Acustica. International Journal of Acoustics. (Stuttgart)
- Adapt. Sistemy Avtomat. Upravleniya* Kievskii Politehnicheskii Institut. Adaptivnye Sistemy Avtomaticheskogo Upravleniya. (Kiev)
- Adaptivnye Sistemy (Riga)* Akademija Nauk Latvīskoi SSR. Institut Elektroniki i Vychislitel'noi Tehniki. (Riga)
- Adv. in Appl. Probab.* Advances in Applied Probability. (Sheffield)
- Adv. in Math.* Advances in Mathematics. (New York)
- Adv. in Mech.* Advances in Mechanics. (Warsaw)
- Aequationes Math.* Aequationes Mathematicae. (Basel)
- \**Afrika Mat.* Afrika Matematika. The First Pan-African Mathematical Journal. (Paris)
- AIAA J.* American Institute of Aeronautics and Astronautics. Journal. (New York)
- AIChE J.* The American Institute of Chemical Engineers. Journal. (New York)
- AIIE Trans.* American Institute of Industrial Engineers. Transactions. (Norcross, Ga.)
- Ajatus* Ajatus. Suomen Filosofisen Yhdistyksen Vuosikirja. Yearbook of the Philosophical Society of Finland. (Helsinki)
- Akad. Nauk Armjan. SSR Dokl.* Akademija Nauk Armjanskoi SSR. Doklady. (Erevan)
- Akad. Nauk Azerbaidžan. SSR Dokl.* Akademija Nauk Azerbaidžanskoi SSR. Doklady. (Baku)
- Akad. Nauk Kazah. SSR Trudy Astrofiz. Inst.* Akademija Nauk Kazahskoi SSR. Trudy Astrofizicheskogo Instituta. (Alma-Ata)
- Akad. Nauk Kazah. SSR Trudy Inst. Mat. i Meh.* Akademija Nauk Kazahskoi SSR. Trudy Instituta Matematiki i Mehaniki. (Alma-Ata)
- Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* Akademija Nauk SSSR. Institut Prikladnoi Matematiki. Preprint. (Moscow)
- Akad. Nauk SSSR Sibirsk. Otdel. Vyčisl. Centr Preprint* Akademija Nauk SSSR. Sibirskoe Otdelenie. Vychislitel'nyi Centr. Preprint. (Novosibirsk)
- Akad. Nauk Ukrain. SSR Inst. Mat. Preprint* Akademija Nauk Ukrainskoi SSR. Institut Matematiki. Preprint. (Kiev)
- Akad. Nauka Umjet. Bosne Hercegov. Rad. Odljeli. Prirod. Mat. Nauka* Akademija Nauka i Umjetnosti Bosne i Hercegovine. Radovi. Odljenje Prirodnih i Matematičkih Nauka. (Sarajevo)
- Akad. Nauka Umjet. Bosne Hercegov. Rad. Odljeli. Tehn. Nauka* Akademija Nauka i Umjetnosti Bosne i Hercegovine. Radovi. Odljenje Tehničkih Nauka. (Sarajevo)
- Akust. Ž.* Akademija Nauk SSSR. Akustičeskii Žurnal. (Moscow) (Translated as: *Soviet Phys. Acoust.*)
- Al. Culukidzis Sahelob. Khutnaisi. Sahelmc. Ped. Inst. Šrom.* Al. Culukidzis Sahelobis Khutnaisi Sahelmcipho Pedagogiuri Institutis Šromebi. (Kutaisi)
- Algebra and Logic* Algebra and Logic. (New York) (Translation of *Algebra i Logika*)
- Algebra i Logika* Akademija Nauk SSSR. Sibirskoe Otdelenie. Institut Matematiki. Algebra i Logika. (Novosibirsk) (Translated as: *Algebra and Logic*)
- Algebra Universalis* Algebra Universalis. (Basel)
- Algoritmy i Algoritm. Jazyki* Vychislitel'nyi Centr Akademii Nauk SSSR. Algoritmy i Algoritmicheskie Jazyki. (Moscow)
- Aligarh Bull. Math.* The Aligarh Bulletin of Mathematics. (Aligarh)
- Alkalmaz. Mat. Lapok* Alkalmazott Matematikai Lapok. (Budapest)
- Amer. J. Math.* American Journal of Mathematics. (Baltimore, Md.)
- Amer. J. Phys.* American Journal of Physics. (New York)
- Amer. Math. Monthly* The American Mathematical Monthly. (Washington, D.C.)
- Amer. Sci.* American Scientist. (New Haven, Conn.)
- Amer. Statist.* The American Statistician. (Washington, D.C.)
- \**AMR* Applied Mechanics Reviews. (New York) See *Appl. Mech. Rev.*
- An. Acad. Brasil. Cienc.* Anais da Academia Brasileira de Ciências. (Rio de Janeiro)
- An. Fac. Cienc. Univ. Porto* Anais de Faculdade de Ciências. Universidade do Porto. (Porto)
- An. Inst. Mat. Univ. Nac. Autónoma México* Anales del Instituto de Matemáticas. Universidad Nacional Autónoma de México. (Mexico City)

- An. Științ. Univ. "Al. I. Cuza" Iași Sect. I a Mat. (N.S.)* Analele Științifice ale Universității "Al. I. Cuza" din Iași. Seria Nouă. Secțiunea I a Matematică. (Iași)
- An. Științ. Univ. "Al. I. Cuza" Iași Sect. I b Fiz. (N.S.)* Universității "Al. I. Cuza" din Iași. Analele Științifice. Secțiunea I b Fizica. Seria Nouă. (Iași)
- An. Univ. București Fiz.* Analele Universității București. Fizica. (Bucharest)
- An. Univ. București Mat.* Analele Universității București. Matematica. (Bucharest)
- An. Univ. Craiova Mat. Fiz.-Chim.* Universității din Craiova. Analele. Matematică, Fizică-Chimie. (Craiova)
- An. Univ. Timișoara Ser. Științ. Fiz.-Chim.* Analele Universității din Timișoara. Seria Științe Fizice-Chimice. (Timișoara)
- An. Univ. Timișoara Ser. Științ. Mat.* Analele Universității din Timișoara. Seria Științe Matematică. (Timișoara)
- Anal. Math.* Analysis Mathematica. (Budapest)
- Anal. Numér. Théor. Approx.* L'Analyse Numérique et la Théorie de L'Approximation. (Cluj-Napoca)
- Ann. Acad. Sci. Fenn. Ser. A I Math.* Suomalaisen Tiedeakatemian Toimituksia. Sarja A. Annales Academiæ Scientiarum Fennicæ. Series A I. Mathematica. (Helsinki)
- Ann. Acad. Sci. Fenn. Ser. A I Math. Dissertationes* Annales Academiæ Scientiarum Fennicæ. Series A I. Mathematica Dissertationes. (Helsinki)
- Ann. Acad. Sci. Fenn. Ser. A VI Phys.* Suomalaisen Tiedeakatemian Toimituksia. Sarja A. Annales Academiæ Scientiarum Fennicæ. Series A VI. Physica. (Helsinki)
- Ann. Discrete Math.* Annals of Discrete Mathematics. (Amsterdam)
- Ann. École Nat. Sup. Méc. Nantes* Annales. École Nationale Supérieure de Mécanique. (Nantes)
- Ann. Fac. Sci. Toulouse Math. (5)* Toulouse. Faculté des Sciences. Annales. Mathématiques. Série 5. (Toulouse)
- Ann. Fac. Sci. Univ. Nat. Zaïre (Kinshasa) Sect. Math.-Phys.* Université Nationale du Zaïre. Faculté des Sciences. Annales. Section Mathématique-Physique. (Kinshasa)
- Ann. Gifu College Ed.* Gifu College of Education. The Annals. (Gifu)
- Ann. Hist. Comput.* Annals of the History of Computing. (Arlington, Va.)
- Ann. Human Genetics* Annals of Human Genetics. (Cambridge)
- Ann. I.N.S.E.E.* Ministère de l'Économie et des Finances. Institut National de la Statistique et des Études Économiques. Annales. (Paris)
- Ann. Inst. Fourier (Grenoble)* Université de Grenoble. Annales de l'Institut Fourier. (Grenoble)
- Ann. Inst. H. Poincaré Sect. A (N.S.)* Annales de l'Institut Henri Poincaré. Section A. Physique Théorique. Nouvelle Série. (Paris)
- Ann. Inst. H. Poincaré Sect. B (N.S.)* Annales de l'Institut Henri Poincaré. Section B. Calcul des Probabilités et Statistique. Nouvelle Série. (Paris)
- Ann. Inst. Statist. Math.* Annals of the Institute of Statistical Mathematics. (Tokyo)
- Ann. Japan Assoc. Philos. Sci.* Annals of the Japan Association for Philosophy of Science. (Tokyo)
- Ann. Mat. Pura Appl. (4)* Annali di Matematica Pura ed Applicata. Serie Quarta. (Bologna)
- Ann. Math. Logic* Annals of Mathematical Logic. (Amsterdam)
- Ann. of Math. (2)* Annals of Mathematics. Second Series. (Princeton, N.J.)
- Ann. of Sci.* Annals of Science. (London)
- Ann. Physics* Annals of Physics. (New York)
- Ann. Physik (7)* Annalen der Physik. 7. Folge. (Leipzig)
- Ann. Polon. Math.* Polska Akademia Nauk. Annales Polonici Mathematici. (Warsaw)
- Ann. Probab.* The Annals of Probability. (Hayward, Calif.)
- Ann. Sci. École Norm. Sup. (4)* Annales Scientifiques de l'École Normale Supérieure. Quatrième Série. (Paris)
- Ann. Sci. Kanazawa Univ.* Kanazawa University. College of Liberal Arts. Annals of Science. (Kanazawa)
- Ann. Sci. Math. Québec* Les Annales des Sciences Mathématiques du Québec. (Montreal)
- Ann. Sci. Univ. Besançon Math. (3)* Annales Scientifiques de l'Université de Besançon. Mathématiques. 3e Série. (Besançon)
- Ann. Sci. Univ. Besançon Méc. Phys. Théor. (3)* Annales Scientifiques de l'Université de Besançon. Mécanique et Physique Théorique. 3ème Série. (Besançon)
- Ann. Sci. Univ. Besançon Phys.* Université de Besançon. Annales Scientifiques. Physique. (Besançon)
- Ann. Sci. Univ. Clermont Math.* Annales Scientifiques de l'Université de Clermont. Série Mathématique. (Clermont-Ferrand)
- Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* Annali della Scuola Normale Superiore di Pisa. Classe di Scienze. Serie IV. (Pisa)
- Ann. Soc. Math. Polon. Ser. I Comment. Math. Prace Mat.* See Comment. Math. Prace Mat.
- Ann. Soc. Math. Polon. Ser. II Wiadom. Mat.* See Wiadom. Mat.
- Ann. Soc. Math. Polon. Ser. III Mat. Stos.* See Mat. Stos.
- Ann. Soc. Math. Polon. Ser. IV Fund. Inform.* See Fund. Inform. (4)
- Ann. Soc. Sci. Bruxelles Sér. I* Annales de la Société Scientifique de Bruxelles. Série I. Sciences Mathématiques, Astronomiques et Physiques. (Brussels)
- Ann. Statist.* The Annals of Statistics. (Hayward, Calif.)
- Ann. Univ. Ferrara Sez. VII (N.S.)* Annali dell'Università di Ferrara. Nuovo Serie. Sezione VII. Scienze Matematiche. (Ferrara)
- Ann. Univ. Mariae Curie-Skłodowska Sect. A* Annales Universitatis Mariae Curie Skłodowska. Sectio A. Mathematica. (Lublin)
- Ann. Univ. Sarav. Math.-Natur. Fak.* Annales Universitatis Saraviensis. Mathematisch-Naturwissenschaftliche Fakultät. (Berlin)
- Ann. Univ. Sci. Budapest. Eötvös Sect. Math.* Annales Universitatis Scientiarum Budapestinensis de Rolando Eötvös Nominatae. Sectio Mathematica. (Budapest)
- Ann. Univ. Turku. Ser. A I* Annales Universitatis Turkuensis. Series A. I. Astronomica-Chemica-Physica-Mathematica. (Turku)
- Annuaire Univ. Sofia Fac. Math. Méc.* Annuaire de l'Université de Sofia. Faculté de Sofia. Faculté de Mathématiques et Mécanique. (Sofia) (Also listed as: *Godišnik Sofijsk. Univ. Fak. Mat. Meh.*)
- Annuaire Univ. Sofia Fac. Phys.* Godišnik na Sofijskija Universitet. Fizički Fakultet. Annuaire de l'Université de Sofia. Faculté de Physique. (Sofia) (Also listed as: *Godišnik Sofijsk. Univ. Fiz. Fak.*)
- Annual Rep. Fac. Ed. Iwate Univ.* Iwate University. Faculty of Education. Annual Report. (Kakuzanwaki)
- Anz. Österreich. Akad. Wiss. Math.-Natur. Kl.* Österreichische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Anzeiger. (Vienna)
- Apl. Mat.* Československá Akademie Věd. Aplikace Matematiky. (Prague)
- Appl. Math. Comput.* Applied Mathematics and Computation. (New York)
- Appl. Math. Modelling* Applied Mathematical Modelling. (Guildford)
- Appl. Math. Notes* Applied Mathematics Notes. (Montreal, Que.)
- Appl. Math. Optim.* Applied Mathematics and Optimization. An International Journal. (New York)
- Appl. Mech. Rev.* Applied Mechanics Reviews. (New York) (Usually abbreviated as *AMR* in the text of *Math. Rev.*)
- Appl. Sci. Res.* Applied Scientific Research. (The Hague)
- Applicable Anal.* Applicable Analysis. An International Journal. (New York)
- Arabian J.-Sci. Engrg.* Arabian Journal for Science and Engineering. (Dhahran)
- Arbeitsber. Inst. Math. Masch. Datenerarb. (Inform.)* Institut für Mathematische Maschinen und Datenverarbeitung (Informatik). Arbeitsberichte. (Erlangen)
- Årbok Univ. Bergen Mat.-Natur. Ser.* Årbok for Universitetet i Bergen. Matematik. Naturvidenskapelig Serie. (Bergen)
- Arch. Automat. Telemekh.* Polska Akademia Nauk. Komitet Automatyki i Cybernetyki Technicznej. Archiwum Automatyki i Telemekhaniki. (Warsaw)
- Arch. Elektrotech. (Warsaw)* Komitet Elektrotechniki. Komitet Elektroniki i Telekomunikacji Polskiej Akademii Nauk. Archiwum Elektrotechniki. (Warsaw)
- Arch. Hist. Exact Sci.* Archive for History of Exact Sciences. (Berlin)
- Arch. Internat. Hist. Sci.* Archives Internationales d'Histoire des Sciences. (Paris)
- Arch. Math. (Basel)* Archiv der Mathematik. Archives of Mathematics. Archives Mathématiques. (Basel)
- Arch. Math. (Brno)* Spisy Přírodovědecké Fakulty University J. E. Purkyně v Brně. Archivum Mathematicum. (Brno)
- Arch. Math. Logik Grundlag.* Archiv für Mathematische Logik und Grundlagenforschung. (Stuttgart)
- Arch. Mech. (Arch. Mech. Stos.)* Institute of Fundamental Technical Research. Polish Academy of Sciences. Archives of Mechanics (Archiwum Mechaniki Stosowanej). (Warsaw)
- Arch. Rational Mech. Anal.* Archive for Rational Mechanics and Analysis. (Berlin)
- Archimede* Archimede. Rivista per gli Insegnanti e i Cultori di Matematiche Pure e Applicate. (Florence)
- Ark. Mat.* Arkiv för Matematik. (Stockholm)
- Arkhimedes* Arkhimedes. Suomen Fyysikkoseura-Finlands Fysikerforening r.y. Suomen Matemaattinen Yhdistys-Finlands Matematiska Förening r.y. (Helsinki)
- Ars Combin.* Ars Combinatoria. (Waterloo, Ont.)
- Artificial Intelligence* Artificial Intelligence. An International Journal. (Amsterdam)
- Astin Bull.* The Astin Bulletin. International Journal for Actuarial Studies in Non-Life Insurance and Risk Theory. (Leiden)
- Astrofizika* Akademija Nauk Armjanskoi SSR. Astrofizika. (Erevan) (Translated as: *Astrophysics*)
- Astrometr. i Astrofiz.* Akademija Nauk Ukrainskoi SSR. Glavnaja Astronomičeskaja Observatorija. Astronometrija i Astrofizika. (Kiev)
- Astronom. and Astrophys.* Astronomy and Astrophysics. (Berlin)
- Astronom. Astrophys. Suppl. Ser.* Astronomy & Astrophysics. Supplement Series. (Lausanne)
- Astronom. J.* The Astronomical Journal. (New York)
- Astronom. Nachr.* Astronomische Nachrichten. (Berlin)
- Astronom. Ž.* Akademija Nauk SSSR. Astronomičeskii Žurnal. (Moscow) (Translated as: *Soviet Astronom.*)
- Astrophys. and Space Sci.* Astrophysics and Space Science. (Dordrecht)
- Astrophys. J.* The Astrophysical Journal. (Chicago, Ill.)
- Astrophys. J. Suppl.* Astrophysics Journal. Supplement Series. (Chicago, Ill.)
- Astrophysics* Astrophysics. A translation of *Astrofizika* of the Academy of Sciences of the Armenian SSR. (New York) (Translation of *Astrofizika*)
- Atti Accad. Ligure Sci. Lett.* Atti della Accademia Ligure di Scienze e Lettere. (Genoa)
- Atti Accad. Naz. Lincei Mem. Cl. Sci. Fis. Mat. Natur. Sez. Ia (8)* Atti della Accademia Nazionale dei Lincei. Memorie. Classe di Scienze Fisiche, Matematiche e Naturali. Sezione Ia. Matematica, Meccanica, Astronomia, Geodesia e Geofisica. Serie VIII. (Rome)
- Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur. (8)* Atti della Accademia Nazionale dei Lincei. Rendiconti. Classe di Scienze Fisiche, Matematiche e Naturali. Serie VIII. (Rome)
- Atti Accad. Peloritana Pericolanti Cl. Sci. Fis. Mat. Natur.* Accademia Peloritana dei Pericolanti. Classe Scienze, Fisiche, Matematiche e Naturali. Atti. (Messina)
- Atti Accad. Sci. Ist. Bologna Cl. Sci. Fis. Rend. (13)* Atti della Accademia delle Scienze dell'Istituto di Bologna. Classe di Scienze Fisiche. Rendiconti. Serie XIII. (Bologna)
- Atti Accad. Sci. Lett. Arti Palermo Parte I (4)* Atti della Accademia di Scienze Lettere e Arti di Palermo. Parte Prima. Scienze. Serie Quarta. (Palermo)
- Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* Atti della Accademia delle Scienze di Torino. Classe di Scienze Fisiche, Matematiche e Naturali. (Turin)
- Atti Sem. Mat. Fis. Univ. Modena* Atti del Seminario Matematico e Fisico dell'Università di Modena. (Modena)



- Atti Soc. Peloritana Sci. Fis. Mat. Natur.* Atti della Società Peloritana di Scienze Fisiche Matematiche e Naturali. (Messina)
- Austral. Comput. J.* The Australian Computer Society. The Australian Computer Journal. (Chippendale)
- Austral. J. Phys.* Australian Journal of Physics. (Melbourne)
- Austral. J. Statist.* The Australian Journal of Statistics. (Sydney)
- Austral. Math. Soc. Gaz.* The Australian Mathematical Society. Gazette. (Kensington)
- Automat. Control Comput. Sci.* Automatic Control and Computer Sciences. (New York) (Translation of *Automat. i Vyčisl. Tehn.* (Riga))
- Automat. Control Theory Appl.* Automatic Control Theory and Applications. (Calgary, Alta.)
- Automat. Document. and Math. Linguistics* Automatic Documentation and Mathematical Linguistics. (New York) (Translation of *Naučn.-Tehn. Informacija (VINITI) Ser. 2. Informacionnye Processy i Sistemy*)
- Automat. Programming* Automatic Programming. (Oxford)
- Automat. Remote Control* Automation and Remote Control. A translation of *Avtomatika i Telemekhanika*, a publication of the Academy of Sciences of the USSR. (New York) (Translation of *Avtomat. i Telemekh.*)
- Automatica—J. IFAC* Automatica. The Journal of IFAC. The International Federation of Automatic Control. (Oxford)
- Ach. Norske Vid.-Akad. Oslo I (N.S.)* Avhandlingar Utgitt av det Norske Videnskaps-Akademi i Oslo I. Mat.-Naturv. Klasse. Ny Serie. (Oslo)
- Avtomat. i Telemekh.* Akademija Nauk SSSR. Avtomatika i Telemekhanika. (Moscow) (Translated as: *Automat. Remote Control*)
- Avtomat. i Vyčisl. Tehn. (Riga)* Akademija Nauk Latvīskoi SSR. Avtomatika i Vyčislitel'naja Tehnika. (Riga) (Translated as: *Automat. Control Comput. Sci.*)
- Avtomat. i Vyčisl. Tehnika (Minsk)* Minskij Radiotekhniki Institut. Avtomatika i Vyčislitel'naja Tehnika. (Minsk)
- Avtomat. Izčisl. Tehn.* Avtomatika i Izčislitel'naja Tehnika. (Sofia)
- Avtomat. Sistemy Upravlen. (LGU)* Leningradskij Gosudarstvennyj Universitet. Avtomatizirovannye Sistemy Upravlenija. (Leningrad)
- Avtomat. Sistemy Upravlenija i Priboj Avtomat.* Avtomatizirovannye Sistemy Upravlenija i Priboj Avtomatiki. (Kharkov)
- Avtomat. Upravl. i Vyčisl. Tehnika* Avtomatičeskoe Upravlenie i Vyčislitel'naja Tehnika. (Moscow)
- Avtomatika* Akademija Nauk Ukraїns'koi RSR. Institut Elektrotehniki. Avtomatika. (Kiev) (Translated as: *Soviet Automat. Control*)
- Avtometrija* Avtometrija. Akademija Nauk SSSR. Sibirskoe Otdelenie. (Novosibirsk)
- Azerbaidžan. Gos. Univ. Učen. Zap.* Azerbaidžanskij Gosudarstvennyj Universitet im. S. M. Kirova. Učenyje Zapiski. (Baku)
- Baškır. Gos. Univ. Učen. Zap.* Baškırskij Gosudarstvennyj Universitet. Učenyje Zapiski. (Ufa)
- Bayer. Akad. Wiss. Math.-Natur. Kl. Abh. (N.F.)* Bayerische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Abhandlungen. Neue Folge. (Munich)
- Bayer. Akad. Wiss. Math.-Natur. Kl. Sitzungsber.* Bayerische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Sitzungsberichte. (Munich)
- Bayreuth. Math. Schr.* Bayreuther Mathematische Schriften. (Bayreuth)
- Beijing Daxue Xuebao* Beijing Daxue Xuebao. Ziran Kexue Ban. Beijing University Journal. Natural Sciences. (Peking)
- Beiträge Algebra Geom.* Beiträge zur Algebra und Geometrie. (Halle) (Formerly: *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M*)
- Beiträge Anal.* Beiträge zur Analysis. (Berlin)
- Beiträge Numer. Math.* Beiträge zur Numerischen Mathematik. (Berlin)
- Bell J. Econom.* The Bell Journal of Economics. (New York)
- Bell System Tech. J.* The Bell System Technical Journal. (Murray Hill, N.J.)
- Ber. Math.-Statist. Sect. Forsch. Graz* Graz. Forschungszentrum. Mathematisch-Statistische Sektion. Berichte. (Graz)
- Ber. Univ. Jyväskylä Math. Inst.* Jyväskylä. Universitätt. Mathematisches Institut. Bericht. (Jyväskylä)
- Biblio. France* Bibliographie de la France. (Paris)
- Biblio. Sci. Nat. Helv.* Bibliographia Scientiae Naturalis Helvetica. (Bern)
- Biol. Cybernet.* Biological Cybernetics. (Berlin)
- Biometrical J.* Biometrical Journal. (Berlin)
- Biometrics* Biometrics. Journal of the Biometric Society. (Washington, D.C.)
- Biometrika* Biometrika. (London)
- BIT* BIT; Nordisk Tidsskrift for Informationsbehandling (BIT). (Copenhagen)
- Biul. Lubel. Towarz. Nauk. Mat. Fiz. Chem.* Biuletyn Lubelskiego Towarzystwa Naukowego. Matematyka. Fizyka. Chemia. (Lublin)
- Bjull. Inst. Teoret. Astronom.* Akademija Nauk Sojuza Sovetskikh Socialističeskikh Respublik. Bjulleten' Instituta Teoretičeskoi Astronomii. (Moscow)
- Bol. Mat.* Boletín de Matemáticas. (Bogotá)
- Bol. Soc. Brasil. Mat.* Boletim da Sociedade Brasileira de Matemática. (Rio de Janeiro)
- Bol. Soc. Mat. Mexicana (2)* Boletín de la Sociedad Matemática Mexicana. Segunda Serie. (Mexico City)
- Boll. Un. Mat. Ital. A (5)* Unione Matematica Italiana. Bollettino. A. Serie V. (Bologna)
- Boll. Un. Mat. Ital. B (5)* Unione Matematica Italiana. Bollettino. B. Serie V. (Bologna)
- British J. Hist. Sci.* British Society for the History of Science. British Journal for the History of Science. (Chalfont St. Giles)
- British J. Math. Statist. Psych.* The British Journal of Mathematical and Statistical Psychology. (London)
- British J. Philos. Sci.* The British Journal for the Philosophy of Science. (Aberdeen)
- British Nat. Biblio.* British National Bibliography. (London)
- BS110* Centre National de la Recherche Scientifique. Bulletin Signalétique 110. Informatique. Automatique. Recherche Opérationnelle. Gestion. (Paris) See *Bull. Signal.* 110
- Bul. Akad. Štiințe RSS Moldoven.* Buletinul Academiei de Științe a RSS Moldovenești. (Kishinev) (Continued as: *Izv. Akad. Nauk Moldov. SSR Ser. Fiz.-Tehn. Mat. Nauk*)
- Bul. Inst. Politehn. București Ser. Chim.-Metal.* Institutului Politehnic "Gheorghe Gheorghiu-Dej" București. Buletinul. Seria Chimie-Metalurgie. (Bucharest)
- Bul. Inst. Politehn. București Ser. Electrotehn.* Institutului Politehnic "Gheorghe Gheorghiu-Dej" București. Buletinul. Seria Electrotehnică. (Bucharest)
- Bul. Inst. Politehn. București Ser. Mec.* Institutului Politehnic "Gheorghe Gheorghiu-Dej" București. Buletinul. Seria Mecanică. (Bucharest)
- Bul. Inst. Politehn. Iași Sec. I* Institutului Politehnic din Iași. Buletinul. Secția I. Matematică. Mecanică Teoretică. Fizică. (Iași)
- Bul. Științ. Inst. Politehn. Cluj-Napoca* Al Institutului Politehnic Cluj-Napoca. Buletinul Științific. (Cluj-Napoca) (Continued as: *Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Arhitect.-Construc.*, *Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Construc. Maș.*, *Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Chim. Metal.*, *Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Electrotehn.-Energet.-Inform.*, and *Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Mat.-Fiz.-Mec. Apl.*)
- Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Arhitect.-Construc.* Al Institutului Politehnic Cluj-Napoca. Buletinul Științific. Seria Arhitectură-Construcții. (Cluj-Napoca) (Formerly: *Bul. Științ. Inst. Politehn. Cluj-Napoca*) (Mathematical Reviews does not review this series)
- Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Chim. Metal.* Al Institutului Politehnic Cluj-Napoca. Buletinul Științific. Seria Chimie-Metalurgie. (Cluj-Napoca) (Formerly: *Bul. Științ. Inst. Politehn. Cluj-Napoca*)
- Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Construc. Maș.* Al Institutului Politehnic Cluj-Napoca. Buletinul Științific. Seria Construcții de Mașini. (Cluj-Napoca) (Formerly: *Bul. Științ. Inst. Politehn. Cluj-Napoca*) (Mathematical Reviews does not review this series)
- Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Electrotehn.-Energet.-Inform.* Al Institutului Politehnic Cluj-Napoca. Buletinul Științific. Seria Electrotehnică-Energetică-Informatică. (Cluj-Napoca) (Formerly: *Bul. Științ. Inst. Politehn. Cluj-Napoca*)
- Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Mat.-Fiz.-Mec. Apl.* Al Institutului Politehnic Cluj-Napoca. Buletinul Științific. Seria Matematică-Fizică-Mecanică Aplicată. (Cluj-Napoca) (Formerly: *Bul. Științ. Inst. Politehn. Cluj-Napoca*)
- Bul. Științ. Tehn. Inst. Politehn. "Traian Vuia"* Timișoara Institutului Politehnic "Traian Vuia" Timișoara. Buletinul Științific și Tehnic. (Timișoara)
- Bul. Univ. Brașov Ser. C* Universității din Brașov. Buletinul. Seria C. (Brașov)
- Bul. Univ. Galați Fasc. II Mat. Fiz. Mec. Teoret.* Universitatea din Galați. Buletinul. Fascicula II. Matematică, Fizică, Mecanică Teoretică. (Galați)
- Bulgar. J. Phys.* Bulgarian Journal of Physics. (Sofia)
- Bull. Acad. Polon. Sci. Sér. Sci. Math.* L'Académie Polonaise des Sciences. Bulletin. Série des Sciences Mathématiques. (Warsaw)
- Bull. Acad. Polon. Sci. Sér. Sci. Phys. Astronom.* L'Académie Polonaise des Sciences. Bulletin. Série des Sciences Physiques et Astronomiques. (Warsaw)
- Bull. Acad. Polon. Sci. Sér. Sci. Tech.* Bulletin de l'Académie Polonaise des Sciences. Série des Sciences Techniques. (Warsaw)
- Bull. Acad. Serbe Sci. Arts Cl. Sci. Math. Natur.* Académie Serbe des Sciences et des Arts. Classe des Sciences Mathématiques et Naturelles. Bulletin. (Belgrade) (Continued as: *Bull. Acad. Serbe Sci. Arts Cl. Sci. Math. Natur. (N.S.)*)
- Bull. Acad. Serbe Sci. Arts Cl. Sci. Math. Natur. (N.S.)* Académie Serbe des Sciences et des Arts. Classe des Sciences Mathématiques et Naturelles. Bulletin. Nouvelle Série. (Belgrade) (Formerly: *Bull. Acad. Serbe Sci. Arts Cl. Sci. Math. Natur.*)
- Bull. Aichi Univ. Ed. Natur. Sci.* Bulletin of Aichi University of Education. Natural Science. (Kariya)
- Bull. Amer. Math. Soc. (N.S.)* American Mathematical Society. Bulletin. New Series. (Providence, R.I.)
- Bull. Assoc. Enseign. Math. Sér. B* Association des Enseignants de Mathématiques. Bulletin. Série B. (Rabat)
- Bull. Astronom. Inst. Czechoslovakia* Astronomical Institutes of Czechoslovakia. Bulletin. (Prague)
- Bull. Austral. Math. Soc.* Bulletin of the Australian Mathematical Society. (St. Lucia)
- Bull. Calcutta Math. Soc.* Bulletin of the Calcutta Mathematical Society. (Calcutta)
- Bull. College Sci. Univ. Ryukyus* University of the Ryukyus. College of Science. Bulletin. (Naha)
- Bull. Dept. Gen. Ed. College Sci. Tech. Nihon Univ.* Bulletin of Department of General Education. College of Science and Technology. Nihon University. (Narashino)
- Bull. Direction Études Rech. Sér. C Math. Inform.* Électricité de France. Bulletin de la Direction des Études et Recherches. Série C. Mathématiques. Informatique. (Clamart)
- Bull. Fac. Ed. Univ. Kagoshima* Bulletin of the Faculty of Education. University of Kagoshima. (Kagoshima)
- Bull. Fac. Ed. Utsunomiya Univ. Sect. 2* Utsunomiya University. Faculty of Education. Section 2. Bulletin. (Utsunomiya)
- Bull. Fac. Ed. Wakayama Univ. Natur. Sci.* Wakayama University. Faculty of Education. Bulletin. Natural Science. (Wakayama)
- Bull. Fac. Engrg. Miyazaki Univ.* Bulletin of the Faculty of Engineering. Miyazaki University. (Miyazaki)
- Bull. Fac. Gen. Ed. Gifu Univ.* Gifu University. Faculty of General Education. Bulletin. (Gifu)
- Bull. Fac. Sci. Assiut Univ.* Assiut University. Bulletin of the Faculty of Science. (Assiut)

- Bull. Fac. Sci. Engrg. Chuo Univ.* Chuo University. Faculty of Science and Engineering. Bulletin. (Tokyo)
- Bull. Fac. Sci. Ibaraki Univ. Ser. A* Bulletin of the Faculty of Science. Ibaraki University. Series A. Mathematics. (Ibaraki)
- \* *Bull. Fac. Sci. Riyadh Univ.* (2) Bulletin of the Faculty of Science. Riyadh University. Series II. Physical and Mathematical Sciences. (Riyad)
- Bull. Fukuoka Univ. Ed. III* Bulletin of Fukuoka University of Education. Part III. Natural Sciences. (Fukuoka)
- Bull. Géodésique* Bulletin Géodésique. (Paris)
- Bull. Inst. Internat. Statist.* Bulletin de l'Institut International de Statistique. (The Hague)
- Bull. Inst. Math. Acad. Sinica* Bulletin of the Institute of Mathematics. Academia Sinica. (Taipei)
- Bull. Inst. Math. Appl.* Bulletin of the Institute of Mathematics and its Applications. (Southend-on-sea)
- Bull. Iranian Math. Soc.* Iranian Mathematical Society. Bulletin. (Tehran)
- Bull. JSME* Bulletin of the Japan Society of Mechanical Engineers. (Tokyo)
- \* *Bull. Korean Math. Soc.* Bulletin of the Korean Mathematical Society. (Seoul)
- Bull. Kyoto Univ. Ed. Ser. B* Bulletin of the Kyoto University of Education. Series B. Mathematics and Natural Science. (Kyoto)
- Bull. Kyushu Inst. Tech. Math. Natur. Sci.* Bulletin of the Kyushu Institute of Technology. Mathematics, Natural Science. (Tobata)
- Bull. London Math. Soc.* The Bulletin of the London Mathematical Society. (London)
- Bull. Malaysian Math. Soc.* (2) Malaysian Mathematical Society. Bulletin. Second Series. (Kuala Lumpur)
- Bull. Math. Biol.* Bulletin of Mathematical Biology. (New York)
- Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* Bulletin Mathématique de la Société des Sciences Mathématiques de la République Socialiste de Roumanie. Nouvelle Série. (Bucharest)
- Bull. Math. Statist.* Bulletin of Mathematical Statistics. (Fukuoka)
- Bull. Nagoya Inst. Tech.* Bulletin of Nagoya Institute of Technology. (Nagoya)
- Bull. Nara Univ. Ed. Natur. Sci.* Bulletin of Nara University of Education. Natural Science. (Nara)
- Bull. Number Theory Related Topics* Bulletin of Number Theory and Related Topics. (Buenos Aires)
- \* *Bull. Osaka Prefect. Tech. College* Bulletin of Osaka Prefectural Technical College. (Osaka)
- † *Bull. Sci. Conseil Acad. RSF Yougoslav. Sect. A* Bulletin Scientifique. Conseil des Académies de la RSF de Yougoslavie. Section A. (Zagreb)
- Bull. Sci. Engrg. Res. Lab. Waseda Univ.* Bulletin of Science and Engineering Research Laboratory. Waseda University. (Tokyo)
- Bull. Sci. Math.* (2) Bulletin des Sciences Mathématiques. 2e Série. (Paris)
- † *Bull. Signal. 110* Centre National de la Recherche Scientifique. Bulletin Signalétique 110. Informatique. Automatique. Recherche Opérationnelle. Gestion. (Paris) (Usually abbreviated as BS110 in the text of *Math. Rev.*)
- Bull. Soc. Math. Belg.* Bulletin de la Société Mathématique de Belgique. (Brussels)
- Bull. Soc. Math. France* Bulletin de la Société Mathématique de France. (Paris)
- Bull. Soc. Math. France Mém.* Société Mathématique de France. Bulletin. Mémoire. (Paris)
- Bull. Soc. Math. Grèce (N.S.)* Bulletin de la Société Mathématique de Grèce. Nouvelle Série. (Athens)
- Bull. Soc. Roy. Sci. Liège* Bulletin de la Société Royale des Sciences de Liège. (Liège)
- Bull. Soc. Sci. Lett. Łódź* Bulletin de la Société des Sciences et des Lettres de Łódź. (Łódź)
- Bull. Tokyo Gakugei Univ.* (4) Bulletin of Tokyo Gakugei University. Series IV. (Tokyo)
- Bull. Univ. Osaka Prefect. Ser. A* Bulletin of University of Osaka Prefecture. Series A. Engineering and Natural Sciences. (Osaka)
- Bull. Yamagata Univ. Natur. Sci.* Bulletin of the Yamagata University. Natural Science. (Yamagata)
- C. R. Acad. Bulgare Sci.* Doklady Bolgarskoj Akademii Nauk. Comptes Rendus de l'Académie Bulgare des Sciences. (Sofia)
- C. R. Acad. Sci. Paris Sér. A-B* Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences. Séries A et B. (Paris)
- C. R. Acad. Sci. Paris Vie Académique* Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences. Vie Académique. (Paris)
- C. R. Math. Rep. Acad. Sci. Canada* La Société Royale du Canada. L'Académie des Sciences. Comptes Rendus Mathématiques. (Mathematical Reports). (Toronto/Waterloo)
- Cahiers Centre Études Rech. Opér.* Cahiers du Centre d'Études de Recherche Opérationnelle. (Brussels)
- Cahiers Topologie Géom. Différentielle* Cahiers de Topologie et Géométrie Différentielle. (Amiens)
- Calcolo* Calcolo. (Rome)
- Calcutta Statist. Assoc. Bull.* Calcutta Statistical Association Bulletin. (Calcutta)
- Canad. J. Math.* Canadian Journal of Mathematics. Journal Canadien de Mathématiques. (Toronto, Ont.)
- Canad. J. Phys.* Canadian Journal of Physics. (Ottawa, Ont.)
- Canad. J. Statist.* The Canadian Journal of Statistics. (Montreal, Que.)
- Canad. Math. Bull.* Canadian Mathematical Bulletin. (Toronto, Ont.)
- Časopis Pěst. Mat.* Československá Akademie Věd. Časopis Pro Pěstování Matematiky. (Prague)
- † *CCA* Computer and Control Abstracts. (New York) See *Comput. Control Abstracts Čečeno-Inguš. Gos. Ped. Inst. Učen. Zap.* Čečeno-Ingušskij Gosudarstvennyj Pedagogičeskij Institut. Učenyje Zapiski. (Groznyj)
- Celestial Mech.* Celestial Mechanics. (Dordrecht)
- Čeljabinsk. Gos. Ped. Inst. Trudy* Čeljabinskij Gosudarstvennyj Pedagogičeskij Institut. Trudy. (Chelyabinsk)
- Centaurus* Centaurus. (Copenhagen)
- Chem. Engrg. J.* The Chemical Engineering Journal. An International Journal of Research and Development. (Lausanne)
- Chem. Phys.* Chemical Physics. (Amsterdam)
- Chem. Phys. Lett.* Chemical Physics Letters. (Amsterdam)
- \* *Chinese Ann. Math.* Chinese Annals of Mathematics. Shuxue Niankan. (Shanghai)
- Chinese Astronom.* Chinese Astronomy. (Oxford) (Translation of *Acta Astronom. Sinica*)
- Chinese J. Math.* Chinese Journal of Mathematics. (Taipei)
- Cho-sŏn In-min Kong-hwa-kuk Kwa-hak-wŏn T'ong-bo* (Academy of Science of the People's Republic of Korea. Bulletin) Cho-sŏn Min-ju-ju-ŭi In-min Kong-hwa-kuk Kwa-hak-wŏn. Tong-bo. (Pyong-yang)
- Cienc. Tecn.* Ciencia y Tecnología. (San José)
- Čisl. Metody Meh. Splošn. Sredy* Akademija Nauk SSSR. Sibirskoe Otdelenie. Vychislitel'nyj Centr. Čislennye Metody Mehaniki Splošnoj Sredy. (Novosibirsk)
- CL & CL—Comput. Linguist. Comput. Lang.* Computational Linguistics and Computer Languages. (Budapest)
- Collect. Math.* Consejo Superior de Investigaciones Científicas. Universidad de Barcelona. Collectanea Mathematica. Seminario Matemático de Barcelona. (Barcelona)
- Collect. Phenom.* Collective Phenomena. An International Journal of Discussion and Speculation. (London)
- Colloq. Math.* Colloquium Mathematicum. (Warsaw)
- Comm. ACM* Communications of the Association for Computing Machinery. (New York)
- Comm. Algebra* Communications in Algebra. (New York)
- Comm. Dublin Inst. Adv. Stud. Ser. A* Communications of the Dublin Institute for Advanced Studies. Series A. (Dublin)
- Comm. Fac. Sci. Univ. Ankara Sér. A<sub>1</sub> Math.* Université d'Ankara. Faculté des Sciences. Communications. Série A<sub>1</sub>. Mathématiques. (Ankara)
- Comm. Fac. Sci. Univ. Ankara Sér. A<sub>2</sub> Phys.* Université d'Ankara. Faculté des Sciences. Communications. Série A<sub>2</sub>. Physique. (Ankara)
- Comm. Fac. Sci. Univ. Ankara Sér. A<sub>3</sub> Astronom.* Université d'Ankara. Faculté des Sciences. Communications. Série A<sub>3</sub>. Astronomie. (Ankara)
- Comm. Math. Phys.* Communications in Mathematical Physics. (Berlin)
- Comm. Partial Differential Equations* Communications in Partial Differential Equations. (New York)
- Comm. Pure Appl. Math.* Communications on Pure and Applied Mathematics. (New York)
- Comm. Roy. Soc. Edinburgh Phys. Sci.* The Royal Society of Edinburgh. Communications Physical Sciences. (Edinburgh)
- Comm. Statist. A—Theory Methods* Communications in Statistics. A. Theory and Methods. (New York)
- Comm. Statist. B—Simulation Comput.* Communications in Statistics. B. Simulation and Computation. (New York)
- Comment. Math. Helv.* Commentarii Mathematici Helvetici. (Zurich)
- Comment. Math. Prace Mat.* Roczniki Polskiego Towarzystwa Matematycznego. Seria I. Commentationes Mathematicae. Prace Matematyczne. (Warsaw)
- Comment. Math. Special Issue* Commentationes Mathematicae. Special Issue. (Warsaw)
- Comment. Math. Univ. Carolin.* Commentationes Mathematicae Universitatis Carolinae. (Prague)
- Comment. Math. Univ. St. Paul.* Commentarii Mathematici Universitatis Sancti Pauli. (Tokyo)
- Comment. Phys.-Math.* See *Soc. Sci. Fenn. Comment. Phys.-Math.*
- Comment. Phys.-Math. Dissertationes* See *Soc. Sci. Fenn. Comment. Phys.-Math.*
- Compositio Math.* Compositio Mathematica. (Groningen)
- Comput. & Fluids* Computers & Fluids. An International Journal. (New York)
- Comput. & Structures* Computers & Structures. An International Journal. (New York)
- † *Comput. Control Abstracts* Computer and Control Abstracts. (New York) (Usually abbreviated as CCA in the text of *Math. Rev.*)
- \* *Comput. Electr. Engrg.* Computers & Electrical Engineering. An International Journal. (Oxford)
- Comput. J.* The Computer Journal. (London)
- Comput. Math. Appl.* Computers & Mathematics with Applications. An International Journal. (Oxford)
- Comput. Methods Appl. Mech. Engrg.* Computer Methods in Applied Mechanics and Engineering. (Amsterdam)
- Comput. Networks* Computer Networks. International Journal of Distributed Informatics. (Amsterdam)
- † *Comput. Rec.* Computing Reviews. (New York) (Usually abbreviated as CR in the text of *Math. Rev.*)
- Comput. Surveys* Computing Surveys. ACM. Association for Computing Machinery. (New York)
- Computing* Computing. Archiv für Informatik und Numerik. (Vienna)
- Conceptus* Conceptus. Zeitschrift für Philosophie. (Innsbruck)
- Confer. Sem. Mat. Univ. Bari* Conferenze del Seminario di Matematica dell'Università di Bari. (Bari)
- Control Cybernet.* Polish Academy of Sciences. Institute of Applied Cybernetics. Control and Cybernetics. (Warsaw)
- Cosmic Res.* Cosmic Research. (New York) (Translation of *Kosmiches. Issled.*)



- † *CR* Computing Reviews. (New York) See *Comput. Rev.*  
*Cryptologia* Cryptologia. (Albion, Mich.)  
† *Current Index Statist. Appl. Methods Theory* Current Index to Statistics. Applications, Methods and Theory. (Washington, D.C.)  
† *Current Math. Publ.* Current Mathematical Publications. (Providence, R.I.)  
† *Cybernet. Systems* Cybernetics and Systems. An International Journal. (Washington, D.C.) (Formerly: *J. Cybernet.*)  
*Cybernetica* Cybernetica. (Namur)  
*Cybernetics* Cybernetics. (New York) (Translation of *Kibernetika* (Kiev))  
*Czechoslovak J. Phys. B* Česloslovaká Akademie Nauk. Česloslovakí Fyzikální Žurnal. Czechoslovak Academy of Sciences. Czechoslovak Journal of Physics. B. (Prague)  
*Czechoslovak Math. J.* Česloslovaká Akademie Nauk. Česloslovakí Matematické žurnal. Czechoslovak Mathematical Journal. (Prague)  
*Defence Sci. J.* Defence Science Journal. (Delhi)  
*Delft Progr. Rep.* Delft Progress Report. (Delft)  
*Delta (Madison)* Delta. University of Wisconsin. (Madison, Wis.)  
*Demonstratio Math.* Demonstratio Mathematica. (Warsaw)  
† *Denshi Tsushin Gakkai Ronbunshi* See *Electron. Comm. Japan*  
† *Deutsch. Biblio. Wöchentl. Verzeich. Amtsblatt Deutsch. Bibliothek Ser. A* Deutsche Bibliographie. Wöchentlichen Verzeichnis. Amtsblatt der Deutschen Bibliothek. Reihe A. (Frankfurt)  
† *Deutsch. Biblio. Wöchentl. Verzeich. Amtsblatt Deutsch. Bibliothek Ser. B* Deutsche Bibliographie. Wöchentlichen Verzeichnis. Amtsblatt der Deutschen Bibliothek. Reihe B. (Frankfurt)  
† *Deutsch. Biblio. Wöchentl. Verzeich. Ser. C* Deutsche Bibliographie. Wöchentlichen Verzeichnis. Reihe C. (Frankfurt)  
† *Deutsch. Nationalbiblio. Reihe A* Deutsche Nationalbibliographie. Reihe A. Neuerscheinungen des Buchhandels. (Leipzig)  
† *Deutsch. Nationalbiblio. Reihe B* Deutsche Nationalbibliographie. Reihe B. Neuerscheinungen Ausserhalb des Buchhandels. (Leipzig)  
† *Dialectica* Dialectica. International Review of Philosophy of Knowledge. (Bienne)  
*Dialogue* Dialogue. Canadian Philosophical Review. Revue Canadienne de Philosophie. (Montreal, Que.)  
*Differential'nye Uravneniya* Differential'nye Uravneniya. (Minsk) (Translated as: *Differential Equations*)  
*Differential'nye Uravneniya i Primenen.*—*Trudy Sem. Processy Optimal. Upravleniya I Sekcija* Institut Fiziki i Matematiki Akademii Nauk Litovskoi SSR. Differential'nye Uravneniya i ih Primenenye. Trudy Respublikanskogo Nauchnogo Seminara "Processy Optimal'nogo Upravleniya". I Sekcija. (Vilnius)  
*Differential'nye Uravneniya i Vyčisl. Mat.* Differential'nye Uravneniya i Vyčislitel'naja Matematika. (Saratov)  
*Differential'nye Uravneniya (Ryazan)* Ryazan. Gosudarstvennyi Pedagogičeskii Institut. Matematičeskij Kafedr. Sbornik Trudov. Differential'nye Uravneniya. (Ryazan)  
*Differential Equations* Differential Equations. (New York) (Translation of *Differential'nye Uravneniya*)  
*Digital Process.* Digital Processes. An International Journal on the Theory and Design of Digital Systems. (St. Saphorin)  
† *Dinamika i Pročnost' Mašin* Dinamika i Pročnost' Mašin. (Har'kov)  
*Dinamika Sistem* Gor'kovskii Gosudarstvennyi Universitet. Dinamika Sistem. (Gorki)  
*Dinamika Splošn. Sredy* Institut Gidrodinamiki Sibirskogo Otdelenija Akademii Nauk SSSR. Dinamika Splošnoi Sredy. (Novosibirsk)  
*Discrete Appl. Math.* Discrete Applied Mathematics. (Amsterdam)  
*Discrete Math.* Discrete Mathematics. (Amsterdam)  
† *Diskret. Analiz* Akademija Nauk SSSR. Sibirskoe Otdelenie. Institut Matematiki. Diskretnyi Analiz. Sbornik Trudov. (Novosibirsk)  
*Dissertationes Math. (Rozprawy Mat.)* Polska Akademia Nauk. Instytut Matematyczny. Dissertationes Mathematicae. Rozprawy Matematyczne. (Warsaw)  
† *Dokl. Akad. Nauk BSSR* Doklady Akademii Nauk BSSR. (Minsk)  
† *Dokl. Akad. Nauk SSSR* Doklady Akademii Nauk SSSR. (Moscow) (Mathematics section translated as: *Soviet Math. Dokl.*) (Physics section translated as: *Soviet Physics Dokl.*)  
† *Dokl. Akad. Nauk Tadžik. SSR* Doklady Akademii Nauk Tadžikskoi SSR. (Dushanbe)  
† *Dokl. Akad. Nauk Ukrain. SSR Ser. A* Akademija Nauk Ukrainskoi SSR. Doklady. Serija A. Fiziko-Matematičeskie i Tehničeskie Nauki. (Kiev) (Ukrainian version: *Dopovidni Akad. Nauk Ukrain. RSR Ser. A.*)  
† *Dokl. Akad. Nauk UzSSR* Doklady Akademii Nauk UzSSR. (Tashkent)  
† *Dopovidni Akad. Nauk Ukrain. RSR Ser. A.* Dopovidni Akademii Nauk Ukrainskoi RSR. Serija A. (Kiev) (Russian version: *Dokl. Akad. Nauk Ukrain. SSR Ser. A*)  
† *Duke Math. J.* Duke Mathematical Journal. (Durham, N.C.)  
† *DVT—Dějiny Věd Tech.* Dějiny Věd a Techniky. Společnost pro Dějiny Věd a Techniky. (Prague)  
† *Econom. Comput. Econom. Cybernet. Stud. Res.* Economic Computation and Economic Cybernetics Studies and Research. (Bucharest)  
† *Econom. Lett.* Economics Letters. (Amsterdam)  
† *Econometrica* Econometrica. Journal of the Econometric Society. (Evanston, Ill.)  
† *Educ. Stud. Math.* Educational Studies in Mathematics. (Dordrecht)  
† *Eesti NSV Tead. Akad. Füüs. Inst. Uurim.* NSV Teaduste Akadeemia. Füüsika Instituudi Uurimused. Eesti Akademia Nauk Estonskoi SSR. Institut Fiziki. Trudy. (Tartu)  
† *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* Eesti NSV Teaduste Akadeemia Toimetised. Füüsika-Matematika. Izvestija Akademii Nauk Estonskoi SSR. Serija Fizika-Matematika. (Tallin)
- Egyptian Statist. J.* The Egyptian Statistical Journal. (Cairo)  
† *Ekonom. i Mat. Metody* Ekonomika i Matematičeskie Metody. (Moscow)  
† *Ekonom.-Mat. Obzor* Česloslovenská Akademie Věd. Ekonomicko-Matematický Obzor. (Prague)  
† *Electron. Comm. Japan* Electronics and Communications in Japan. The Transactions of the Institute of Electronics and Communication Engineers of Japan. (Washington, D.C.) (Partial translation of *Denshi Tsushin Gakkai Ronbunshi*) (See also *Systems-Comput.-Controls*)  
† *Electron. Lett.* Electronics Letters. (London)  
† *Elektroenerget. i Avtomat. (Kishinev)* Akademija Nauk Moldavskoi SSR. Otdelenie Energetičeskoj Kibernetiki. Elektroenergetika i Avtomatika. (Kishinev)  
† *Elektron. Informationsverarb. Kybernet.* Elektronische Informationsverarbeitung und Kybernetik. (Berlin)  
† *Elektronika i Modelirovanie* Akademija Nauk Ukrainskoi SSR. Institut Elektrodinamika. Elektronika i Modelirovanie. (Kiev)  
† *Elektronnoe Modelirovanie* Elektronnoe Modelirovanie. (Kiev)  
† *Elem. Math.* Elemente der Mathematik. Revue de Mathématiques Élémentaires. Rivista de Matematica Elementare. (Basel)  
† *Elem. Math. Suppl.* Elemente der Mathematik. Supplement. (Basel)  
† *Encyclopaedia* Utah Academy of Sciences, Arts, and Letters. Journal. (Salt Lake City, Utah)  
† *Engrg. Cybernetics* Engineering Cybernetics. English Edition of Tehničeskaja Kibernetika. (New York) (Translation of *Izv. Akad. Nauk SSSR Tehn. Kibernet.*)  
† *Enseign. Math. (2)* L'Enseignement Mathématique. Revue Internationale. IIe Série. (Geneva)  
† *Erevan. Gos. Univ. Učen. Zap. Estestv. Nauki* Erevanskii Gosudarstvennyi Universitet. Učenyje Zapiski. Estestvennye Nauki. (Erevan)  
† *Estadist. Española* Instituto Nacional de Estadística. Estadística Española. (Madrid)  
† *Estadística* Inter-American Statistical Institute. Estadística. (Washington, D.C.)  
† *Euclides (Groningen)* Euclides. Maandblad voor de Didactiek van de Wiskunde. (Groningen)  
† *European J. Combin.* European Journal of Combinatorics. (London)  
† *European J. Oper. Res.* European Journal of Operational Research. (Amsterdam)  
† *Fak. Mat. Univ. Kiril Metodij Skopje Godišen Zb.* Skopje. Univerzitet Kiril i Metodij. Fakultet na Matematička. Godišen Zbornik. (Skopje)  
† *Fak. Mat. Univ. Kiril Metodij Skopje Godišen Zb. Special Issue* Skopje. Univerzitet Kiril i Metodij. Fakultet na Matematička. Godišen Zbornik. Special Issue. (Skopje)  
† *Fasc. Math.* Politechnika Poznańska. Instituta Matematyka. Fasciculi Mathematici. (Poznań)  
† *Fibonacci Quart.* The Fibonacci Quarterly. Official Organ of the Fibonacci Association. (Santa Clara, Calif.)  
† *Fiz. Elementar. Častic i Atom. Jadra* Ob'edinennyi Institut Jadernyh Issledovanij. Dubna. Fizika Elementarnyh Častic i Atomnogo Jadra. (Moscow) (Translated as: *Soviet J. Particles and Nuclei*)  
† *Fluid Dynamics* Fluid Dynamics. (New York) (Translation of *Izv. Akad. Nauk SSSR Meh. Židk. Gaza*)  
† *Fluid Mech.—Soviet Res.* Fluid Mechanics. Soviet Research. (Washington, D.C.)  
† *Formosan Sci.* Formosan Science. (Taipei)  
† *Fortschr. Phys.* Fortschritte der Physik. (Berlin)  
† *Found. Control Engrg.* Technical University of Poznań. Institute of Control Engineering. Foundations of Control Engineering. (Poznań)  
† *Found. Phys.* Foundations of Physics. (New York)  
† *Funct. Approx. Comment. Math.* Uniwersytet im. Adama Mickiewicza w Poznaniu. Instytut Matematyki. Functiones et Approximatio Commentarii Mathematici. (Poznań)  
† *Functional Anal. Appl.* Functional Analysis and its Applications. (New York) (Translation of *Funkcional. Anal. i Priložen.*)  
† *Fund. Inform. (4)* Roczniki Polskiego Towarzystwa Matematycznego. Seria IV. Fundamenta Informaticae. (Warsaw)  
† *Fund. Math.* Polska Akademia Nauk. Fundamenta Mathematicae. (Warsaw)  
† *Funkcial. Ekvac.* Fakto de l'Funkcialaj Ekvacioj Japana Matematika Societo. Funkcialaj Ekvacioj. Serio Internacia. (Kobe)  
† *Funkcional. Anal. i Priložen.* Akademija Nauk SSSR. Funkcional'nyi Analiz i ego Priloženija. (Moscow) (Translated as: *Funkcional. Anal. Appl.*)  
† *Fuzzy Sets and Systems* Fuzzy Sets and Systems. (Amsterdam)  
† *Gaceta Mat. (1)* (Madrid) Gaceta Matemática. Primera Serie. (Madrid)  
† *Ganita* Ganita Bharat Ganita Parishad. (Lucknow)  
† *Ganita Bhārati* Ganita Bhārati. Indian Society for History of Mathematics. Bulletin. (Ranchi)  
† *Gaoneng Wuli Yu He Wuli* See *Phys. Energi. Fort. Phys. Nuclear.*  
† *Gauss-Ges. Göttingen Mitt.* Gauss-Gesellschaft e. V. Göttingen. Mitteilungen. (Göttingen)  
† *Gaz. Mat. (Bucharest)* Gazeta Matematică. Publicație Lunară Pentru Tineret. (Bucharest)  
† *Gaz. Mat. (Lisbon)* Gazeta de Matemática. (Lisbon)  
† *Gen. Relativity Gravitation* General Relativity and Gravitation. (London)  
† *Genetics* Genetics. A Periodical Record of Investigations Bearing on Heredity and Variation. (Austin, Tex)  
† *Geod. Inst. Medd.* Geodætisk Institut. Meddelelse. (Copenhagen)  
† *Geodes. Mapp. Photogramm.* Geodesy Mapping and Photogrammetry. (Washington, D.C.) (Partial translation of *Izv. Vyss. Učebn. Zaved. Geod. i Aérofot.*)  
† *Geom. Dedicata* Geometriae Dedicata. (Dordrecht)  
† *Gibridnye Vyčisl. Mašiny i Kompleksy* Gibridnye Vyčislitel'nye Mašiny i Kompleksy. (Kiev)  
† *Gidromeh. (Kiev)* Akademija Nauk Ukrainskoi SSR. Institut Gidromehaniki. Gidromehanika. (Kiev)

- Glas. Mat. Ser. III* Društvo Matematicara i Fizicara S. R. Hrvatske. Glasnik Matematički. Serija III. (Zagreb)
- Glasgow Math. J.* Glasgow Mathematical Journal. (Glasgow)
- Godišnik Sofijsk. Univ. Fak. Mat. Meh.* See *Annuaire Univ. Sofia Fac. Math. Méc.*
- Godišnik Sofijsk. Univ. Fiz. Fak.* See *Annuaire Univ. Sofia Fac. Phys.*
- Godišnik Vis. Himikotehn. Inst. (Burgas)* Godišnik Visija Himikotehnološki Institut. Burgas. (Sofia)
- Godišnik Vis. Inž.-Stroitel. Inst.* Godišnik na Visija Inžerno-Stroitelnja Institut. (Sofia)
- Godišnik Vis. Učebn. Zaved. Priložna Mat.* Godišnik na Visite Učebni Zavedenija. Priložna Matematika. (Sofia)
- Godišnik Vis. Učebn. Zaved. Tehn. Fiz.* Godišnik na Visite Učebni Zavedenija. Tehnički Fizika. (Sofia)
- Godišnik Vis. Učebn. Zaved. Tehn. Meh.* Godišnik na Visite Učebni Zavedenija. Tehnički Mehanika. (Sofia)
- Goř'kov. Gos. Univ. Učen. Zap.* Goř'kovskii Gosudarstvennyi Universitet. Učeny Zapiski. (Gorki)
- Gradevin. Fak. Sarajeco Rad.* Sarajevo. Građevinski Fakultet. Radovi. (Sarajevo)
- Gravitacija i Teor. Otnositel'nosti* Kazanskii Gosudarstvennyi Universitet. Gravitacija i Teorija Otnositel'nosti. (Kazan)
- Gruzin. Politehn. Inst. Trudy* Gruzinskii Politehnicheskii Institut im. V. I. Lenina. Trudy. (Tbilisi) See *V. I. Lenin. Sakharth. Politekh. Inst. Samecn. Šrom.*
- Gujarat Statist. Rev.* Gujarat Statistical Review. (Ahmedabad)
- Hadronic J.* Hadronic Journal. (Nonantum, Mass.)
- Hak-sul Chi* Kōn'guk Taehakkyo, Haksul Yōn'guwon. Hak-sul Chi. (Kōn'guk University. Research Institute. Research Journal). (Seoul)
- Hardy-Ramanujan J.* Hardy-Ramanujan Journal. (Bombay)
- Helv. Phys. Acta* Helvetica Physica Acta. Societatis Physicae Helveticae Commentaria Publica. (Basel)
- Hiroshima Math. J.* Hiroshima Mathematical Journal. (Hiroshima)
- Hist. of Sci.* History of Science. An Annual Review of Literature, Research, and Teaching. (Cambridge)
- Historia Math.* Historia Mathematica. (New York)
- Hitotsubashi J. Arts Sci.* Hitotsubashi Journal of Arts & Sciences. Hitotsubashi University. (Tokyo)
- Hokkaido Math. J.* Hokkaido Mathematical Journal. (Sapporo)
- Houston J. Math.* Houston Journal of Mathematics. (Houston, Tex.)
- Huazhong Gongxueyuan Xuebao* See *J. Huazhong Inst. Tech.*
- IBM J. Res. Develop.* International Business Machines Corporation. Journal of Research and Development. (New York)
- IBM Systems J.* International Business Machines Corporation. Systems Journal. (Armonk, N.Y.)
- IEEE Trans. Acoust. Speech Signal Process.* Institute of Electrical and Electronics Engineers. Transactions on Acoustics, Speech, and Signal Processing. (New York)
- IEEE Trans. Aerospace Electron. Systems* Institute of Electrical and Electronics Engineers. Transactions on Aerospace and Electronic Systems. (New York)
- IEEE Trans. Antennas and Propagation* Institute of Electrical and Electronics Engineers. Transactions on Antennas and Propagation. (New York)
- IEEE Trans. Automat. Control* Institute of Electrical and Electronics Engineers. Transactions on Automatic Control. (New York)
- IEEE Trans. Circuits and Systems* Institute of Electrical and Electronics Engineers. Transactions on Circuits and Systems. (New York)
- IEEE Trans. Comm.* Institute of Electrical and Electronics Engineers. Transactions on Communications. (New York)
- IEEE Trans. Comput.* Institute of Electrical and Electronics Engineers. Transactions on Computers. (New York)
- IEEE Trans. Geosci. Electron.* Institute of Electrical and Electronics Engineers. Transactions on Geoscience Electronics. (New York)
- IEEE Trans. Inform. Theory* Institute of Electrical and Electronics Engineers. Transactions on Information Theory. (New York)
- IEEE Trans. Microwave Theory Tech.* Institute of Electrical and Electronics Engineers. Transactions on Microwave Theory and Techniques. (New York)
- IEEE Trans. Plasma Sci.* Institute of Electrical and Electronic Engineers. Transactions on Plasma Science. (New York)
- IEEE Trans. Software Engrg.* Institute of Electrical and Electronics Engineers. Transactions on Software Engineering. (New York)
- IEEE Trans. Systems Man Cybernet.* Institute of Electrical and Electronic Engineers. Transactions on Systems, Man, and Cybernetics. (New York)
- IJAA Internat. J. Appl. Anal.* IJAA. International Journal of Applied Analysis. (Calcutta)
- Illinois J. Math.* Illinois Journal of Mathematics. (Urbana, Ill.)
- Indag. Math.* See *Nederl. Akad. Wetensch. Indag. Math.*
- Indian J. Hist. Sci.* Indian Journal of History of Science. National Institute of Sciences of India. (New Delhi)
- Indian J. Math.* Indian Journal of Mathematics. (Allahabad)
- Indian J. Mech. Math.* Indian Journal of Mechanics and Mathematics. (Calcutta)
- Indian J. Pure Appl. Math.* Indian Journal of Pure and Applied Mathematics. (New Delhi)
- Indian J. Pure Appl. Phys.* Indian Journal of Pure and Applied Physics. (New Delhi)
- Indian Sci. Abstracts* Indian Science Abstracts. (New Delhi)
- Indiana Univ. Math. J.* Indiana University Mathematics Journal. (Bloomington, Ind.)
- Indust. Math.* Industrial Mathematics. (Detroit, Mich.)
- INFOR—Canad. J. Oper. Res. Inform. Process.* INFOR. Canadian Journal of Operational Research and Information Processing. (Toronto, Ont.)
- Inform. and Control* Information and Control. (New York)
- Inform. Process. Lett.* Information Processing Letters. (Amsterdam)
- Inform. Process. Mach.* Information Processing Machines. (Prague)
- Inform. Sci.* Information Sciences. An International Journal. (New York)
- Inst. Hautes Études Sci. Publ. Math.* Institut des Hautes Études Scientifiques. Publications Mathématiques. (Paris)
- Inst. Math. Statist. Bull.* Institute of Mathematical Statistics. Bulletin. (Hayward, Calif.)
- Integral Equations Operator Theory* Integral Equations and Operator Theory. (Basel)
- Internat. Econom. Rev.* International Economic Review. (Osaka)
- Internat. J. Bio-Med. Comput.* International Journal of Bio-Medical Computing. (Barking)
- Internat. J. Circuit Theory Appl.* International Journal of Circuit Theory and Applications. (Chichester)
- Internat. J. Comput. Inform. Sci.* International Journal of Computer and Information Sciences. (New York)
- Internat. J. Comput. Math.* International Journal of Computer Mathematics. Section A. Programming Theory and Methods. Section B. Computational Methods. (New York)
- Internat. J. Control* International Journal of Control. (London)
- Internat. J. Electron.* International Journal of Electronics. (London)
- Internat. J. Engrg. Sci.* International Journal of Engineering Science. (Oxford)
- Internat. J. Fracture* International Journal of Fracture. (Leiden)
- Internat. J. Game Theory* International Journal of Game Theory. (Vienna)
- Internat. J. Gen. Systems* International Journal of General Systems. Methodology, Applications, Education. (New York)
- Internat. J. Man-Mach. Stud.* International Journal of Man-Machine Studies. (London)
- Internat. J. Math. Ed. Sci. Tech.* International Journal of Mathematical Education in Science and Technology. (Chichester)
- Internat. J. Math. Math. Sci.* International Journal of Mathematics and Mathematical Sciences. (Greenville, N.C.)
- Internat. J. Non-Linear Mech.* International Journal of Non-Linear Mechanics. (New York)
- Internat. J. Numer. Analyt. Methods Geomech.* International Journal for Numerical and Analytical Methods in Geomechanics. (Chichester)
- Internat. J. Numer. Methods Engrg.* International Journal for Numerical Methods in Engineering. (London)
- Internat. J. Policy Anal. Inform. Systems* International Journal of Policy Analysis and Information Systems. (New York)
- Internat. J. Solids and Structures* International Journal of Solids and Structures. (New York)
- Internat. J. Systems Sci.* International Journal of Systems Science. (London)
- Internat. J. Theoret. Phys.* International Journal of Theoretical Physics. (London)
- Internat. Logic Rev.* International Logic Review. Rassegna Internazionale di Logica. (Bologna)
- Internat. Math. News* International Mathematical News. (Vienna)
- Internat. Statist. Rev.* International Statistical Review. Revue Internationale de Statistique. (Edinburgh)
- Invent. Math.* Inventiones Mathematicae. (Berlin)
- Investigación Oper.* Investigación Operacional. (Havana)
- Inž.-Fiz. Ž.* Inženerno-Fizičeskii Žurnal. (Minsk) (Translated as: *J. Engrg. Phys.*)
- Iraqi J. Sci.* Iraqi Journal of Science. (Baghdad)
- Isis* Isis. An International Review Devoted to the History of Science and Civilization. (Cambridge, Mass.)
- Islamabad J. Sci.* Islamabad Journal of Sciences. Journal of Mathematics and Sciences. (Islamabad)
- Israel J. Math.* Israel Journal of Mathematics. (Jerusalem)
- Israel J. Tech.* Israel Journal of Technology. (Jerusalem)
- Issled. Operacii i ASU* Kievskii Gosudarstvennyi Universitet. Issledovanie Operacii i ASU. (Kiev)
- Issled. Operacii i Statist. Modelirovanie* Leningradskii Gosudarstvennyi Universitet im. A. A. Ždanova. Issledovanie Operacii i Statističeskoe Modelirovanie. (Leningrad)
- Issled. Prikl. Mat.* Kazanskii Universitet. Issledovaniya po Prikladnoi Matematike. (Kazan)
- Issled. Teor. Plastin i Oboloček* Kazanskii Universitet. Issledovaniya po Teorii Plastin i Oboloček. (Kazan)
- İstanbul Tek. Üniv. Bül.* İstanbul Teknik Üniversitesi Bülteni. Bulletin of the Technical University of Istanbul. (Istanbul)
- İstanbul Üniv. Fen Fak. Mecm. Ser. A* İstanbul Üniversitesi Fen Fakültesi Mecmuası. A Serisi. Sırfı ve Tatbiki Matematik. Revue de la Faculté des Sciences de l'Université d'Istanbul. Série A. Mathématiques Pures et Appliquées. (Istanbul)
- Istit. Lombardo Accad. Sci. Lett. Rend. A* Istituto Lombardo. Accademia di Scienze e Lettere. Rendiconti. Scienze Matematiche, Fisiche, Chimiche e Geologiche. A. (Milan)
- Istit. Veneto Sci. Lett. Arti Atti Cl. Sci. Mat. Natur.* Istituto Veneto de Scienze, Lettere ed Arti. Venezia. Atti. Classe de Scienze Matematiche e Naturali. (Venice)
- Istor.-Astronom. Issled.* Istoriko-Astronomičeskie Issledovaniya. (Moscow)
- Istor. Estestvozn. Tehn. Armen.* Akademija Nauk Armjanskoi SSR. Istorija Estestvoznaniya i Tehniki v Armenii. (Erevan)
- Istor.-Mat. Issled.* Istoriko-Matematičeskie Issledovaniya. (Moscow)
- Itogi Nauki—Seriya Matematika* (Progress in Science—Mathematical Series) Itogi Nauki—Seriya Matematika (Progress in Science—Mathematical Series). (Moscow) (Translated as: *J. Societ Math.*)
- Ivanov. Gos. Univ. Učen. Zap.* Ivanovskii Gosudarstvennyi Universitet. Učeny Zapiski. (Ivanovo)
- Izv. Acad. Sci. USSR Atmospher. Ocean. Phys.* Izvestiya Academy of Sciences USSR



- Atmospheric and Oceanic Physics. (Washington, D.C.) (Translation of *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana*)
- Izv. Acad. Sci. USSR Phys. Solid Earth* Izvestiya Academy of Sciences USSR. Physics of the Solid Earth. (Washington, D.C.) (Translation of *Izv. Akad. Nauk SSSR Ser. Fiz. Zemli*)
- Izv. Akad. Nauk Armjan. SSR Ser. Fiz.* Izvestiya Akademii Nauk Armjanskoi SSR. Seriya Fizika. (Erevan)
- Izv. Akad. Nauk Armjan. SSR Ser. Mat.* Izvestiya Akademii Nauk Armjanskoi SSR. Seriya Matematika. (Erevan) (Translated as: *Soviet J. Contemporary Math. Anal.*)
- Izv. Akad. Nauk Armjan. SSR Ser. Meh.* Izvestiya Akademii Nauk Armjanskoi SSR. Seriya Mekhanika. (Erevan)
- Izv. Akad. Nauk Azerbaidzhan. SSR Ser. Fiz.-Tehn. Mat. Nauk* Izvestiya Akademii Nauk Azerbaidzhanской SSR. Seriya Fiziko-Tekhnicheskikh i Matematicheskikh Nauk. (Baku)
- Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* Izvestiya Akademii Nauk Kazahskoi SSR. Seriya Fiziko-Matematicheskaja. (Alma-Ata)
- Izv. Akad. Nauk Kirgiz. SSR* Izvestiya Akademii Nauk Kirgizskoi SSR. (Frunze)
- Izv. Akad. Nauk Moldav. SSR Ser. Fiz.-Tehn. Mat. Nauk* Izvestiya Akademii Nauk Moldavskoi SSR Seriya Fiziko-Tekhnicheskikh i Matematicheskikh Nauk. (Kishinev) (Formerly: *Bul. Akad. Stiince RSS Moldoven.*)
- Izv. Akad. Nauk SSSR Meh. Tverd. Tela* Izvestiya Akademii Nauk SSSR. Mekhanika Tverdogo Tela. (Moscow) (Translated as: *Mech. Solids*) (Formerly: and *Inzh. Zh. Meh. Tverd. Tela*)
- Izv. Akad. Nauk SSSR Meh. Zhidk. Gaza* Akademii Nauk SSSR. Izvestiya Akademii Nauk SSSR. Mekhanika Zhidkosti i Gaza. (Moscow) (Translated as: *Fluid Dynamics*)
- Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* Izvestiya Akademii Nauk SSSR. Seriya Fizika Atmosfery i Okeana. (Moscow) (Translated as: *Izv. Acad. Sci. USSR Atmosf. Ocean. Phys.*)
- Izv. Akad. Nauk SSSR Ser. Fiz. Zemli* Izvestiya Akademii Nauk SSSR Seriya Fizika Zemli. (Moscow) (Translated as: *Izv. Acad. Sci. USSR Phys. Solid Earth*)
- Izv. Akad. Nauk SSSR Ser. Mat.* Izvestiya Akademii Nauk SSSR. Seriya Matematicheskaja. (Moscow) (Translated as: *Math. USSR-Izv.*)
- Izv. Akad. Nauk SSSR Tehn. Kibernet.* Izvestiya Akademii Nauk SSSR. Tekhnicheskaja Kibernetika. (Moscow) (Translated as: *Engng. Cybernetics*)
- Izv. Akad. Nauk Tadzhik. SSR Otdel. Fiz.-Mat. i Geolog.-Him. Nauk* Izvestiya Akademii Nauk Tadzhikskoi SSR. Otdelenie Fiziko-Matematicheskikh i Geologo-Himicheskikh Nauk. (Dushanbe)
- Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* Izvestiya Akademii Nauk Turkmeniskoi SSR. Seriya Fiziko-Tekhnicheskikh, Himicheskikh i Geologicheskikh Nauk. (Ashkhabad)
- Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* Izvestiya Akademii Nauk UzSSR. Seriya Fiziko-Matematicheskikh Nauk. UzSSR Fanlar Akademijasining Ahboroti. Fizika-Matematika Fanlari Serijasi. (Tashkent)
- Izv. Severo-Kavkaz. Naučn. Centra Vysš. Školy Ser. Estestv. Nauk* Izvestiya Severo-Kavkazskogo Naučnogo Centra Vysšei Školy Estestvennyye Nauki. (Rostov-on-Don)
- Izv. Severo-Kavkaz. Naučn. Centra Vysš. Školy Ser. Tehn. Nauk* Severo-Kavkazskogo Naučnogo Centra Vysšei Školy. Izvestiya. Seriya Tekhnicheskije Nauki. (Rostov-on-Don)
- Izv. Sibirsk. Otdel. Akad. Nauk SSSR Ser. Tehn. Nauk* Izvestiya Sibirskogo Otdeleniya. Akademii Nauk SSSR. Seriya Tekhnicheskikh Nauk. (Novosibirsk)
- Izv. Tomsk. Politehn. Inst.* Izvestiya Tomskogo Ordena Trudovogo Krasnogo Znameni Politehnicheskogo Instituta im. S. M. Kirova. (Tomsk)
- Izv. Voronež. Gos. Ped. Inst.* Izvestiya Voronežskogo Gosudarstvennogo Pedagogičeskogo Instituta. (Voronezh)
- Izv. Vuzov* See *Izv. Vysš. Učebn. Zaved. Matematika*
- Izv. Vysš. Učebn. Zaved. Elektromekhanika* Izvestiya Vysših Učebnyh Zavedenii. Elektromekhanika. (Novocherkassk)
- Izv. Vysš. Učebn. Zaved. Fizika* Izvestiya Vysših Učebnyh Zavedenii Fizika. (Tomsk) (Translated as: *Soviet Phys. J.*)
- Izv. Vysš. Učebn. Zaved. Geod. i Aërofot.* Izvestiya Vysših Učebnyh Zavedenii. Geodezija i Aërofotografika. (Moscow)
- Izv. Vysš. Učebn. Zaved. Matematika* Izvestiya Vysših Učebnyh Zavedenii Matematika. (Kazan) (Translated as: *Soviet Math. (Iz. VUZ)*)
- Izv. Vysš. Učebn. Zaved. Radiofizika* Izvestiya Vysših Učebnyh Zavedenii. Radiofizika. (Gorki) (Translated as: *Radiofizy. i Quantum Electronics*)
- J. Acoust. Soc. Amer.* Acoustical Society of America. Journal. (New York)
- J. Algebra* Journal of Algebra. (New York)
- J. Algorithms* Journal of Algorithms. (New York)
- J. Amer. Statist. Assoc.* Journal of the American Statistical Association. (Washington, D.C.)
- J. Analyse Math.* Journal d'Analyse Mathématique. (Jerusalem)
- J. Appl. Math. Mech.* Journal of Applied Mathematics and Mechanics. Translation of the Soviet journal *Prikladnaja Matematika i Mekhanika*. (New York) (Translation of *Prikl. Mat. Meh.*)
- J. Appl. Mech. Tech. Phys.* Journal of Applied Mechanics and Technical Physics. (New York) (Translation of *Ž. Prikl. Meh. i Tehn. Fiz.*)
- J. Appl. Probab.* Journal of Applied Probability. (Sheffield)
- J. Approx. Theory* Journal of Approximation Theory. (New York)
- J. Assoc. Comput. Mach.* Journal of the Association for Computing Machinery. (New York)
- J. Astronaut. Sci.* American Astronautical Society. Journal of the Astronautical Sciences. (Baltimore, Md.)
- J. Atmospheric Sci.* Journal of the Atmospheric Sciences. (Boston, Mass.)
- J. Austral. Math. Soc. Ser. A* Australian Mathematical Society. Journal. Series A. (St. Lucia)
- J. Austral. Math. Soc. Ser. B* Australian Mathematical Society. Journal. Series B. Applied Mathematics. (St. Lucia)
- J. Chem. Phys.* The Journal of Chemical Physics. (New York)
- J. Chinese Inst. Engrs.* Chinese Institute of Engineers. Journal. (Taipei)
- J. College Engrg. Nihon Univ. Ser. B* Nihon University. College of Engineering. Journal. Series B. (Tokyo)
- J. Combin. Inform. System Sci.* Journal of Combinatorics, Information & System Sciences. (Delhi)
- J. Combin. Theory Ser. A* Journal of Combinatorial Theory. Series A. (New York)
- J. Combin. Theory Ser. B* Journal of Combinatorial Theory. Series B. (New York)
- J. Comput. Appl. Math.* Journal of Computational and Applied Mathematics. (Antwerp)
- J. Comput. Chem.* Journal of Computational Chemistry. (New York)
- J. Comput. Phys.* Journal of Computational Physics. (New York)
- J. Comput. System Sci.* Journal of Computer and System Sciences. (New York)
- J. Cuneiform Stud.* Journal of Cuneiform Studies. (New Haven, Conn.)
- J. Cybernet.* Journal of Cybernetics. Transactions of the American Society for Cybernetics. (Washington, D.C.) (Contents include translations from related Japanese and Russian journals) (Continued as: *Cybernet. Systems*)
- J. Design Automat. Fault-Tolerant Comput.* Journal of Design Automation & Fault-Tolerant Computing. (Woodland Hills, Calif.) (Continued as: *J. Digital Systems*)
- J. Differential Equations* Journal of Differential Equations. (New York)
- J. Differential Geom.* Journal of Differential Geometry. (Bethlehem, Pa.)
- J. Digital Systems* Journal of Digital Systems. (Potomac, Md.) (Formerly: *J. Design Automat. Fault-Tolerant Comput.*)
- J. Econom. Theory* Journal of Economic Theory. (New York)
- J. Econometrics* Journal of Econometrics. (Lausanne)
- J. Elasticity* Journal of Elasticity. (Alphen aan den Rijn)
- J. Elisha Mitchell Sci. Soc.* Journal of the Elisha Mitchell Scientific Society. (Chapel Hill, N.C.)
- J. Engrg. Math.* Journal of Engineering Mathematics. (Groningen)
- J. Engrg. Phys.* Journal of Engineering Physics. (New York) (Translation of *Inzh. Fiz. Zh.*)
- J. Fac. Ed. Saga Univ. Part I* Saga University. Faculty of Education. Journal. Part I. (Saga)
- J. Fac. Engrg. Univ. Tokyo Ser. B* Journal of the Faculty of Engineering. University of Tokyo. Series B. (Tokyo)
- J. Fac. Sci. Karadeniz Tech. Univ.* Karadeniz Teknik Üniversitesi Temel Bilimler Fakültesi. Dergisi. (Karadeniz Technical University. Faculty of Sciences. Journal.) Series MA: Mathematics. (Trabzon)
- J. Fac. Sci. Riyad Univ.* Riyadh University. Faculty of Science. Journal. (Riyad)
- J. Fac. Sci. Shinshu Univ.* Journal of the Faculty of Science. Shinshu University. (Matsumoto)
- J. Fac. Sci. Univ. Tokyo Sect. IA Math.* Journal of the Faculty of Science. University of Tokyo. Section IA. Mathematics. (Tokyo)
- J. Fluid Mech.* Journal of Fluid Mechanics. (London)
- J. Franklin Inst.* Journal of the Franklin Institute. (Philadelphia, Pa.)
- J. Funct. Anal.* Journal of Functional Analysis. (New York)
- J. Geom.* Journal of Geometry. (Basel)
- J. Graph Theory* Journal of Graph Theory. (New York)
- J. Guidance Control* Journal of Guidance and Control. (New York)
- J. Hist. Arabic Sci.* Journal for the History of Arabic Science. (Aleppo)
- J. Hist. Astronom.* Journal for the History of Astronomy. (Chalfont St. Giles)
- J. Hokkaido Univ. Ed. Sect. II A* Journal of Hokkaido University of Education. Section II A. (Sapporo)
- J. Huazhong Inst. Tech.* Journal of Huazhong Institute of Technology. Huazhong Gongxueyuan Xuebao (Zhongguo Kexue Shuxue Zhuanji). (Wuhan)
- J. Indian Acad. Math.* Indian Academy of Mathematics. Journal. (Indore)
- J. Indian Inst. Sci.* Indian Institute of Science. Journal. (Bangalore)
- J. Indian Math. Soc. (N.S.)* The Journal of the Indian Mathematical Society. New Series. (Madras)
- J. Indian Statist. Assoc.* Journal of the Indian Statistical Association. (Bombay)
- J. Inform. Optim. Sci.* Journal of Information & Optimization Sciences. (Delhi)
- J. Inform. Process.* Journal of Information Processing. (Tokyo)
- J. Inst. Math. Appl.* Journal of the Institute of Mathematics and its Applications. (New York)
- J. Integral Equations* Journal of Integral Equations. (New York)
- J. Interdisciplinary Modeling Simulation* Journal of Interdisciplinary Modeling and Simulation. (New York)
- J. Internat. Assoc. Math. Geol.* Journal of the International Association for Mathematical Geology. (New York)
- J. Japan Statist. Soc.* Journal of the Japan Statistical Society (Nihon Tōkei Gakkai Kaihō). (Tokyo)
- J. Jiujaji Univ.* Jiujaji University. Journal. (Gwalior)
- J. Karnatak Univ. Sci.* Journal of the Karnatak University. Science. (Dharwar)
- J. Korean Math. Soc.* Journal of the Korean Mathematical Society. (Seoul)
- J. London Math. Soc. (2)* The Journal of the London Mathematical Society. Second Series. (London)
- J. Madras Univ. B* Journal of the Madras University. B. Contributions in Mathematics, Physical and Biological Sciences. (Madras)
- J. Madurai Kamaraj Univ.* Madurai Kamaraj University. Journal. (Madurai)
- J. Math. Anal. Appl.* Journal of Mathematical Analysis and Applications. (New York)
- J. Math. Biol.* Journal of Mathematical Biology. (New York)
- J. Math. Econom.* Journal of Mathematical Economics. (Amsterdam)
- J. Math. (Jabalpur) (N.S.)* Journal of Mathematics. New Series. (Jabalpur)
- J. Math. Kyoto Univ.* Journal of Mathematics of Kyoto University. (Kyoto)

- J. Math. Phys.* Journal of Mathematical Physics. (New York)  
*J. Math. Phys. Sci.* Journal of Mathematical and Physical Sciences. (Madras)  
*J. Math. Psych.* Journal of Mathematical Psychology. (New York)  
*J. Math. Pures Appl.* (9) Journal de Mathématiques Pures et Appliquées. Neuvième Série. (Paris)  
*J. Math. Sci.* Journal of Mathematical Sciences. The Society of Mathematical Sciences. (Delhi)  
*J. Math. Soc. Japan* Journal of the Mathematical Society of Japan. (Tokyo)  
*J. Math. Sociol.* The Journal of Mathematical Sociology. (London)  
*J. Math. Tokushima Univ.* Journal of Mathematics. Tokushima University. (Tokushima)  
*J. Maulana Azad College Tech.* Maulana Azad College of Technology. Journal. (Bhopal)  
*J. Méc. Appl.* Journal de Mécanique Appliquée. (Paris)  
*J. Mécanique* Journal de Mécanique. (Paris)  
*J. Mech. Phys. Solids* Journal of the Mechanics and Physics of Solids. (London)  
*J. Multivariate Anal.* Journal of Multivariate Analysis. (New York)  
*J. Nat. Chiao Tung Univ.* National Chiao Tung University. Journal. (Hsinchu)  
*J. Natur. Sci. Math.* The Journal of Natural Sciences and Mathematics. (Lahore)  
*J. Number Theory* Journal of Number Theory. (New York)  
*J. Oper. Res. Soc.* Operational Research Society Journal. (Birmingham)  
*J. Oper. Res. Soc. Japan* Journal of the Operations Research Society of Japan. (Tokyo)  
*J. Operator Theory* Journal of Operator Theory. (Bucharest)  
*J. Opt. Soc. Amer.* Journal of the Optical Society of America. (New York)  
*J. Optim. Theory Appl.* Journal of Optimization Theory and Applications. (New York)  
*J. Philos. Logic* Journal of Philosophical Logic. (Dordrecht)  
*J. Phys. A* Journal of Physics. A. Mathematical and General. (London)  
*J. Phys. B* Journal of Physics. B. Atomic and Molecular Physics. (London)  
*J. Phys. Soc. Japan* Journal of the Physical Society of Japan. (Tokyo)  
*J. Physique* Le Journal de Physique. (Paris)  
*J. Proc. Roy. Soc. New South Wales* Royal Society of New South Wales. Journal and Proceedings. (Sydney)  
*J. Pure Appl. Algebra* Journal of Pure and Applied Algebra. (Amsterdam)  
*J. Pure Appl. Sci.* Middle East Technical University. Journal of Pure and Applied Sciences. Orta Doğu Teknik Üniversitesi. Temel ve Uygulamalı Bilimler Dergisi. (Ankara)  
*J. Recreational Math.* Journal of Recreational Mathematics. (Farmingdale, N.Y.)  
*J. Reine Angew. Math.* Journal für die Reine und Angewandte Mathematik. (Berlin)  
*J. Res. Nat. Bur. Standards* National Bureau of Standards. Journal of Research. (Washington, D.C.)  
*J. Rheol.* Journal of Rheology. (New York)  
*J. Roy. Statist. Soc. Ser. A* Journal of the Royal Statistical Society. Series A. General. (London)  
*J. Roy. Statist. Soc. Ser. B* Journal of the Royal Statistical Society. Series B. Methodological. (London)  
*J. Roy. Statist. Soc. Ser. C* Journal of the Royal Statistical Society. Series C. Applied Statistics. (London)  
*J. Saitama Univ. Fac. Ed. Math. Natur. Sci.* Saitama University. Faculty of Education. Journal. Mathematics and Natural Science. (Urawa)  
*J. Shivaji Univ. (Sci.)* Shivaji University. Journal. (Science). (Kolhapur)  
*J. Soviet Math.* Journal of Soviet Mathematics. (New York) (Translation of *Itogi Nauki—Seriya Matematika* (Progress in Science—Mathematical Series), *Problemy Matematicheskogo Analiza* (Problems in Mathematical Analysis), and *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)*)  
*J. Statist. Comput. Simulation* Journal of Statistical Computation and Simulation. (New York)  
*J. Statist. Phys.* Journal of Statistical Physics. (New York)  
*J. Statist. Plann. Inference* Journal of Statistical Planning Inference. (Amsterdam)  
*J. Statist. Res.* Journal of Statistical Research. (Dacca)  
*J. Symbolic Logic* The Journal of Symbolic Logic. (Providence, R.I.)  
*J. Systems Software* The Journal of Systems and Software. (New York)  
*J. Tech. Bengal Engrg. College* Journal of Technology. Bengal Engineering College. (Howrah)  
*J. Tech. Phys.* Polish Academy of Sciences. Institute of Fundamental Technological Research. Journal of Technical Physics. (Warsaw)  
*J. Theoret. Biol.* Journal of Theoretical Biology. (London)  
*J. Tsuda College* Journal of Tsuda College. (Tokyo)  
*J. Univ. Bombay (N.S.)* Journal of the University of Bombay. New Series. (Bombay)  
*J. Univ. Kuwait Sci.* The Journal of the University of Kuwait. Science. (Kuwait)  
*J. Univ. Poona* University of Poona. Journal. (Poona)  
*J. Warburg Courtauld Inst.* Journal of the Warburg and Courtauld Institutes. (London)  
*Jadernaja Fiz.* Akademiya Nauk SSSR. Jadernaja Fizika. (Moscow) (Translated as: *Soviet J. Nuclear Phys.*)  
*Jahresber. Deutsch. Math.-Verein.* Jahresbericht der Deutschen Mathematiker-Vereinigung. (Stuttgart)  
*Janus Janus.* Revue Internationale de l'Histoire des Sciences, de la Médecine, de la Pharmacie et de la Technique. (Leiden)  
*Japan. J. Math. (N.S.)* Science Council of Japan. Japanese Journal of Mathematics. New Series. (Tokyo)  
*\*Japan. Stud. Hist. Sci.* Japanese Studies in the History of Science. (Tokyo)  
*Jbuch. Heidelberg Akad. Wiss.* Heidelberger Akademie der Wissenschaften. Jahrbuch. (Heidelberg)  
*Jisuan Shuxue* See *Math. Numer. Sinica*  
*Jñānabha* Jñānabha. The Vijnana Parishad of India. Bundelkhand University. (Orai)  
*Kaliningrad. Gos. Univ. Differentsial'naja Geom. Mnogoobraz. Figur* Kaliningradskop Gosudarstvennogo Universitet. Differentsial'naja Geometrija Mnogoobraznykh Figur. (Kaliningrad)  
*Karachi Math. Assoc. Riazi (Souvenir)* Riazi. Souvenir of the Karachi Mathematics Association. (Karachi)  
*Karachi Univ. J. Sci.* Karachi University. Journal of Science. (Karachi)  
*Keio Engrg. Rep.* Keio Engineering Reports. (Tokyo)  
*Keio Math. Sem. Rep.* Keio Mathematical Seminar Reports. (Yokohama)  
*Kenkyū Kiyō—Gakushūin Kōtōka* Memoirs of Gakushūin High School. (Tokyo)  
*Kexue Tongbao* Chinese Academy of Science. Kexue Tongbao (Science Bulletin). (Peking) (Continued as: *Kexue Tongbao (Chinese)*)  
*Kexue Tongbao (Chinese)* Chinese Academy of Science. Kexue Tongbao (Science Bulletin). (Peking) (Translated as: *Kexue Tongbao (English)*) (Formerly: *Kexue Tongbao*)  
*\*Kexue Tongbao (English)* Chinese Academy of Science. Kexue Tongbao (Science Bulletin). A Monthly Journal of Science. (Peking) (Translation of *Kexue Tongbao (Chinese)*)  
*Kibernet. i Vyčisl. Tehn.* Akademija Nauk Ukrainkoj SSR. Institut Kibernetiki. Kibernetika i Vyčislitel'naja Tehnika. (Kiev)  
*Kibernetika (Kiev)* Otdelenie Matematiki, Mehaniki i Kibernetiki Akademii Nauk Ukrainkoj SSR. Kibernetika. (Kiev) (Translated as: *Cybernetics*)  
*Klasični Naučn. Spisi Mat. Inst. Beograd. (N.S.)* Beograd. Matematički Institut. Klasični Naučn. Spisi. Nova Serija. (Belgrade)  
*†Knjižnica Letopis* Knjižnica Letopis. (Moscow)  
*Knjižnice Odborn. Věd. Spisů Vysoké. Učení Tech. v Brně A* Knjižnice Odborných a Vědeckých Spisů Vysokého Učení Technického v Brně. Vysoké Učení Technické v Brně. A. (Brno)  
*Knjižnice Odborn. Věd. Spisů Vysoké. Učení Tech. v Brně B* Knjižnice Odborných a Vědeckých Spisů Vysokého Učení Technického v Brně. Vysoké Učení Technické v Brně. B. (Brno)  
*Knowledge Practice Math.* Knowledge and Practice of Mathematics. Shuxuede Shijian Yu Renshi. (Peking)  
*Kodai Math. J.* Kodai Mathematical Journal. (Tokyo)  
*Kombin. Anal.* Kombinatornyj Analiz. Moskovskij Gosudarstvennyj Universitet im. M. V. Lomonosova. (Moscow)  
*Kongress Tagungsber.* See *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M*  
*†Korean Sci. Abstracts* Korean Scientific Abstracts. (Seoul)  
*Kosmiches. Issled.* Kosmicheskie Issledovaniya. (Moscow) (Translated as: *Cosmic Res.*)  
*Közl.—MTA Számítástech. Automat. Kutató Int. Budapest* Közlemények. MTA Számítástechikai és Automatizálási Kutató Intézet Budapest. (Budapest)  
*Kristallografia* See *Soviet Phys. Cryst.*  
*Kuifysoc. Gos. Ped. Inst. Naučn. Trudy* Kuifyshevskij Gosudarstvennyj Pedagogičeskij Institut. Naučnye Trudy. (Kuybyshev)  
*Kumamoto J. Sci. (Math.)* Kumamoto Journal of Science. (Mathematics). (Kumamoto)  
*Kvantovaja Elektronika* Kvantovaja Elektronika. (Kiev)  
*\*Kwansei Gakuin Univ. Annual Stud.* Kwansei Gakuin University. Annual Studies. (Nishinomiya)  
*Kwart. Hist. Nauk. Tech.* Polska Akademia Nauk. Zakład Historii Nauki i Techniki. Kwartalnik Historii Nauki i Techniki. (Warsaw)  
*Kybernetes* Kybernetes. An International Journal of Cybernetics and General Systems. (London)  
*Kybernetika (Prague)* Kybernetika. (Prague)  
*Kybernetika (Prague) Suppl.* Kybernetika. Supplement. (Prague)  
*Kyungpook Math. J.* Kyungpook National University. Kyungpook Mathematical Journal. (Taegu)  
*Latv. Gos. Univ. Učen. Zap.* Latvīskij Gosudarstvennyj Universitet im. Petra Stučki. Učēnye Zapiski. (Riga) (Also listed as: *Latvijas Valsts Univ. Zinātņ. Raksti*)  
*Latv. Mat. Ežegodnik* Latvīskij Gosudarstvennyj Universitet imeni P. Stučki. Latvīskij Matematičeskij Ežegodnik. (Riga)  
*Latvijas PSR Zinātņ. Akad. Vēstis* Latvijas PSR Zinātņu Akadēmijas Vēstis. Izvestija Akademii Nauk Latvīskoj SSR. (Riga)  
*Latvijas PSR Zinātņ. Akad. Vēstis Fiz. Tehn. Zinātņ. Sēr.* Latvijas PSR Zinātņu Akadēmijas Vēstis. Fizikas un Tehnisko Zinātņu Sērija. Izvestija Akademii Nauk Latvīskoj SSR. Serija Fizičeskij i Tehničeskij Nauk. (Riga)  
*Latvijas Valsts Univ. Zinātņ. Raksti* PSRS Augstākās Izglītības Ministrija. Pēteris Stučka Latvijas Valsts Universitāte. Zinātniskie Raksti. Ministerstvo Vysshego Obrazovaniya. Latvīskij Gosudarstvennyj Universitet im. Petra Stučki. Učēnye Zapiski. (Riga) (See also *Latv. Gos. Univ. Učen. Zap.*)  
*Leningrad. Gos. Univ. Učen. Zap.* Leningradskij Gosudarstvennyj Ordena Lenina Universitet imeni A. A. Ždanova. Učēnye Zapiski. (Leningrad)  
*†Letopis' Žurnal'nyh Statei* Letopis' Žurnal'nyh Statei. (Moscow)  
*Let. Math. Phys.* Letters in Mathematical Physics. A Journal for the Rapid Dissemination of Short Contributions in the Field of Mathematical Physics. (Dordrecht)  
*Let. Nuovo Cimento (2)* Lettere al Nuovo Cimento. Rivista Internazionale della Società Italiana di Fisica. Serie 2. (Bologna)  
*Libyan J. Sci.* The Libyan Journal of Science. (Tripoli)  
*Linear Algebra Appl.* Linear Algebra and its Applications. (New York)  
*Linear and Multilinear Algebra* Linear and Multilinear Algebra. (New York)  
*Lithuanian Math. J.* Lithuanian Mathematical Journal. (New York) (Translation of *Lietosk. Mat. Sb.*)  
*Lietosk. Fiz. Sb.* Lietuvos TSR Mokslo Akademija. Lietuvos TSR Aukštojo Mokyklos. Lietuvos Fizikos Rinkiny. Akademija Nauk Litovskoj SSR. Vysšie Školy Litovskoj SSR. Litovskij Fizičeskij Sbornik. (Vilnius) (Translated as: *Soviet Phys.—Collection*)  
*Lietosk. Mat. Sb.* Lietuvos TSR Mokslo Akademija. Lietuvos TSR Aukštojo



- Mokyklos. Lietuvos Matematikos Rinkinys. Akademija Nauk Lietuvos SSR. Vysšie Učebnye Zavedeniya Litovskoi SSR. Litovskii Matematicheskii Sbornik. (Vilnius) (Translated as: *Lithuanian Math. J.*)
- Lixue Xuebao* See *Acta Mech. Sinica* (Peking)
- \* *Lixue Yu Shijian* Lixue Yu Shijian. Mechanics and Practice. (Peking)
- Logique et Anal. (N.S.)* Logique et Analyse. Nouvelle Série. (Louvain)
- \* *Luso J. Sci. Tech.* Luso. Journal of Science and Technology. (Zomba)
- Magnetohydrodynamics* Magnetohydrodynamics. (A translation of *Magnitnaya Gidrodinamika* of the Academy of Sciences of the Latvian SSR). (New York) (Translation of *Magnit. Gidrodinamika*)
- Makedon. Akad. Nauk. Umet. Oddel. Prirod.-Mat. Nauk. Prilozi* Makedonska Akademija na Naukite i Umetnostite. Oddelenie za Prirodo-Matematički Nauki. Prilozi. (Skopje)
- Management Sci.* Management Science. Journal of the Institute of Management Science. Application and Theory Series. (Philadelphia, Pa.)
- Manuscripta Math.* Manuscripta Mathematica. (Berlin)
- Mat. Bilten* Matematički Bilten. (Skopje)
- Mat. Enseñanza* Matemáticas y Enseñanza. (Mexico City)
- \* *Mat. Enseñanza Univ.* Matemática Enseñanza Universitaria. (Bogotá)
- \* *Mat. Fiz.* Akademija Nauk Ukrainkoj SSR. Institut Matematiki. Matematičeskaja Fizika. (Kiev)
- Mat. Fiz. i Funkcional. Anal.* Matematičeskaja Fizika i Funkcional'nyj Analiz. Akademija Nauk Ukrainkoj SSR. Fiziko-Tehničeskij Institut Nizkih Temperatur. (Kharkov)
- Mat.-Fys. Medd. Danske Vid. Selsk.* Matematiskfysiske Meddelelser udgivet af Det Kongelige Danske Videnskabsnernes Selskab. (Copenhagen)
- Mat. Issled.* Akademija Nauk Moldavskoi SSR. Institut Matematiki s Vyčislitel'nym Centrom. Matematičeskije Issledovaniya. (Kishinev)
- Mat. Lapok* Matematikai Lapok. Bolyai János Matematikai Társulat. (Budapest)
- Mat. Metody i Fiz.-Meh. Polja* Akademija Nauk Ukrainkoj SSR. L'vovskij Filial Matematicheskoi Fiziki Instituta Matematiki. Matematičeskije Metody i Fiziko-Mehaničeskije Polja. (Kiev)
- Mat. Metody v Social. Nauk.—Trudy Sem. Processy Optimal. Upravleniya II Sekcija* Institut Fiziki i Matematiki Litovskoi SSR. Matematičeskije Metody v Social'nyh Naukah. Trudy Respublikanskogo Naučnogo Seminara "Processy Optimal'nogo Upravleniya". II Sekcija. (Vilnius)
- Mat. Sb. (N.S.)* Matematičeskii Sbornik. Novaja Serija. (Moscow) (Translated as: *Math. USSR-Sb.*)
- Mat. Sb. (Tomsk)* Tomsk. Gosudarstvennyi Universitet. Matematičeskii Sbornik. (Tomsk)
- Mat. Stos. (3)* Roczniki Polskiego Towarzystwa Matematycznego. Seria III. Matematyka Stosowana. (Warsaw)
- Mat. v Škole* Ministerstvo Prosvetšeniya RSSR. Matematika v Škole. (Moscow)
- Mat. Vesnik* Društvo Matematičara, Fizičara i Astronoma SRS i Matematički Institut-Beograd. Matematički Vesnik. Nova Serija. (Belgrade)
- Mat. Voprosy Upravlenn. Proizvodstvom* Moskovskij Gosudarstvennyi Universitet. Mekhaniko-Matematičeskii Fakul'tet. Matematičeskije Voprosy Upravleniya Proizvodstvom. (Moscow)
- Mat. Zametki* Akademija Nauk Sojuza SSR. Matematičeskije Zametki. (Moscow) (Translated as: *Math. Notes*)
- Match* Match. (Mülheim)
- Matematiche (Catania)* Le Matematiche. (Catania)
- Matematika (Belgrade)* Matematika. (Belgrade)
- Materialy Sem. Kibernet.* Akademija Nauk Moldavskoi SSR. Materialy Seminara po Kibernetike. (Kishinev)
- Math. Ann.* Mathematische Annalen. (Berlin)
- Math. Balkanica* Mathematica Balkanica. (Belgrade)
- Math. Biosci.* Mathematical Biosciences. An International Journal. (New York)
- Math. Chronicle* Mathematical Chronicle. (Auckland)
- Math. Colloq. Univ. Cape Town* Mathematics Colloquium University of Cape Town. (Cape Town)
- Math. Comp.* Mathematics of Computation. (Providence, R.I.)
- Math. Comput. Simulation* Mathematics and Computers in Simulation. (Amsterdam)
- Math. Ed. (Siwan)* The Mathematics Education. (Siwan)
- Math. Gaz.* The Mathematical Gazette. (London)
- Math. Intelligencer* The Mathematical Intelligencer. (Berlin)
- Math. J. Okayama Univ.* Mathematical Journal of Okayama University. (Okayama)
- Math. Japon.* Mathematica Japonica. (Osaka)
- Math. Mag.* Mathematics Magazine. (Washington, D.C.)
- Math. Medley* Mathematical Medley. (Singapore)
- Math. Methods Appl. Sci.* Mathematical Methods in the Applied Sciences. (Stuttgart)
- Math. Nachr.* Mathematische Nachrichten. (Berlin)
- Math. Notae* Mathematicae Notae. Boletín del Instituto de Matemática. (Rosario)
- Math. Notes* Mathematical Notes of the Academy of Sciences of the USSR. (New York) (Translation of *Mat. Zametki*)
- \* *Math. Numer. Sinica* Mathematica Numerica Sinica. Jisuan Shuxue. (Peking)
- Math. Oper. Res.* Mathematics of Operations Research. (Providence, R.I.)
- Math. Operationsforsch. Statist. Ser. Optim.* Mathematische Operationsforschung und Statistik Series Optimization. (Berlin)
- Math. Operationsforsch. Statist. Ser. Statist.* Mathematische Operationsforschung und Statistik Series Statistics. (Berlin)
- Math.-Phys. Semesterber.* Mathematisch-Physikalische Semesterberichte. (Göttingen)
- Math. Proc. Cambridge Philos. Soc.* Mathematical Proceedings of the Cambridge Philosophical Society. (Cambridge, England)
- Math. Programming* Mathematical Programming. (Amsterdam)
- Math. Programming Stud.* Mathematical Programming Study. (Amsterdam)
- Math. Rep. Kyushu Univ.* Mathematical Reports of College of General Education. Kyushu University. (Fukuoka)
- Math. Rep. Toyama Univ.* Toyama University. Mathematics Reports. (Toyama)
- \* *Math. Rev.* Mathematical Reviews. (Providence, R.I.) (Usually abbreviated as *MR* in the text of *Math. Rev.*)
- Math. Scand.* Mathematica Scandinavica. (Copenhagen)
- \* *Math. Sci.* The Mathematical Scientist. (Canberra City)
- Math. Sci. Humaines* Centre de Mathématique Sociale. École Pratique des Hautes Études. Mathématiques et Sciences Humaines. (Paris)
- Math. Sem. Notes Kobe Univ.* Kobe University. Mathematics Seminar Notes. (Kobe)
- Math. Slovaca* Mathematica Slovaca. (Bratislava)
- \* *Math. Social Sci.* Mathematical Social Sciences. (Amsterdam)
- Math. Student* The Mathematics Student. (Madras)
- Math. Systems Theory* Mathematical Systems Theory. (New York)
- Math. USSR-Izv.* Mathematics of the USSR-Izvestiya. (Providence, R.I.) (Translation of *Izv. Akad. Nauk SSSR Ser. Mat.*)
- Math. USSR-Sb.* Mathematics of the USSR-Sbornik. (Providence, R.I.) (Translation of *Mat. Sb. (N.S.)*)
- Math. Z.* Mathematische Zeitschrift. (Berlin)
- Mathematica (Cluj)* Societatea de Științe Matematice și Fizice din R.P.R. Filiala Cluj. Mathematica. (Cluj)
- Mathematika* Mathematika. A Journal of Pure and Applied Mathematics. (London)
- Matrix Tensor Quart.* The Tensor Club of Great Britain. The Matrix and Tensor Quarterly. (London)
- MC* Mathematics of Computation. (Providence, R.I.) (Reviewed as: *Math. Comp.*)
- Meccanica—J. Ital. Assoc. Theoret. Appl. Mech.* Meccanica. Journal of the Italian Association of Theoretical and Applied Mechanics. (Milan)
- Mech. Res. Comm.* Mechanics Research Communications. (Elmsford, N. Y.)
- Mech. Solids* Mechanics of Solids. (New York) (Translation of *Izv. Akad. Nauk SSSR Meh. Tverd. Tela*)
- Mech. Teoret. Stos.* Polskie Towarzystwo Mechaniki Teoretycznej i Stosowanej. Mechanika Teoretyczna i Stosowana. (Warsaw)
- Med. Konink. Acad. Wetensch. België* Mededelingen van de Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van België. Klasse der Wetenschappen. (Brussels)
- Meh. Tverd. Tela* Akademija Nauk Ukrainkoj SSR. Institut Prikladnoi Matematiki i Mehaniki. Mehanika Tverdogo Tela. (Kiev)
- Mem. Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur. (5)* Accademia delle Scienze di Torino. Memorie. Classe di Scienze Fisiche, Matematiche e Naturali. Serie V. (Turin)
- Mem. Amer. Math. Soc.* Memoirs of the American Mathematical Society. (Providence, R.I.)
- Mem. Defense Acad.* Memoirs of the Defense Academy. Mathematics, Physics, Chemistry and Engineering. (Yokosuka) (Continued as: *Mem. Nat. Defense Acad.*)
- Mem. Ehime Univ. Natur. Sci. Ser. A* Memoirs of the Ehime University. Natural Science. Series A. (Matsuyama)
- Mem. Fac. Ed. Kumamoto Univ. Natur. Sci.* Kumamoto University. Faculty of Education. Memoirs. Natural Science. (Kumamoto)
- Mem. Fac. Ed. Shiga Univ. Natur. Sci.* Shiga University. Faculty of Education. Memoirs. Natural Science. (Otsu)
- Mem. Fac. Ed. Shimane Univ. Natur. Sci.* Shimane University. Faculty of Education. Memoirs. Natural Science. (Matsue)
- Mem. Fac. Engrg. Hiroshima Univ.* Memoirs of the Faculty of Engineering. Hiroshima University. (Hiroshima)
- Mem. Fac. Engrg. Kyoto Univ.* Memoirs of the Faculty of Engineering. Kyoto University. (Kyoto)
- Mem. Fac. Engrg. Miyazaki Univ.* Memoirs of the Faculty of Engineering. Miyazaki University. (Miyazaki)
- Mem. Fac. Gen. Ed. Kumamoto Univ. Natur. Sci.* Kumamoto University. Faculty of General Education. Natural Sciences. Memoirs. (Kumamoto)
- Mem. Fac. Indust. Arts Kyoto Tech. Univ. Sci. and Tech.* Memoirs of the Faculty of Industrial Arts. Kyoto Technical University. Science and Technology. (Kyoto)
- \* *Mem. Fac. Sci. Kōchi Univ. Ser. A Math.* Kōchi University. Faculty of Science. Memoirs. Series A. Mathematics. (Kōchi)
- Mem. Fac. Sci. Kyushu Univ. Ser. A* Memoirs of the Faculty of Science. Kyushu University. Series A. Mathematics. (Fukuoka)
- Mem. Fac. Sci. Shimane Univ.* Shimane University. Faculty of Science. Memoirs. (Matsue)
- Mem. Kitami Inst. Tech.* Memoirs of the Kitami Institute of Technology. (Kitami)
- Mem. Kyoto Tech. Univ. Sci. Tech.* Memoirs of the Faculty of Industrial Arts. Kyoto Technical University. Science and Technology. (Kyoto)
- Mem. Muroran Inst. Tech.* Memoirs of the Muroran Institute of Technology. (Muran)
- \* *Mem. Nat. Defense Acad.* Memoirs of the National Defense Academy. Mathematics, Physics, Chemistry and Engineering. (Yokosuka) (Formerly: *Mem. Defense Acad.*)
- Mem. Numer. Math.* Memoirs of Numerical Mathematics. (Kyoto)
- Mem. Osaka Inst. Tech. Ser. A* Memoirs of the Osaka Institute of Technology. Series A. Science & Technology. (Osaka)
- Mem. Osaka Kyoiku Univ. III Natur. Sci. Appl. Sci.* Memoirs of Osaka Kyoiku University. III. Natural Science and Applied Science. (Osaka)
- Mem. Real Acad. Cienc. Artes Barcelona* Memorias de la Real Academia de Ciencias y Artes de Barcelona. (Barcelona)
- Mem. Real Acad. Cienc. Exact. Fis. Natur. Madrid* Memorias de la Real Academia de

- Ciencias Exactas, Físicas y Naturales de Madrid. Serie de Ciencias Exactas. (Madrid)
- Mem. School Engrg. Okayama Univ.* Memoirs of the School of Engineering. Okayama University. (Okayama)
- Mem. School Sci. Engrg. Waseda Univ.* Memoirs of the School of Science and Engineering. Waseda University. (Tokyo)
- Mem. Soc. Astronom. Ital. (N.S.)* Memorie della Società Astronomica Italiana. Nuova Serie. (Milan)
- Menemui Mat.* Menemui Matematik. (Discovering Mathematics). (Kuala Lumpur)
- Metody i Modeli Upravljenja* Riškii Gosudarstvennyi Politehnicheskii Institut. Metody i Modeli Upravljenja. (Riga)
- Metody Vyčisl.* Leningradskii Ordena Lenina Gosudarstvennyi Universitet im. A. A. Zdanova. Kafedra Vyčislitel'noi Matematiki i Vyčislitel'nyi Centr. Metody Vyčislenii. (Leningrad)
- Metrika* Metrika. (Würzburg)
- Metroeconomica* Metroeconomica. Rivista Internazionale di Economica. (Bologna)
- Metron* Metron. (Rome)
- \* *MIC—Modeling Identification Control* Modeling, Identification and Control. A Norwegian Research Bulletin. (Oslo)
- Michigan Math. J.* The Michigan Mathematical Journal. (Ann Arbor, Mich.)
- Mind* Mind. A Quarterly Review of Psychology. (Oxford)
- Mitt. Math. Ges. Hamburg* Mitteilungen der Mathematischen Gesellschaft in Hamburg. (Hamburg)
- Mitt. Math. Sem. Giessen* Mitteilungen aus dem Mathematischen Seminar Giessen. (Giessen)
- Mitt. Verein. Schweiz. Versicherungsmath.* Vereinigung Schweizerischer Versicherungsmathematiker. Mitteilungen. (L'Association des Actuaire Suisses. Bulletin). (Bern)
- Molecular Phys.* Molecular Physics. (London)
- Molod. Naučn. Rabotnik* Erevanskii Gosudarstvennyi Universitet. Molodoi Naučnyi Rabotnik. (Erevan)
- Monatsh. Math.* Monatshefte für Mathematik. (Vienna)
- \* *Monthly Notices Roy. Astronom. Soc.* Royal Astronomical Society. Monthly Notices. (Oxford)
- Moscow Univ. Math. Bull.* Moscow University Mathematics Bulletin. (New York) (Translation of the mathematics section of *Vestnik Moskov. Univ. Ser. I Mat. Meh.*)
- Moscow Univ. Phys. Bull.* Moscow University Physics Bulletin. (New York) (Translation of the physics section of *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.*)
- Moskoe. Gos. Ped. Inst. Učen. Zap.* Moskovskii Gosudarstvennyi Pedagogičeskii Institut im. V. I. Lenina. Učenyje Zapiski. (Moscow)
- Moskoe. Gos. Univ. Soobšč. Gos. Astronom. Inst. Šternberg* Moskovskii Gosudarstvennyi Universitet im. M. V. Lomonosova. Soobščeniia Gosudarstvennogo Astronomičeskogo Instituta im. P. K. Šternberga. (Moscow)
- Moskov. Gos. Univ. Trudy Gos. Astronom. Inst. Šternberg* Moskovskii Gosudarstvennyi Universitet im. M. V. Lomonosova. Trudy Gosudarstvennogo Astronomičeskogo Instituta im. P. K. Šternberga. (Moscow)
- Moskoe. Gos. Zaočn. Ped. Inst. Sb. Naučn. Trudov* Moskovskii Gosudarstvennyi Zaočnyi Pedagogičeskii Institut. Sbornik Naučnykh Trudov. (Moscow)
- Moskoe. Inst. Elektron. Mašinostroeniia—Trudy MIEM* Moskovskii Institut Elektronogo Mašinostroeniia. Trudy MIEM. (Moscow)
- Moskov. Inst. Inž. Železnodorož. Transporta Trudy* Moskovskii Institut Inženirov Železnodorožnogo Transporta. Trudy. (Moscow)
- Moskov. Inž.-Stroitel. Inst. Sb. Trudov* Moskovskii Inženerno-Stroitel'skii Institut im. V. V. Kuibysheva. Sbornik Trudov. (Moscow)
- Moskoe. Lesotekh. Inst. Naučn. Trudy* Moskovskii Lesotekhnicheskii Institut. Naučnye Trudy. (Moscow)
- \* *MR* Mathematical Reviews. (Providence, R.I.) See *Math. Rev.*
- Nachr. Akad. Wiss. Göttingen Math.-Phys. Kl. II* Nachrichten der Akademie der Wissenschaften in Göttingen. II. Mathematisch-Physikalische Klasse. (Göttingen)
- Nadežn. i Kontrol' Kačestva* Ežemesjačnoe Priloženie k Žurnalu Standarty i Kačestvo Gosudarstvennyi Komitet Standartov Soveta Ministrov SSR. Nadežnost' i Kontrol' Kačestva. (Moscow)
- Nagoya Math. J.* Nagoya Mathematical Journal. (Nagoya)
- \* *Nanjing Daxue Xuebao* Nanjing Daxue Xuebao. Ziran Kexue Ban. Nanjing University Journal. Natural Sciences. (Nanking)
- Nanta Math.* Nanyang University. Nanta Mathematica. (Singapore)
- Narisi Istor. Prirodznac. i Tehn.* Narisi z Istorii Prirodznavstva i Tehniki. (Kiev)
- Natur. Sci. Rep. Ochanomizu Univ.* Natural Science Report of the Ochanomizu University. (Tokyo)
- Naturalia* Naturalia. (San José)
- Naučn.-Tehn. Informacija (VINITI) Ser. 2. Informacionnye Processy i Sistemy* Akademija Nauk SSSR. Vsesojuznyi Institut Naučnoi i Tehničkoj Informacii. Naučno-Tekhnicheskaja Informacija. Serija 2. Informacionnye Processy i Sistemy. (Moscow) (Translated as: *Automat. Document. and Math. Linguistics*)
- Naval Res. Logist. Quart.* Naval Research Logistics Quarterly. (Washington, D.C.)
- NEC Res. Develop.* NEC Research and Development (Technical Journal of Nippon Electric Co., Ltd.). (Tokyo)
- Nederl. Akad. Wetensch. Indag. Math.* Koninklijke Nederlandse Akademie van Wetenschappen. Indagationes Mathematicae. (Amsterdam) (Same as: *Nederl. Akad. Wetensch. Proc. Ser. A*)
- Nederl. Akad. Wetensch. Proc. Ser. A* See *Nederl. Akad. Wetensch. Indag. Math.*
- Nederl. Akad. Wetensch. Proc. Ser. B* Koninklijke Nederlandse Akademie van Wetenschappen. Proceedings. Series B. Koninklijke Sciences. (Amsterdam)
- Nederl. Akad. Wetensch. Verslag Afd. Natuurk.* Koninklijke Nederlandse Akademie van Wetenschappen. Verslag van de Gewone Vergadering van de Afdeling Natuurkunde. (Amsterdam)
- Nepali Math. Sci. Rep.* The Nepali Mathematical Sciences Report. (Kathmandu)
- Networks* Networks. An International Journal. (New York)
- New Zealand Math. Mag.* The New Zealand Mathematics Magazine. (Auckland)
- New Zealand Oper. Res.* New Zealand Operational Research. (Wellington)
- Nieuw Arch. Wisk. (3)* Nieuw Archief voor Wiskunde. Derde Serie. (Groningen)
- Nieuw Tijdschr. Wisk.* Nieuw Tijdschrift voor Wiskunde. (Groningen)
- Nigerian J. Sci.* University of Ibadan. Nigerian Journal of Science. (Ibadan)
- Nonlinear Anal.* Nonlinear Analysis. (Oxford)
- Nordisk Tidskr. Informationsbehandling (BIT)* See *BIT*
- Normat* Normat. Nordisk Matematisk Tidskrift. (Oslo)
- Norske Vid.-Akad. Oslo Mat.-Natur. Kl. Skr. (N.S.)* Norske Videnskaps-Akademi i Oslo. Matematisk-Naturvidenskapelig Klasse. Skrifter. (Oslo)
- Norske Vid. Selsk. Forh. (Trondheim)* Det Kongelige Norske Videnskabers Selskabs Forhandling. (Trondheim)
- Norske Vid. Selsk. Skr. (Trondheim)* Det Kongelige Norske Videnskabers Selskabs Skrifter. (Trondheim)
- Notes and Records Roy. Soc. London* Notes and Records of the Royal Society of London. (London)
- \* *Notices Amer. Math. Soc.* Notices of the American Mathematical Society. (Providence, R.I.) See *Abstracts Amer. Math. Soc.* (Beginning with the January, 1980 issue only contains the program of the meeting of the Society)
- Notre Dame J. Formal Logic* Notre Dame Journal of Formal Logic. (Notre Dame, Ind.)
- Nois* Nois. (Bloomington, Ind.)
- Nova Acta Leopoldina (N.F.)* Nova Acta Leopoldina. Abhandlungen der Deutschen Akademie der Naturforscher Leopoldina. Neue Folge. (Leipzig)
- \* *Novye Knigi SSSR* Novye Knigi SSSR. (Moscow)
- NTM Schr. Geschichte Natur. Tech. Medizin* NTM Schriftenreihe für Geschichte der Naturwissenschaften Technik und Medizin. (Leipzig)
- Nuclear Phys. A* Nuclear Physics. A. (Amsterdam)
- Nuclear Phys. B* Nuclear Physics. B. (Amsterdam)
- Numer. Funct. Anal. Optim.* Numerical Functional Analysis and Optimization. (New York)
- Numer. Math.* Numerische Mathematik. (Berlin)
- \* *Numer. Math. J. Chinese Univ.* Numerical Mathematics. A Journal of Chinese Universities. (Nanking)
- Nuovo Cimento A (11)* Il Nuovo Cimento. A. Serie 11. (Bologna)
- Nuovo Cimento B (11)* Il Nuovo Cimento. B. Serie 11. (Bologna)
- O Eukleides A—Agymnasio (N.S.)* O Eukleides; Ekdose Tes Ellenikes Mathemates Etairias. A. Agymnasio. Nea Seira. (Athens)
- O Eukleides B—Lykeio (N.S.)* O Eukleides; Ekdose Tes Ellenikes Mathemates Etairias. B. Lykeio. Nea Seira. (Athens)
- Obs. Astronom. Univ. Nac. La Plata Ser. Astronom.* Observatorio Astronomico de la Universidad Nacional de La Plata. Serie Astronomica. (La Plata)
- Obzornik Mat. Fiz.* Društvo Matematikov, Fizikov in Astronomov SRS. Obzornik za Matematiko in Fiziko. (Ljubljana)
- Oper. Res.* Operations Research. The Journal of the Operations Research Society of America. (Baltimore, Md.)
- Opsearch* Opsearch. The Journal of the Operational Research Society of India. (Delhi)
- Optica Acta* Optica Acta. (London)
- \* *Optimal Control Appl. Methods* Optimal Control Applications & Methods. (Chichester)
- Optimizacija* Akademija Nauk SSSR. Sibirskoe Otdelenie. Institut Matematiki. Optimizacija. (Novosibirsk)
- Organon* Organon. Institut d'Histoire de la Science et de la Technique auprès de l'Académie Polonaise des Sciences. (Warsaw)
- Osaka J. Math.* Osaka Journal of Mathematics. (Osaka)
- Österreich. Akad. Wiss. Math.-Natur. Kl. Denkschr.* Österreichische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Denkschriften. (Vienna)
- Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* Österreichische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Sitzungsberichte. Abteilung II. Mathematik, Astronomie, Physik, Meteorologie und Technik. (Vienna)
- Othor i Peredača Informacii* Othor i Peredača Informacii. Akademija Nauk Ukrainkoj SSR. Fiziko-Mehaničeskii Institut. (Kiev)
- Pacific J. Math.* Pacific Journal of Mathematics. (Berkeley, Calif.)
- Papers Proc. Roy. Soc. Tasmania* Papers and Proceedings of the Royal Society of Tasmania. (Hobart)
- Pattern Recognition* The Journal of the Pattern Recognition Society. (New York)
- Penz. Politehn. Inst. Učen. Zap. Mat. Meh.* Penzenskii Politehnicheskii Institut. Matematika i Mekhanika. Učenyje Zapiski. (Penza)
- Period. Mat. (5)* Periodico di Matematiche. Serie V. (Rome)
- Period. Math. Hungar.* Periodica Mathematica Hungarica. Journal of the János Bolyai Mathematical Society. (Budapest)
- Perm. Gos. Univ. Učen. Zap.* Permskii Gosudarstvennyi Universitet imeni A. M. Gor'kogo. Učenyje Zapiski. (Perm)
- Perm. Politehn. Inst. Sb. Naučn. Trudov* Permskii Politehnicheskii Institut. Sbornik Naučnykh Trudov. (Perm)
- Philips J. Res.* Philips Journal of Research. (Eindhoven)
- Philos. Forum Quart.* The Philosophical Forum. A Quarterly. (Boston, Mass.)
- Philos. Math.* Philosophia Mathematica. An International Journal for Philosophy of Modern Mathematics. (Hauppauge, N.Y.)
- Philos. Natur.* Philosophia Naturalis. Archiv für Naturphilosophie und die Philosophischen Grenzgebiete der Exakten Wissenschaften und Wissenschaftsgeschichte. (Meisenheim-Glan)



- Philos. Quart.* The Philosophical Quarterly. (St. Andrews)  
*Philos. Sci.* Philosophy of Science. (East Lansing, Mich.)  
*Philos. Stud.* Philosophical Studies. (Dordrecht)  
*Philos. Trans. Roy. Soc. London Ser. A* Philosophical Transactions of the Royal Society of London. Series A. Mathematical and Physical Sciences. (London)  
*Phys. A* Physica A. Europhysics Journal. (Amsterdam)  
*Phys. B + C* Physica B + C. Europhysics Journal. B: Low Temperature and Solid State Physics. C: Atomic, Molecular and Plasma Physics, Optics. (Amsterdam)  
*\* Phys. D* Physica D. Nonlinear Phenomena. (Amsterdam)  
*\* Phys. Energi. Fort. Phys. Nuclear.* Physica Energiae Fortis et Physica Nuclearis. Gaoneng Wuli Yu He Wuli. (Peking)  
*Phys. Fluids* The Physics of Fluids. (New York)  
*\* Phys. Lett. A* Physics Letters. A. (Amsterdam)  
*Phys. Lett. B* Physics Letters. B. (Amsterdam)  
*Phys. Rep.* Physics Reports. Section C of Physics Letters. (Amsterdam)  
*Phys. Rep. Kumamoto Univ.* Physics Reports of the Kumamoto University. (Kumamoto)  
*Phys. Rev. A* (3) Physical Review. A. General Physics. Third Series. (New York)  
*Phys. Rev. B* (3) Physical Review. B. Condensed Matter. Third Series. (New York)  
*Phys. Rev. C* (3) Physical Review. C. Nuclear Physics. Third Series. (New York)  
*Phys. Rev. D* (3) Physical Review. D. Particles and Fields. Third Series. (New York)  
*Phys. Rev. Lett.* Physical Review Letters. (New York)  
*Phys. Scripta* Physica Scripta. (Stockholm)  
*Phys. Status Solidi (B)* Physica Status Solidi. B. Basic Research. (Berlin)  
*Phys.—Riv. Internaz. Storia Sci.* Physica Rivista Internazionale di Storia della Scienza. (Florence)  
*Pi Mu Epsilon J.* Pi Mu Epsilon Journal. (Norman, Okla.)  
*PLISKA Stud. Math. Bulgar.* PLISKA Studia Mathematica Bulgarica. (Sofia)  
*Plodiv. Univ. Naučn. Trud.* Plovdivski Universitet. Naučni Trudove. (Plovdiv)  
*Podstawy Sterowania* Podstawy Sterowania. Polska Akademia Nauk. Centrum Badań Naukowych w Woj. Katowickim. Zakład Systemów Automatyki Kompleksowej. (Gliwice)  
*Pokroky Mat. Fyz. Astronom.* Jednota Československých Matematiků a Fyziku. Pokroky Matematiky, Fyziky a Astronomie. (Prague)  
*Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* Polish Academy of Sciences. Institute of Philosophy and Sociology. Bulletin of the Section of Logic. (Wrocław)  
*\* Polska Biblio. Analit. Mech.* Polska Akademia Nauk. Instytut Podstawowych Problemów Techniki. Polska Bibliografia Analityczna. Mechanika. Polish Scientific Abstracts. Mechanics. (Warsaw)  
*Portugal. Math.* Portugaliae Mathematica. (Lisbon)  
*Portugal. Phys.* Portugaliae Physica. (Lisbon)  
*\* Postępy Cybernet.* Postępy Cybernetyki. Kwartalnik Naukowy. (Wrocław)  
*Prace Inst. Maszyn Przepływowych* Prace Instytutu Maszyn Przepływowych. Transactions of the Institute of Fluid-Flow Machinery. (Warsaw)  
*Prace Nauk. Inst. Cybernet. Tech. Politech. Wrocław. Ser. Konfer.* Wrocław. Politechnika. Instytut Cybernetyki Technicznej. Prace Naukowe. Seria Konferencje. (Warsaw)  
*Prace Nauk. Inst. Cybernet. Tech. Politech. Wrocław. Ser. Monograf.* Wrocław. Politechnika Wrocławska. Instytut Cybernetyki Technicznej. Prace Naukowe. Seria Monografie. (Wrocław)  
*Prace Nauk. Inst. Cybernet. Tech. Politech. Wrocław. Ser. Stud. Materiały* Wrocław. Politechnika Wrocławska. Instytut Cybernetyki Technicznej. Prace Naukowe. Seria Studia i Materiały. (Wrocław)  
*Prace Nauk. Inst. Mat. Politech. Wrocław. Ser. Konfer.* Wrocław. Politechnika Wrocławska. Instytut Matematyki. Prace Naukowe. Seria Konferencje. (Wrocław)  
*Prace Nauk. Inst. Mat. Politech. Wrocław. Ser. Monograf.* Wrocław. Politechnika Wrocławska. Instytut Matematyki. Prace Naukowe. Seria Monografie. (Wrocław)  
*Prace Nauk. Inst. Mat. Politech. Wrocław. Ser. Stud. Materiały* Politechniki Wrocławskiej. Instytutu Matematyki. Prace Naukowe. Seria Studia i Materiały. (Wrocław)  
*Prague Bull. Math. Linguist.* Prague Bulletin of Mathematical Linguistics. (Prague)  
*\* Prague Stud. Math. Linguist.* Prague Studies in Mathematical Linguistics. (Prague)  
*Prakt. Akad. Athēnōn* Praktikā tēs Akadēmias Athēnōn. (Athens)  
*Praxis Math.* Praxis der Mathematik. (Cologne)  
*\* Prikl. Geom. i Inžener. Grafika* Prikladnaja Geometrija i Inženernaja Grafika. (Kiev)  
*Prikl. Mat. i Programirovanie* Akademiya Nauk Moldavskoi SSR. Institut Matematiki s Vychislitel'nym Centrom. Prikladnaja Matematika i Programirovanie. (Kishinev)  
*Prikl. Mat. Meh.* Akademiya Nauk SSSR. Otdelenie Tehnicheskikh Nauk. Institut Mekhaniki. Prikladnaja Matematika i Mekhanika. (Moscow) (Translated as: *J. Appl. Math. Mech.*)  
*Prikl. Meh.* Akademiya Nauk Ukrainskoi SSR. Otdelenie Matematiki, Mekhaniki i Kibernetiki. Prikladnaja Mekhanika. (Kiev) (Translated as: *Soviet Appl. Mech.*)  
*Prikl. Problemy Proč. i Plast.* Gor'kovskii Gosudarstvennyi Universitet imeni N. I. Lobachevskogo. Prikladnye Problemy Pročnosti i Plastičnosti. (Gorki)  
*Primenen. Mat. Ekonom.* Leningradskii Ordena Lenina Gosudarstvennyi Universitet imeni A. A. Ždanova. Kafedra i Laboratoriya Ekonomiko-Matematicheskikh Metodov. Primenenie Matematiki v Ekonomike. (Leningrad)  
*Primenen. Teor. Veroyatnost. i Mat. Statist.* Primenenie Teorii Veroyatnostei i Matematicheskoi Statistiki. (Vilnius)  
*Prirod.-Mat. Fak. Univ. Kiril Metodij Skopje Godišen Zb.* Prirodno-Matematička Fakultet na Univerzitetot Kiril i Metodij Skopje. Godišen Zbornik. (Skopje) (May also appear as: *Univ. Kiril Metodij—Skopje Fac. Math.*) (Formerly: *Prirod.-Mat. Fak. Univ. Kiril i Metodij Skopje Godišen Zb.*)  
*\* Probab. Math. Statist.* Probability and Mathematical Statistics. (Warsaw/Wrocław)  
*Problemi Tehn. Kibernet.* Problemi na Tehničeskata Kibernetika. Problems of Engineering Cybernetics. (Sofia)  
*Problems Control Inform. Theory / Problemy Upravljen. Teor. Inform.* Problems of Control and Information Theory. Problemy Upravljenja i Teorii Informacii. (Budapest)  
*Problems Inform. Transmission* Problems of Information Transmission. (New York) (Translation of *Problemy Pereдачи Informacii*)  
*Problemy Jadern. Fiz. i Kosm. Lučei* Problemy Jadernoj Fiziki i Kosmicheskikh Lučei. (Kharkov)  
*Problemy Kibernet.* Problemy Kibernetiki. (Moscow)  
*Problemy Mat.* Bydgoszcz. Wyższa Szkoła Pedagogiczna. Zeszyty Naukowe. Problemy Matematyczne. (Bydgoszcz)  
*Problemy Matematicheskogo Analiza (Problems in Mathematical Analysis)* Problemy Matematicheskogo Analiza (Problems in Mathematical Analysis). (Leningrad) (Translated as: *J. Soviet Math.*)  
*Problemy Pereдачи Informacii Akademija Nauk SSSR. Institut Problem Pereдачи Informacii Akademii Nauk SSSR. Problemy Pereдачи Informacii.* (Moscow) (Translated as: *Problems Inform. Transmission*)  
*Problemy Služain. Poiska Akademija Nauk Latvīskoi SSR. Institut Elektroniki i Vychislitel'noi Tehniki. Problemy Slučainogo Poiska.* (Riga)  
*Problemy Teor. Gravitacii i Element. Častic* Problemy Teorii Gravitacii i Elementarnykh Častic. (Moscow)  
*Proc. Amer. Math. Soc.* Proceedings of the American Mathematical Society. (Providence, R.I.)  
*Proc. Edinburgh Math. Soc. (2)* Proceedings of the Edinburgh Mathematical Society. Series II. (Edinburgh)  
*Proc. Fac. Sci. Tokai Univ.* Proceedings of the Faculty of Science of Tokai University. (Tokyo)  
*Proc. Indian Acad. Sci. Sect. A Chem. Sci.* Indian Academy of Sciences. Proceedings. Section A. Chemical Sciences. (Bangalore)  
*Proc. Indian Acad. Sci. Sect. A Earth Planetary Sci.* Indian Academy of Sciences. Proceedings. Section A. Earth and Planetary Sciences. (Bangalore)  
*Proc. Indian Acad. Sci. Sect. A Math. Sci.* Indian Academy of Sciences. Proceedings. Section A. Mathematical Sciences. (Bangalore)  
*Proc. Indian Nat. Sci. Acad. Part A* Proceedings of the Indian National Science Academy. Part A. Physical Sciences. (New Delhi)  
*Proc. Inst. Electr. Engrs.* Proceedings of the Institution of Electrical Engineers. Electronics. Power. Control & Science. (London)  
*Proc. Inst. Statist. Math.* The Proceedings of the Institute of Statistical Mathematics. (Tokyo)  
*Proc. Japan Acad. Ser. A Math. Sci.* Japan Academy. Proceedings. Series A. Mathematical Sciences. (Tokyo)  
*Proc. Japan Acad. Ser. B Phys. Biol. Sci.* Japan Academy. Proceedings. Series B. Physical and Biological Sciences. (Tokyo)  
*Proc. London Math. Soc. (3)* Proceedings of the London Mathematical Society. Third Series. (London)  
*Proc. Math. Phys. Soc. Egypt* Proceedings of the Mathematical and Physical Society. (Cairo)  
*Proc. Nat. Acad. Sci. India Sect. A* Proceedings of the National Academy of Sciences, India. Section A. (Allahabad)  
*Proc. Nat. Acad. Sci. U.S.A.* Proceedings of the National Academy of Sciences of the United States of America. (Washington, D.C.)  
*Proc. Roy. Irish Acad. Sect. A* Proceedings of the Royal Irish Academy. Section A. (Dublin)  
*Proc. Roy. Soc. Canada (4)* Proceedings of the Royal Society of Canada. Fourth Series. (Ottawa, Ont.)  
*Proc. Roy. Soc. Edinburgh Sect. A* Proceedings of the Royal Society of Edinburgh. Section A. Mathematical and Physical Sciences. (Edinburgh)  
*Proc. Roy. Soc. London Ser. A* Proceedings of the Royal Society. London. Series A. Mathematical and Physical Sciences. (London)  
*Proc. Steklov Inst. Math.* Proceedings of the Steklov Institute of Mathematics. (Providence, R.I.) (Translation of *Trudy Mat. Inst. Steklov.*)  
*Proc. (Trudy) P. N. Lebedev Phys. Inst.* Proceedings (Trudy) of the P. N. Lebedev Physics Institute. (New York) (Translation of *Trudy Fiz. Inst. Lebedev.*)  
*Proc. West Virginia Acad. Sci.* West Virginia Academy of Science. Proceedings. (Morgantown, W. Va.)  
*Procesy Optimal. Upravljenija Trudy Sem. I Sekcija* See *Differencial'nye Uravnenija i Primenen.*—*Trudy Sem. Procesy Optimal. Upravljenija I Sekcija*  
*Procesy Optimal. Upravljenija Trudy Sem. II Sekcija* See *Mat. Metody v Social. Nauk.*—*Trudy Sem. Procesy Optimal. Upravljenija II Sekcija*  
*Procesy Optimal. Upravljenija Trudy Sem. V Sekcija* See *Statist. Problemy Upravljenija*—*Trudy Sem. Procesy Optimal. Upravljenija V Sekcija*  
*Progr. Math. (Allahabad)* Academy for Progress of Mathematics of the University of Allahabad. Progress of Mathematics. (Allahabad)  
*Progr. Theoret. Phys.* Progress of Theoretical Physics. (Osaka)  
*\* Progr. Theoret. Phys. Suppl.* Progress of Theoretical Physics. Supplement. (Kyoto)  
*Programming and Comput. Software* Programming and Computer Software. (New York) (Translation of *Programirovanie*)  
*Programirovanie* Akademiya Nauk SSSR. Programirovanie. (Moscow) (Translated as: *Programming and Comput. Software*)  
*Programirovanie EVM* Programirovanie EVM. (Vilnius)  
*Przegląd Statyst.* Polska Akademia Nauk. Komitet Statystyki i Ekonometrii. Przegląd Statystyczny. (Warsaw)  
*Psychometrika* Psychometrika. A Journal Devoted to the Development of Psychology as a Quantitative Rational Science. (Chicago, Ill.)  
*Pubb. Istit. Mat. Appl. Fac. Ingr. Univ. Stud. Roma Quaderno* Università degli Studi di Roma. Facoltà di Ingegneria. Istituto di Matematica Applicata. Pubblicazioni. (Rome)

- Publ. Centre Rech. Math. Pures* (1) Publications du Centre de Recherches en Mathématiques Pures. Série I. (Neuchâtel)
- Publ. Dép. Math. (Lyon)* Publications du Département de Mathématiques. Faculté des Sciences de Lyon. (Lyon)
- Publ. Économétriques* Publications Économétriques. (Paris)
- Publ. Inst. Math. (Beograd) (N.S.)* Institut Mathématique. Publications. Nouvelle Série. (Belgrade)
- Publ. Inst. Statist. Univ. Paris* Publications de l'Institut de Statistique de l'Université de Paris. (Paris)
- Publ. Math. Debrecen* Universitatis Debreceniensis. Institutum Mathematicum. Publicationes Mathematicae. (Debrecen)
- Publ. Res. Inst. Math. Sci.* Kyoto University. Research Institute for Mathematical Sciences. Publications. (Kyoto)
- \* *Publ. Sec. Mat. Univ. Autònoma Barcelona* Publicacions de la Secció de Matemàtiques. Universitat Autònoma de Barcelona. (Barcelona)
- Punjab Univ. J. Math. (Lahore)* Punjab University. Journal of Mathematics. (Lahore)
- Pure Appl. Math. Sci.* Pure and Applied Mathematics Sciences. (Saharanpur)
- \* *Quad. Mathesis Cosenza* Mathesis di Cosenza. Quaderni. (Cosenza)
- Questiones Math.* Quaestiones Mathematicae. (Pretoria)
- Quart. Appl. Math.* Quarterly of Applied Mathematics. (Providence, R.I.)
- Quart. J. Math. Oxford Ser. (2)* The Quarterly Journal of Mathematics. Oxford. Second Series. (Oxford)
- Quart. J. Mech. Appl. Math.* The Quarterly Journal of Mechanics and Applied Mathematics. (Oxford)
- RAAG Res. Notes* Research Notes and Memoranda of Applied Geometry for Preventing Natural Philosophy. Post-RAAG Reports. (Tokyo)
- Rad Jugoslav. Akad. Znan. Umjet.* Rad Jugoslavenske Akademije Znanosti i Umjetnosti. (Zagreb)
- Radio Engr. Electron. Phys.* Radio Engineering and Electronic Physics. Translation of Radiotekhnika i Elektronika, a U.S.S.R. Academy of Sciences Publication. (New York) (Translation of Radiotekhn. i Elektron.)
- Radio Sci.* Radio Science. (Washington, D.C.)
- Radiophys. and Quantum Electronics* Radiophysics and Quantum Electronics. A translation of the Izvestiya Vysish Uchebnyh Zavedenii Radiofizika of the Ministry of Higher Education of the USSR. (New York) (Translation of Izv. Vysf. Uchebn. Zaved. Radiofizika)
- Radiotekhn. (Har'kov)* Har'kovski Ordena Trudovogo Krasnogo Znameni Gosudarstvennyi Universitet imeni A. M. Gor'kogo. Radiotekhnika. (Kharkov)
- Radiotekhn. i Elektron.* Akademija Nauk SSSR. Radiotekhnika i Elektronika. (Moscow) (Translated as: *Radio Engr. Electron. Phys.*)
- RAIRO Anal. Numér.* RAIRO Analyse Numérique. (Paris)
- RAIRO Automat.* RAIRO Automatique. (Paris)
- RAIRO Inform.* RAIRO Informatique. (Paris)
- RAIRO Inform. Théor.* RAIRO Informatique Théorique. (Paris)
- RAIRO Rech. Opér.* RAIRO Recherche Opérationnelle. (Paris)
- Ranchi Univ. Math. J.* Ranchi University Mathematical Journal. (Ranchi)
- Ratio Ratio.* (Oxford)
- RCA Rev.* RCA Review. (Princeton, N.J.)
- Real Anal. Exchange* Real Analysis Exchange. (Macomb, Ill.)
- Recent Progr. Natur. Sci. Japan* Recent Progress of Natural Sciences in Japan. (Tokyo)
- Rech. Aérospat.* La Recherche Aérospatiale. (Châtillon) (Translated as: *Rech. Aérospat. (English)*)
- \* *Rech. Aérospat. (English)* La Recherche Aérospatiale. English edition. (Châtillon) (Translation of *Rech. Aérospat.*)
- Rend. Accad. Naz. XL (5)* Accademia Nazionale dei XL. Rendiconti Serie V. (Rome)
- Rend. Accad. Sci. Fis. Mat. Napoli (4)* Società Nazionale di Scienze, Lettere ed Arti in Napoli. Rendiconto dell'Accademia delle Scienze Fisiche e Matematiche. Serie IV. (Naples)
- Rend. Circ. Mat. Palermo (2)* Rendiconti del Circolo Matematico di Palermo. Serie II. (Palermo)
- Rend. Istit. Mat. Univ. Trieste* Rendiconti dell'Istituto di Matematica dell'Università di Trieste. (Trieste)
- Rend. Mat. (6)* Rendiconti di Matematica. Università degli Studi di Roma. Istituto Matematica Guido Castelnuovo. Istituto di Matematica Applicata. Istituto Nazionale di Alta Matematica. Serie VI. (Rome)
- Rend. Sem. Fac. Sci. Univ. Cagliari* Rendiconti del Seminario della Facoltà di Scienze della Università di Cagliari. (Cagliari)
- Rend. Sem. Mat. Fis. Milano* Rendiconti del Seminario Matematico e Fisico di Milano. (Milan)
- Rend. Sem. Mat. Univ. Padova* Rendiconti del Seminario Matematico dell'Università di Padova. (Padua)
- Rend. Sem. Mat. Univ. Politec. Torino* Rendiconti del Seminario Matematico (già "Conferenze di Fisica e di Matematica") Università e Politecnico di Torino. (Torino)
- Rep. Comput. Centre Univ. Tokyo* Report of the Computer Centre. University of Tokyo. (Tokyo)
- Rep. Fac. Engrg. Kanagawa Univ.* Kanagawa University. Faculty of Engineering. Reports. (Yokohama)
- Rep. Fac. Engrg. Oita Univ.* Oita University. Faculty of Engineering. Reports. (Oita)
- Rep. Fac. Sci. Engrg. Saga Univ. Math.* Reports of the Faculty of Science and Engineering. Saga University. Mathematics. (Saga)
- Rep. Fac. Sci. Kagoshima Univ.* Reports of the Faculty of Science of Kagoshima University. (Kagoshima)
- Rep. Fac. Sci. Shizuoka Univ.* Reports of the Faculty of Science. Shizuoka University. (Shizuoka)
- Rep. Inst. High Speed Mech. Tôhoku Univ.* Tôhoku University. Institute of High Speed Mechanics. Reports. (Sendai)
- Rep. Math. Logic* Reports on Mathematical Logic. (Katowice)
- Rep. Math. Phys.* Reports on Mathematical Physics. (Amsterdam)
- \* *Rep. Progr. Phys.* Reports on Progress in Physics. (Bristol)
- Rep. Statist. Appl. Res. Un. Japan. Sci. Engrs.* Reports of Statistical Application Research. Union of Japanese Scientists and Engineers. (Tokyo)
- Rep. Univ. Electro-Comm.* Reports of the University of Electro-Communications. (Tokyo)
- República Venezuela Bol. Acad. Cienc. Fis. Mat. Natur.* República de Venezuela. Boletín de la Academia de Ciencias Físicas, Matemáticas y Naturales. (Caracas)
- Res. Bull. Fac. Ed. Oita Univ.* The Research Bulletin of the Faculty of Education. Oita University. (Oita)
- Res. Bull. Meisei Univ.* Meisei University. Research Bulletin. (Tokyo)
- Res. Bull. Panjab Univ. (N.S.)* Research Bulletin of the Panjab University. New Series. (Chandigarh)
- Res. Inst. Fund. Inform. Sci. Res. Rep.* Kyushu University. Research Institute of Fundamental Information Science. Research Report. (Fukuoka)
- Res. Rep. Anan Tech. College* Research Reports of the Anan Technical College. (Anan)
- \* *Res. Rep. Inst. Inform. Sci. Tech. Tokyo Denki Univ.* Tokyo Denki University. Institute of Information Science & Technology. Research Reports. (Tokyo)
- Res. Rep. Kushiho Tech. College* Research Reports. Kushiho Technical College. (Hokkaido)
- Res. Rep. Miyagi Tech. College* Miyagi Technical College. Research Reports. (Miyagi)
- Res. Rep. Nagaoka Tech. College* Research Reports of the Nagaoka Technical College. (Nagaoka)
- Res. Rep. Tokyo Denki Univ.* Tokyo Denki University. Research Reports. (Tokyo)
- Resultate Math.* Resultate der Mathematik. (Basel)
- Rev. Acad. Cienc. Zaragoza (2)* Revista de la Academia de Ciencias Exactas, Físicas y Naturales de Zaragoza. Serie 2. (Zaragoza)
- Rev. CETHEDC* Revue du Centre d'Études Théoriques de la Détection et des Communications. (Paris)
- Rev. CETHEDC Cahier* Revue du Centre d'Études Théoriques de la Détection et des Communications. Cahier. (Paris)
- Rev. Cienc. (Lima)* Revista de Ciencias. (Lima)
- Rev. Cienc. Mat. Univ. Lourenço Marques* Revista de Ciências Matemáticas. Universidade de Lourenço Marques. (Maputo)
- Rev. Colombiana Mat.* Revista Colombiana de Matemáticas. (Bogotá)
- Rev. Econom. Statist.* The Review of Economics and Statistics. (Cambridge, Mass.)
- Rev. Econom. Stud.* The Review of Economic Studies. (Edinburgh)
- Rev. Histoire Sci. Appl.* Revue d'Histoire des Sciences et de leurs Applications. (Paris)
- \* *Rev. Ingr.* Universidad Católica Argentina. Facultad de Ciencias Fisicomatemáticas e Ingeniería. Revista de Ingeniería. (Buenos Aires)
- Rev. Internat. Philos.* Revue Internationale de Philosophie. (Wetteren)
- Rev. Mat. Hisp.-Amer. (4)* Revista Matemática Hispano-Americana. 4. Serie. (Madrid)
- Rev. Mexicana Astronom. Astrofis.* Revista Mexicana de Astronomía y Astrofísica. (Mexico City)
- Rev. Mexicana Fis.* Revista Mexicana de Física. (Mexico City)
- Rev. Modern Phys.* Reviews of Modern Physics. (New York)
- Rev. Questions Sci.* Revue des Questions Scientifiques. (Louvain)
- Rev. Real Acad. Cienc. Exact. Fis. Natur. Madrid* Real Academia de Ciencias Exactas, Físicas y Naturales de Madrid. Revista. (Madrid)
- Rev. Roumaine Math. Pures Appl.* Académie de la République Populaire Roumaine. Revue Roumaine de Mathématiques Pures et Appliquées. (Bucharest)
- Rev. Roumaine Phys.* Revue Roumaine de Physique. (Bucharest)
- Rev. Roumaine Sci. Tech. Sér. Électrotech. Énergét.* Revue Roumaine des Sciences Techniques. Série Électrotechnique et Énergétique. (Bucharest)
- Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* Revue Roumaine des Sciences Techniques. Série de Mécanique Appliquée. (Bucharest)
- Rev. Statist. Appl.* Revue de Statistique Appliquée. Centre d'Enseignement et de Recherche de Statistique Appliquée. (Paris)
- Rev. Téc. Fac. Ingr. Univ. Zulia* Universidad del Zulia. Facultad de Ingeniería. Revista Técnica. (Zulia)
- Rev. Un. Mat. Argentina* Revista de la Unión Matemática Argentina. (Buenos Aires)
- \* *Rheol. Acta* Rheologica Acta. An International Journal of Rheology. (Darmstadt)
- Rice Univ. Stud.* Rice University Studies. (Houston, Tex.)
- \* *Ricerca (4) (Napoli)* La Ricerca. Matematiche Pure ed Applicate. Serie IV. (Naples)
- Ricerche Mat.* Ricerche di Matematica. (Naples)
- \* *Riv. Mat. Sci. Econom. Social.* Rivista di Matematica per le Scienze Economiche e Sociali. (Milan)
- Riv. Mat. Univ. Parma (4)* Rivista di Matematica della Università di Parma. Serie IV. (Parma)
- Riv. Nuovo Cimento (3)* La Rivista del Nuovo Cimento. Serie 3. (Bologna)
- Rjazan. Gos. Ped. Inst. Učen. Zap.* Rjazanski Gosudarstvennyi Pedagogičeskii Institut. Učenyje Zapiski. (Ryazan)
- Rocky Mountain J. Math.* The Rocky Mountain Journal of Mathematics. (Missoula, Mont.)
- Rostock. Math. Kolloq.* Rostocker Mathematisches Kolloquium. (Rostock)
- Rozprawy Československé Akad. Věd Rada Mat. Přírod. Věd* Rozprawy Československé Akademie Věd Rada Matematických a Přírodních Věd. (Prague)



- Rozprawy Elektrotech.* Polska Akademia Nauk. Instytut Technologii Elektronowej. Rozprawy Elektrotechniczne. (Warsaw)
- Rozprawy Inż.* Polska Akademia Nauk. Instytut Podstawowych Problemów Techniki. Rozprawy Inżynierskie. (Warsaw)
- Rozprawy Politech. Poznań* Politechnika Poznańska. Rozprawy. (Poznań)
- RSB Ekonom. Promysl. D* Akademija Nauk SSSR. Vsesojuznyj Institut Naučnoj i Tehničeskoj Informacii. Referativnyj Sbornik. Ekonomika Promyšlennosti. D. Primenenie Matematičeskikh Metodov v Ekonomičeskikh Issledovanijah i Planirovanii. (Moscow)
- Russian Math. Surveys* Russian Mathematical Surveys. A translation of the survey articles and of selected biographical articles in *Uspehi Matematičeskikh Nauk*. (London) (Selected translation of *Uspehi Mat. Nauk*)
- \* *RZ Automat. Telemeh. i Vyčisl. Tehn.* Akademija Nauk SSSR. Institut Naučnoj Informacii. Referativnyj Žurnal. Avtomatika, Telemekhanika i Vyčislitel'naja Tehnika. (Moscow)
- \* *RZ Fiz.* Akademija Nauk SSSR. Institut Naučnoj Informacii. Referativnyj Žurnal. Fizika. (Moscow)
- \* *RZ Mat.* Akademija Nauk SSSR. Institut Naučnoj Informacii. Referativnyj Žurnal. Matematika. (Moscow) (Usually abbreviated as *RZMat* in the text of *Math. Rev.*)
- \* *RZ Meh.* Akademija Nauk SSSR. Institut Naučnoj Informacii. Referativnyj Žurnal. Mehanika. (Moscow) (Usually abbreviated as *RZMeh* in the text of *Math. Rev.*)
- \* *RZ Tehn. Kibernet.* Akademija Nauk SSSR. Institut Naučnoj i Tehničeskoj Referativnyj Žurnal. Tehničeskaja Kibernetika. (Moscow) (Usually abbreviated as *RZTehn. Kibernet.* in the text of *Math. Rev.*)
- \* *RZKibernet* Akademija Nauk SSSR. Institut Naučnoj Informacii. Referativnyj Žurnal. Kibernetika. (Moscow) See *RZ Kibernet.*
- \* *RZMat* Akademija Nauk SSSR. Institut Naučnoj Informacii. Referativnyj Žurnal. Matematika. (Moscow) See *RZ Mat.*
- \* *RZMeh* Akademija Nauk SSSR. Institut Naučnoj Informacii. Referativnyj Žurnal. Mehanika. (Moscow) See *RZ Meh.*
- \* *RZTehn. Kibernet.* Akademija Nauk SSSR. Institut Naučnoj i Tehničeskoj Referativnyj Žurnal. Tehničeskaja Kibernetika. (Moscow) See *RZ Tehn. Kibernet.*
- Sakharth. SSR Mecn. Akad. Gamothol. Centr. Šrom.* Sakharthvelos SSR Mecnierebatha Akademis Gamothvlihti Centris Šromebi. (Tbilisi) See *Trudy Vyčisl. Centra Akad. Nauk Gruzin. SSR*
- Sakharth. SSR Mecn. Akad. Marthw. Sistem. Inst. Šrom.* Sakharthvelos SSR Mecnierebatha Akademia. Marthwis Sistemebis Institutis Šromebi. (Tbilisi) See *Trudy Inst. Sistem Upravlenija Akad. Nauk Gruzin. SSR*
- Sakharth. SSR Mecn. Akad. Math. Inst. Šrom.* Sakharthvelos SSR Mecnierebatha Akademia A. Razmadzis Sahelobis Tbilisis Matematikis Institutis. Šromebi. (Tbilisi) See *Trudy Tbilis. Mat. Inst. Razmadze Akad. Nauk Gruzin. SSR*
- Sakharth. SSR Mecn. Akad. Moambe* Sakharthvelos SSR Mecnierebatha Akademiis Moambe. (Tbilisi) See *Soobšč. Akad. Nauk Gruzin. SSR*
- Sankhyā Ser. A* Sankhyā (Statistics). The Indian Journal of Statistics. Series A. (Calcutta)
- Sankhyā Ser. B* Sankhyā (Statistics). The Indian Journal of Statistics. Series B. (Calcutta)
- Sb. Praci Ped. Fak. v Ostravě Ser. A* Sbornik Praci Pedagogické Fakulty v Ostravě. Seria A. (Ostrava)
- Sb. Praci Přírodověd. Fak. Univ. Palackého v Olomouci Fyz. Sbornik Praci Přírodovědecké Fakulty University Palackého v Olomouci. Obor Fyzika.* (Prague)
- Sb. Praci Přírodověd. Fak. Univ. Palackého v Olomouci Mat. Sbornik Praci Přírodovědecké Fakulty University Palackého v Olomouci. Obor Matematika.* (Prague)
- Sb. Trudov Inst. Problem Upravlén.* Institut Problem Upravlenina. Sbornik Trudov. (Moscow)
- Sb. Trudov Odes. Elektrotehn. Inst. Sojazi* Sbornik Trudov Odesskogo Elektrotehničeskogo Instituta Svjazi im. A. S. Popova. (Odessa)
- Sb. Trudov Vsesojuz. Zaočn. Politehn. Inst.* Sbornik Trudov Vsesojuznogo Zaočnogo Politehničeskogo Instituta. (Moscow)
- Sb. Vysoké. Učeni Tech. v Brně* Sbornik Vysokého Učeni Technického v Brně. (Brno)
- Scand. Actuar. J.* Scandinavian Actuarial Journal. (Uppsala)
- Scand. J. Statist.* Scandinavian Journal of Statistics. Theory and Applications. (Stockholm)
- Schr. Math. Inst. Univ. Münster (2)* Schriftenreihe des Mathematischen Instituts der Universität Münster. 2. Serie. (Münster)
- Sci. Bull. Fac. Ed. Nagasaki Univ.* Science Bulletin of the Faculty of Education. Nagasaki University. (Nagasaki)
- Sci. Hist.* Scientiarum Historia. Driemaandelijks Tijdschrift voor de Geschiedenis van de Geneeskunde, Wiskunde en Natuurwetenschappen. (Antwerp)
- Sci. Papers College Gen. Ed. Univ. Tokyo* Scientific Papers of the College of General Education. University of Tokyo. (Tokyo)
- Sci. Rep. College Gen. Ed. Osaka Univ.* Science Reports. College of General Education. Osaka University. (Osaka)
- \* *Sci. Rep. Fac. Ed. Fukushima Univ.* Fukushima University. Faculty of Education. Science Reports. (Fukushima)
- Sci. Rep. Fac. Ed. Gifu Univ. Natur. Sci.* Science Reports of the Faculty of Education. Gifu University. Natural Science. (Gifu)
- Sci. Rep. Hirosaki Univ.* Science Reports of the Hirosaki University. (Hirosaki)
- Sci. Rep. Kagoshima Univ.* Science Reports of Kagoshima University. (Kagoshima)
- Sci. Rep. Kanazawa Univ.* The Science Reports of the Kanazawa University. (Kanazawa)
- Sci. Rep. Kyoto Prefect. Univ. Natur. Sci. Living Sci.* Kyoto Prefectural University. Scientific Reports. Natural Science and Living Science. (Kyoto)
- Sci. Rep. Niigata Univ. Ser. A* Science Reports of Niigata University. Series A. Mathematics. (Niigata)
- Sci. Rep. Res. Inst. Engrg. Kanagawa Univ.* Kanagawa University. Research Institute for Engineering. Science Reports. (Yokohama)
- Sci. Rep. Saitama Univ. Ser. A* The Science Reports of the Saitama University. Series A. Mathematics, Physics and Chemistry. (Urawa)
- Sci. Rep. Tokyo Woman's Christian Univ.* Tokyo Woman's Christian University. Science Reports. (Tokyo)
- Sci. Rep. Yokohama Nat. Univ. Sect. I* Science Reports of the Yokohama National University. Section I. Mathematics, Physics. (Yokohama)
- Sci. Rev.* Scientia Revue. (Belgrade)
- Sci. Sinica* Scientia Sinica. Zhongguo Kexue. (Peking)
- Sci. Sinica Suppl.* Scientia Sinica Supplement. (Peking)
- Science* American Association for the Advancement of Science. Science. (Washington, D.C.)
- Scientia (Milano)* Scientia. Rivista Internazionale di Sintesi Scientifica. (Milan)
- Scientia (Valparaiso)* Universidad Técnica Federico Santa María. Scientia. (Valparaiso)
- Scripta Fac. Sci. Natur. UJEP Brunensis—Geog.* Universita J. E. Purkyně. Facultatis Scientiarum Naturalium. Scripta Geographica. (Brno)
- Scripta Fac. Sci. Natur. UJEP Brunensis—Math.* Scripta Facultatis Scientiarum Naturalium Universita J. E. Purkyně Brunensis. Mathematica. (Brno)
- Scripta Fac. Sci. Natur. UJEP Brunensis—Phys.* Scripta Facultatis Scientiarum Naturalium Universita J. E. Purkyně Brunensis. Physica. (Brno)
- \* *Sem. Inst. Prikl. Mat. Dokl.* Tiflis. Universitet. Institut Prikladnoj Matematiki. Seminar. Doklady. (Tbilisi)
- Semigroup Forum* Semigroup Forum. (New York)
- Serdica* Serdica. Bulgaricae Mathematicae Publicationes. (Sofia)
- Shuxue Niankan* See *Chinese Ann. Math.*
- Shuxue Xuebao* See *Acta Math. Sinica*
- Shuxue Shijian Yu Renshi* See *Knowledge Practice Math.*
- \* *SIAM J. Algebraic Discrete Methods* Society for Industrial and Applied Mathematics. Journal on Algebraic and Discrete Methods. (Philadelphia, Pa.)
- SIAM J. Appl. Math.* SIAM Journal on Applied Mathematics. (Philadelphia, Pa.)
- SIAM J. Comput.* SIAM Journal on Computing. (Philadelphia, Pa.)
- SIAM J. Control Optim.* Society for Industrial and Applied Mathematics. Journal on Control and Optimization. (Philadelphia, Pa.)
- SIAM J. Math. Anal.* SIAM Journal on Mathematical Analysis. (Philadelphia, Pa.)
- SIAM J. Numer. Anal.* SIAM Journal on Numerical Analysis. (Philadelphia, Pa.)
- \* *SIAM J. Sci. Statist. Comput.* Society for Industrial and Applied Mathematics. Journal on Scientific and Statistical Computing. (Philadelphia, Pa.)
- SIAM Rev.* SIAM Review. A Publication of the Society for Industrial and Applied Mathematics. (Philadelphia, Pa.)
- Siberian Math. J.* Siberian Mathematical Journal. (New York) (Translation of *Sibirsk. Mat. Ž.*)
- Sibirsk. Mat. Ž.* Akademija Nauk SSSR. Sibirskoe Otdelenie. Sibirskil Matematičeskil Žurnal. (Moscow) (Translated as: *Siberian Math. J.*)
- Siemens Forsch. Entwickl.* Siemens Forschungs- und Entwicklungsberichte. Research and Development Reports. (Berlin)
- Signal Process.* Signal Processing. (Amsterdam)
- Simon Stevin* Simon Stevin. Wis- en Natuurkundig Tijdschrift. (Groningen)
- Simulation* Society for Computer Simulation. Technical Journal. Simulation. (La Jolla, Calif.)
- SINET* SINET: an Ethiopian Journal of Science. (Addis Ababa)
- \* *SINET Newsltr.* SINET Newsletter. (Addis Ababa)
- Sitzungsber. Heidelb. Akad. Wiss. Math.-Natur. Kl.* Sitzungsberichte der Heidelberger Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. (Heidelberg)
- Sitzungsber. Sächs. Akad. Wiss. Leipzig. Math.-Natur. Kl.* Sitzungsberichte der Sächsischen Akademie der Wissenschaften zu Leipzig. Mathematisch-Naturwissenschaftliche Klasse. (Berlin)
- Soc. Sci. Fenn. Comment. Phys.-Math.* Societas Scientiarum Fennica. Commentationes Physico-Mathematicae. (Helsinki)
- Social Networks* Social Networks. An International Journal of Structural Analysis. (Lausanne)
- Solid Mech. Arch.* Solid Mechanics Archives. (Leiden)
- Soobšč. Akad. Nauk Gruzin. SSR* Soobščeniija Akademii Nauk Gruzinskoi SSR. (Tbilisi) (May also appear as: *Sakharth. SSR Mecn. Akad. Moambe*)
- Soobšč. Vyčisl. Mat.* Akademija Nauk SSSR. Vyčislitel'nyj Centr. Soobščeniija po Vyčislitel'noj Matematike. (Moscow)
- Soochow J. Math.* Soochow Journal of Mathematics. (Taipei)
- South African Statist. J.* South African Statistical Journal. (Cape Town)
- Southeast Asian Bull. Math.* Southeast Asian Bulletin of Mathematics. (Singapore)
- Soviet Aeronaut.* Soviet Aeronautics. (New York) (Translation of *Izo. Vysš. Učebn. Zaved. Aviacion. Tehn.*)
- Soviet Appl. Mech.* Soviet Applied Mechanics. (New York) (Translation of *Prikl. Meh.*)
- Soviet Astronom.* Soviet Astronomy. A translation of *Astronomičeskil Žurnal*, the astronomical journal of the Academy of Sciences of the USSR. (New York) (Translation of *Astronom. Ž.*)
- Soviet Automat. Control* Soviet Automatic Control. (New York) (Translation of *Avtomatika*)
- \* *Soviet J. Contemporary Math. Anal.* Soviet Journal of Contemporary Mathematical Analysis. (New York) (Translation of *Izo. Akad. Nauk Armjan. SSR Ser. Mat.*)
- Soviet J. Nuclear Phys.* American Institute of Physics. Soviet Journal of Nuclear Physics. (New York) (Translation of *Jadernaja Fiz.*)

- Soviet J. Particles and Nuclei* Soviet Journal of Particles and Nuclei. (New York) (Translation of *Fiz. Elementar. Častic i Atom. Jadra*)
- Soviet Math. Dokl.* Soviet Mathematics. Doklady. A translation of the mathematics section of Doklady Akademii Nauk SSSR. (Providence, R. I.) (Translation of mathematics section of *Dokl. Akad. Nauk SSSR*)
- Soviet Math. (Iz. VUZ)* Soviet Mathematics (Izvestiya Vysših Učebnyh Zavedenii. Matematika). (New York) (Translation of *Izo. Vysš. Učebn. Zaved. Matematika*)
- Soviet Phys. Acoust.* Soviet Physics. Acoustics. A translation of Akustičeskii Žurnal of the Academy of Sciences of the USSR. (New York) (Translation of *Akust. Ž.*)
- Soviet Phys.—Collection* Soviet Physics. Collection. (New York) (Translation of *Litovsk. Fiz. Sb.*)
- Soviet Phys. Cryst.* Soviet Physics Crystallography. (New York) (Translation of *Kristallografija*)
- Soviet Phys. Dokl.* Soviet Physics. Doklady. A translation of the physics sections of Doklady Akademii Nauk SSSR. (New York) (Translation of physics sections of *Dokl. Akad. Nauk SSSR*)
- Soviet Phys. J.* Soviet Physics Journal. (New York) (Translation of *Izo. Vysš. Učebn. Zaved. Fizika*)
- Soviet Phys. JETP* Soviet Physics. JETP. A translation of *Ž. Eksperimental'noi i Teoretičeskoj Fiziki* of the USSR. (New York) (Translation of *Ž. Eksper. Teoret. Fiz.*)
- Soviet Phys. Uspekhi* Soviet Physics. Uspekhi. A translation of the Uspehi Fizičeskikh Nauk (Advances in the Physical Sciences) of the Academy of Sciences of the USSR. (New York) (Translation of *Uspehi Fiz. Nauk*)
- Statist. Hefte (N.F.)* Statistische Hefte. Neue Folge. (Wiesbaden)
- Statist. i Elektron.-Vychisl. Tehn. v Ėkonom.* Naučno-Issledovatel'skii Institut po Proektirovaniu Vychislitel'nykh Centrov i Sistem Ėkonomičeskoj Informacii CSU SSSR. Statistika i Elektronno-Vychislitel'naja Tehnika v Ėkonomike. (Moscow)
- Statist. Neerlandica* Statistica Neerlandica. Orgaan van de Vereniging voor Statistiek. (The Hague)
- Statist. Problemy Upravlenija—Trudy Sem. Procesy Optimal. Upravlenija V Sekcija Akademii Nauk Litovskoi SSR.* Institut Fiziki i Matematiki. Institut Fiziko-Tekhnicheskii Problem Ėnergetiki. Litovskaja Territorial'naja Gruppy NKAU SSR Meždunarodnoi Federacii po Avtomatizacii Upravleniju Litovskoi NII NTI i TĖI. Statističeskije Problemy Upravlenija. Trudy Seminara "Processy Optimal'nogo Upravlenija." V Sekcija. (Vilnius)
- † *Statist. Theory Method Abstracts* Statistical Theory and Method Abstracts. (London) (Usually abbreviated as *STMA* in the text of *Math. Rev.*)
- Statistica (Bologna)* Statistica. (Bologna)
- † *STMA* Statistical Theory and Method Abstracts. (London) See *Statist. Theory Method Abstracts*
- Stochastic Process. Appl.* Stochastic Processes and their Applications. (Amsterdam)
- Stochastica* Stochastica. (Barcelona)
- Stochastics* Stochastics. (New York)
- \* *Structural Topology* Structural Topology. Topologie Structurale. (Montreal)
- Struktura. i Mat. Lingvistika* Kievskii Gosudarstvennyi Universitet. Strukturalnaja i Matematičeskaja Lingvistika. (Kiev)
- Stud. Appl. Math.* Studies in Applied Mathematics. (Cambridge, Mass.)
- Stud. Cerc. Fiz.* Studii și Cercetări de Fizică. (Bucharest)
- Stud. Cerc. Mat.* Studii și Cercetări Matematice. (Bucharest)
- Stud. Cerc. Mec. Apl.* Studii și Cercetări de Mecanică Aplicată. (Bucharest)
- Stud. Develop.* Middle East Technical University. Studies in Development. (Ankara)
- Stud. Develop. Special Issue* Middle East Technical University. Studies in Development. Special Issue. (Ankara)
- Stud. Hist. Philos. Sci.* Studies in History and Philosophy of Science. (London)
- Studia Automat.* Studia z Automatyki. Poznańskie Towarzystwo Przyjaciół Nauk. Wydział Nauk Technicznych. Prace Komisji Automatyki. (Poznań)
- \* *Studia Geotech. Mech.* Studia Geotechnica et Mechanica. (Wrocław)
- Studia Leibniana* Studia Leibniana. Vierteljahrsschrift für Philosophie und Geschichte der Wissenschaften. (Wiesbaden)
- Studia Logica* Polska Akademia Nauk. Institut Filozofii i Socjologii. Studia Logica. (Wrocław)
- Studia Math.* Polska Akademia Nauk. Institut Matematyczny. Studia Mathematica. (Warsaw)
- Studia Sci. Math. Hungar.* Consilium Instituti Mathematici Academiae Scientiarum Hungaricae. Studia Scientiarum Mathematicarum Hungarica. (Budapest)
- Studia Univ. Babeș-Bolyai Math.* Universitatis Babeș-Bolyai. Studia Mathematica. (Cluj)
- Studia Univ. Babeș-Bolyai Ser. Phys.* Studia Universitatis Babeș-Bolyai. Series Physica. (Cluj)
- Su-hak kwa Mul-li* Academy of Science of the People's Democratic Republic of Korea. Research Center for Physics and Mathematics. Su-hak kwa Mul-li (Mathematics and Physics). (Pyongyang)
- Sudhoffs Arch.* Sudhoffs Archiv für Geschichte der Medizin und der Naturwissenschaften. (Wiesbaden)
- Sūgaku* Mathematical Society of Japan. Sūgaku (Mathematics). (Tokyo)
- Sūgakushi Kenkyū* History of Mathematics Society of Japan. Sūgakushi Kenkyū (Journal of History of Mathematics of Japan). (Tokyo)
- Sūrikaiseikenkyūsho Kōkyūroku* Sūrikaiseikenkyūsho Kōkyūroku. (Kyoto)
- Sverdlovsk. Gos. Ped. Inst. Naučn. Trudy* Sverdlovskii Gosudarstvennyi Pedagogičeskii Institut. Naučnye Trudy. (Sverdlovsk)
- Synthese* Synthese. An International Journal for Epistemology, Methodology and Philosophy of Science. (Dordrecht)
- Systems and Control* Systems and Control (Shisutemu to Seigyo). (Kyoto)
- Systems-Comput.-Controls* Systems-Computers-Controls. The Transactions of the Institute of Electronics and Communication Engineers of Japan. (Washington, D.C.) (Partial translation of *Denshi Tsushin Gakkai Ronbunshi*) (See also *Electron. Comm. Japan*)
- Systems Sci.* Wrocław Technical University. Systems Science. (Wrocław)
- \* *SZÁMKI Tanulmányok* Számítógéptárgyalmas Kutató Intézet. Tanulmányok. (Budapest)
- Sigma—Mat.-Közgazdasági Folyóirat* Sigma. Matematikai-Közgazdasági Folyóirat. (Budapest)
- Tadžik. Gos. Univ. Trudy Meh.-Mat. Fak.* Tadžikskii Gosudarstvennyi Universitet im. V. I. Lenina. Trudy Mehaniko-Matematičeskogo Fakul'teta. (Dushanbe)
- Tallin. Politehn. Inst. Toimetised* Tallinna Politehnilise Instituudi Toimetised. (Tallin)
- Tamkang J. Math.* Tamkang Journal of Mathematics. (Taipei)
- Tanulmányok—MTA Számítástech. Automat. Kutató Int.* Budapest Tanulmányok. MTA Számítástech. Automatizálási Kutató Intézet Budapest. (Budapest)
- Tartu Riikl. Ül. Toimetised* Tartu Riikliku Ülikooli Toimetised. Ühene Zapiski Tartuskogo Gosudarstvennogo Universiteta. Acta et Commentationes Universitatis Tartuens. Matematika ja Mehhaanikaalaseid Töid. Trudy po Matematike i Mehhanike. (Tartu)
- Taškent. Gos. Ped. Inst. Učen. Zap.* Taškentskii Gosudarstvennyi Pedagogičeskii Institut im. Nizami. Učene Zapiski. (Tashkent)
- Taškent. Gos. Univ.—Buharsk. Ped. Inst. Naučn. Trudy* Taškentskii Gosudarstvennyi Universitet. Buharskii Pedagogičeskii Institut. Naučnye Trudy. (Tashkent)
- Taškent. Gos. Univ. Sb. Naučn. Trudov* Taškentskii Gosudarstvennyi Universitet. Sbornik Naučnykh Trudov. (Tashkent)
- Taškent. Politehn. Inst. Naučn. Trudy* Taškentskii Politehnicheskii Institut. Naučnye Trudy. Novaja Serija. (Tashkent)
- Tbilis. Gos. Univ. Inst. Prikl. Mat. Trudy* Tbilisskii Gosudarstvennyi Universitet. Institut Prikladnoi Matematiki. Trudy. (Tbilisi) (May also appear as: *Tbilis. Sahelmc. Univ. Gomoqeneb. Math. Inst. Šrom.*)
- Tech. Rep. Kansai Univ.* Kansai University. Technology Reports. (Osaka)
- Tech. Rep. Osaka Univ.* Technology Reports of the Osaka University. (Osaka)
- Technikgeschichte* Technikgeschichte. Verein Deutscher Ingenieure. (Düsseldorf)
- Technometrics* Technometrics. A Journal of Statistics for the Physical, Chemical and Engineering Sciences. (Princeton, N.J.)
- Tellus* Svenska Geofysiska Föreningen. Tellus. A Quarterly Journal of Geophysics. (Uppsala)
- Tensor (N.S.)* The Tensor Society. Tensor. New Series. (Tokyo)
- Teor. Funkcii Funkcional. Anal. i Priložen.* Har'kovskii Ordena Trudovogo Krasnogo Znamenai Gosudarstvennyi Universitet im. A. M. Gor'kogo. Teorija Funkcii, Funkcional'nyi Analiz i ih Priloženija. (Kharkov)
- Teor. Konečn. Avtomatov i Priložen.* Institut Ėlektroniki i Vychislitel'noi Tehniki. Akademija Nauk Latviiškii SSR. Teorija Konečnykh Avtomatov i ee Priloženija. (Riga)
- Teor. Optimal. Rešenii—Trudy Sem. Procesy Optimal. Upravlenija VI Sekcija Akademii Nauk Litovskoi SSR.* Institut Fiziki i Matematiki. Teorija Optimal'nykh Rešenii—Trudy Seminara "Processy Optimal'nogo Upravlenija". (Vilnius)
- Teor. Primen. Meh.* Jugoslovensko Društvo za Mehaniku. Teorijaska i Primenjena Mehanika. (Belgrade)
- Teor. Verojatnost. i Mat. Statist.* Teorija Verojatnostei i Matematičeskaja Statistika. (Kiev) (Translated as: *Theory Probab. Math. Statist.*)
- Teor. Verojatnost. i Primenen.* Akademija Nauk SSSR. Teorija Verojatnostei i ee Primenenija. (Moscow) (Translated as: *Theory Probab. Appl.*)
- Teorema* Teorema. (Valencia)
- Teoret. Ėlektrotehn.* L'vovskii Gosudarstvennyi Universitet. Teoretičeskaja Ėlektrotehnika. (Lvov)
- Teoret. i Prikl. Meh. (Kiev/Donetsk)* Doneckii Gosudarstvennyi Universitet. Teoretičeskaja i Prikladnaja Mehanika. (Kiev/Donetsk) (Also listed as: *Teoret. i Prikladna Meh. (Kharkov)*)
- Teoret. i Prikl. Meh. (Minsk)* Belorusskii Politehnicheskii Institut. Teoretičeskaja i Prikladnaja Mehanika. (Minsk)
- Teoret. i Prikladna Meh. (Kharkov)* Harkivskii Deržavnyi Universitet im. O. M. Gor'kogo. Teoretična i Prikladna Mehanika. (Kharkov) See *Teoret. i Prikl. Meh. (Kiev/Donetsk)*
- Teoret. Mat. Fiz.* Akademija Nauk SSSR. Teoretičeskaja i Matematičeskaja Fizika. (Moscow) (Translated as: *Theoret. and Math. Phys.*)
- Teoret. Prilož. Meh.* B'lgarska Akademija na Naukite. Teoretična i Priložna Mehanika. (Sofia)
- TESLA Electron.* TESLA Electronics. Quarterly Review of Czechoslovak Electronics and Telecommunications. (Prague)
- Texas J. Sci.* The Texas Journal of Science. (San Angelo, Tex.)
- Tbilis. Sahelmc. Univ. Gomoqeneb. Math. Inst. Šrom.* Tbilisis Sahelmcipho Universiteti Gomoqenebithi Matematikis Instituti. Šromebi. (Tbilisi) See *Tbilis. Gos. Univ. Inst. Prikl. Mat. Trudy*
- Tbilis. Univ. Šrom.* Tbilisis Universitetis. Fizika-Matematikisa de Sabunebi-metqvelo Mecnierebani. Šromebi. (Tbilisi) See *Trudy Tbilis. Univ.*
- Theoret. and Math. Phys.* Theoretical and Mathematical Physics. (New York) (Translation of *Teoret. Mat. Fiz.*)
- Theoret. Comput. Sci.* Theoretical Computer Science. (Amsterdam)
- Theoret. Linguist.* Theoretical Linguistics. (New York)
- Theoret. Population Biol.* Theoretical Population Biology. (New York)
- Theoria* Theoria. A Swedish Journal of Philosophy. (Lund)
- Theory and Decision* Theory and Decision. An International Journal for Philosophy and Methodology of the Social Sciences. (Dordrecht)
- Theory Probab. Appl.* Theory of Probability and its Applications. An English translation of the Soviet journal *Teorija Verojatnostei i ee Primenenija*. (Philadelphia, Pa.) (Translation of *Teor. Verojatnost. i Primenen.*)



- Theory Probab. Math. Statist.* Theory of Probability and Mathematical Statistics. (Providence, R.I.) (Translation of *Teor. Veroyatnost. i Mat. Statist.*)
- Tianmen Xuebao* See *Acta Astronom. Sinica*
- Točn. i Nadežn. Kibernet. Sistem Akademija Nauk Ukrainkoj SSR. Institut Elektrodinamiki. Točnost' i Nadežnost' Kibernetičeskijh Sistem.* (Kiev)
- Tōhoku Math. J. (2)* The Tōhoku Mathematical Journal. Second Series. (Sendai)
- Tokyo J. Math.* Tokyo Journal of Mathematics. (Tokyo)
- Tomsk. Gos. Univ. Učen. Zap.* Tomskij Gosudarstvennyj Universitet im. V. V. Kuibysheva. Učenyje Zapiski. (Tomsk)
- Topology* Topology. An International Journal of Mathematics. (Oxford)
- Topology Appl.* Topology and its Applications. (Amsterdam)
- Topology Proc.* Topology Proceedings. (Auburn, Ala.)
- Trabajos Estadíst. Investigación Oper.* Trabajos de Estadística y de Investigación Operativa. (Madrid)
- Trans. Amer. Math. Soc.* Transactions of the American Mathematical Society. (Providence, R.I.)
- Trans. ASME Ser. E J. Appl. Mech.* American Society of Mechanical Engineers. Transactions of the ASME. Series E. Journal of Applied Mechanics. (New York)
- Trans. ASME Ser. G J. Dynamic Systems Measurement Control* American Society of Mechanical Engineers. Transactions of the ASME. Series G. Journal of Dynamic Systems, Measurement and Control. (New York)
- Trans. Illinois State Acad. Sci.* Illinois State Academy of Science. Transactions. (Springfield, Ill.)
- Trans. Moscow Math. Soc.* Transactions of the Moscow Mathematical Society. (Providence, R.I.) (Translation of *Trudy Moskov. Mat. Obšč.*)
- Trans. Roy. Soc. Canada (4)* Transactions of the Royal Society of Canada. Chemical, Mathematical and Physical Sciences. Fourth Series. (Ottawa, Ont.)
- Trans. Roy. Soc. South Africa* Transactions of the Royal Society of South Africa. (Cape Town)
- Transport Theory Statist. Phys.* Transport Theory and Statistical Physics. An International Journal for Rapid Communication. (New York)
- Transportation Plann. Tech.* Transportation Planning and Technology. (London)
- Transportation Res. Part B* Transportation Research. Part B. Methodological. (Oxford)
- Transportation Sci.* Operations Research Society of America. Transportation Science Section. Transportation Science. (Baltimore, Md.)
- Travaux Sémin. Anal. Convexe. Travaux du Séminaire d'Analyse Convexe.* (Montpellier)
- TRU Math.* TRU Mathematics. (Tokyo)
- Trud. Viš. Ikonom. Inst. "Karl Marks"—Sofija* Višija Ikonomičeskij Institut "Karl Marks"—Sofija. Trudove. (Sofia)
- Trudy Akad. Nauk Litov. SSR Ser. B* Lietuvos TSR Mokslų Akademijos. Darbai. Serija B. Akademii Nauk Litovskoi SSR. Trudy. Serija B. (Vilnius)
- Trudy Fiz. Inst. Lebedev.* Akademija Nauk SSSR. Trudy Fizičeskogo Instituta imeni P. N. Lebedeva. (Moscow) (Translated as: *Proc. (Trudy) P. N. Lebedev Phys. Inst.*)
- Trudy Frunze. Politehn. Inst.* Frunzenskij Politehničeskij Institut. Trudy Frunzenskogo Politehničeskogo Instituta. (Frunze)
- Trudy Geom. Sem. Kazan. Univ.* Kazanskij Universitet. Geometričeskogo Seminara. Trudy. (Kazan)
- Trudy Gor'kov. Politehn. Inst.* Gor'ki. Politehničeskij Institut. Trudy. (Gorki)
- Trudy Inst. Mat. i Meh. Ural. Naučn. Centr Akad. Nauk SSSR* Trudy Instituta Matematiki i Mekhaniki. Ural'skij Naučnyj Centr. Akademija Nauk SSSR. (Sverdlovsk)
- Trudy Inst. Sistem Upravlenija Akad. Nauk Gruz. SSR* Akademija Nauk Gruzinskoi SSR. Trudy Instituta Sistem Upravlenija. (Tbilisi) (May also appear as: *Sakharth. SSR Mecn. Akad. Math. Inst. Šrom.*)
- Trudy Inst. Teoret. Astronom.* Akademija Nauk SSSR. Trudy Instituta Teoretičeskoj Astronomii. (Moscow)
- Trudy Iževsk. Sel'skhozjaistvo. Inst.* Iževskij Sel'skhozjaistvennyj Institut. Trudy. (Iževsk)
- Trudy Kaf. Teorii Funkcij i Funkcional. Anal. Moskov. Gos. Univ.* Moskovskij Gosudarstvennyj Universitet. Mekhaniko-matematičeskij Fakul'tet. Kafedra Teorii Funkcij i Funkcional'nogo Analiza. Trudy. (Moscow)
- Trudy Kazan. Aviacion. Inst.* Trudy Kazanskogo Aviacionnogo Instituta. Matematika i Mekhanika. (Kazan)
- Trudy Kirgiz. Gos. Univ. Ser. Mat. Nauk* Kirgizskij Gosudarstvennyj Universitet. Trudy Kirgizskogo Gosudarstvennogo Universiteta. Serija Matematičeskijh Nauk. (Frunze)
- Trudy Leningrad. Tehnolog. Inst. Holod. Promyšl.* Trudy Leningradskogo Tehnologičeskogo Instituta Holodil'noj Promyšlennosti. (Leningrad)
- Trudy Mat. Inst. Steklov.* Akademija Nauk Sojuzh Sovetskijh Socialističeskijh Respublik. Trudy Matematičeskogo Instituta imeni V. A. Steklova. (Moscow) (Translated as: *Proc. Steklov Inst. Math.*)
- Trudy Moskov. Mat. Obšč.* Trudy Moskovskogo Matematičeskogo Obščestva. (Moscow) (Translated as: *Trans. Moscow Math. Soc.*)
- Trudy Moskov. Orden. Lenin. Energet. Inst.* Trudy Moskovskogo Ordena Lenina Energetičeskogo Instituta. (Moscow)
- Trudy Rjazan. Radiotehn. Inst.* Trudy Rjazanskogo Radiotehničeskogo Instituta. (Rjazan)
- Trudy Samarkand. Gos. Univ. (N.S.)* Ministerstvo Vysshego i Srednego Special'nogo Obrazovanija UzSSR. Trudy Samarkandskogo Gosudarstvennogo Universiteta imeni A. Navoi. Novaja Serija. (Samarkand)
- Trudy Sem. Kaf. Teoret. Meh. i Vyš. Mat. (Džambul)* Džambul'skij. Tehnologičeskij Institut Legkoj i Piščevoj Promyšlennosti. Seminar Kafedra Teoretičeskoj Mekhaniki i Vyšej Matematiki. Trudy. (Džambul)
- Trudy Sem. Kraev. Zadačam* Trudy Seminara po Kraevym Zadačam. (Kazan)
- Trudy Sem. Petrovsk.* Moskovskij Universitet. Trudy Seminara imeni I. G. Petrovskogo. (Moscow)
- Trudy Sem. Vektor. Tensor. Anal.* Trudy Seminara po Vektornomu i Tenzornomu Analizu s ih Priloženijami k Geometrii, Mekhanike i Fizike. (Moscow)
- Trudy SibNII* Sibirskij Naučno-Issledovatel'skij Institut Energetiki. Trudy. (Moscow)
- Trudy Tairkent. Gos. Univ.* Trudy Tairkentskogo Gosudarstvennogo Universiteta imeni V. I. Lenina. Matematika. (Tashkent) See *Tairkent. Gos. Univ. Naučn. Trudy*
- Trudy Tbiliss. Mat. Inst. Razmadze Akad. Nauk Gruz. SSR* Akademija Nauk Gruzinskoi SSR. Trudy Tbilisskogo Matematičeskogo Instituta im. A. M. Razmadze. (Tbilisi) (May also appear as: *Sakharth. SSR Mecn. Akad. Math. Inst. Šrom.*)
- Trudy Tbiliss. Univ.* Tbilisskogo Universiteta. Fiziko-Matematičeskije i Estestvennye Nauki. Trudy. (Tbilisi) (May also appear as: *Tbilis. Univ. Šrom.*)
- Trudy Tomsk. Gos. Univ.* Trudy Tomskogo Gosudarstvennogo Universiteta im. V. V. Kuibysheva. (Tomsk)
- Trudy Udm. Družby Narod.* Trudy Universiteta Družby Narodov im. Patrisa Lumumby. (Moscow)
- Trudy Vyčisl. Centra Akad. Nauk Armjan. SSR i Erevan. Gos. Univ. Mat. Voprosy Kibernet. i Vyčisl. Tehn.* Trudy Vyčislitel'nogo Centra Akademii Nauk Armjanskoi SSR i Erevanskogo Gosudarstvennogo Universiteta. Matematičeskije Voprosy Kibernetiki i Vyčislitel'noj Tehniki. (Erevan)
- Trudy Vyčisl. Centra Akad. Nauk Gruz. SSR* Akademija Nauk Gruzinskoi SSR. Trudy Vyčislitel'nogo Centra. (Tbilisi) (May also appear as: *Sakharth. SSR Mecn. Akad. Gamothol. Centr. Šrom.*)
- Trudy Vyčisl. Centra Tartu. Gos. Univ.* Trudy Vyčislitel'nogo Centra. Tartuskij Gosudarstvennyj Universitet. (Tartu)
- † *TS-3 Bibliograf. Informacija* TS-3 Bibliografija Informacija. (Moscow)
- † *TS-3 Ekspres—Informacija* TS-3 Ekspres—Informacija. (Moscow)
- † *TS-3 Obzor. Informacija* TS-3 Obzorja Informacija. (Moscow)
- † *TS-3 Referatnyj Sb.* TS-3 Referativnyj Sbornik. (Moscow)
- Tsukuba J. Math.* Tsukuba Journal of Mathematics. (Tsukuba)
- Tydschr. Natuurwetenschap.* Die Suid-Afrikaanse Akademie vir Wetenskap en Kuns. Tydskrif vir Natuurwetenskappe. (Pretoria)
- Učen. Zap. CAGI* Učenyje Zapiski Central'nogo Aero-Gidrodinamičeskogo Instituta (CAGI). (Moscow)
- Učen. Zap. Erevan. Gos. Univ. Estestv. Nauki* Učenyje Zapiski Erevanskogo Gosudarstvennogo Universiteta. Estestvennye Nauki. (Erevan)
- Učen. Zap. Statist. Akademija Nauk SSSR.* Central'nyj Ekonomiko-Matematičeskij Institut. Učenyje Zapiski po Statistike. (Moscow)
- Ufim. Aviacion. Inst. Trudy* Ufimskij Aviacionnyj Institut im. Ordžonikidze. Trudy. (Ufa)
- Ukrain. Fiz. Ž.* Akademija Nauk Ukrain'skoj RSR. Vidil' Fiziki. Ukrain'skij Fizičnij Žurnal. (Ukrainian edition). (Kiev) (Translated as: *Ukrain. Fiz. Ž.*)
- Ukrain. Fiz. Ž.* Akademija Nauk Ukrainkoj SSR. Otdelenie Fiziki. Ukrain'skij Fizičeskij Žurnal. (Kiev) (Translation of *Ukrain. Fiz. Ž.*)
- Ukrain. Geom. Sb.* Ukrain'skij Geometričeskij Sbornik. (Kharkov)
- Ukrain. Mat. Ž.* Akademija Nauk Ukrain'skoj RSR. Institut Matematiki. Ukrain'skij Matematičnij Žurnal. (Ukrainian edition). (Kiev) (Translated as: *Ukrain. Mat. Ž.*)
- Ukrain. Mat. Ž.* Akademija Nauk Ukrainkoj SSR. Institut Matematiki. Ukrain'skij Matematičeskij Žurnal. (Kiev) (Translation of *Ukrain. Mat. Ž.*)
- Ukrainian Math. J.* Ukrainian Mathematical Journal. (New York) (Translation of *Ukrain. Mat. Ž.*)
- Ulsan Inst. Tech. Rep.* Ulsan Institute of Technology. Report. (Ulsan)
- Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Elektron. Telekomun. Automat.* Univerzitet u Beogradu Publikacije Elektrotehničkog Fakulteta. Serija Elektronika, Telekomunikacije, Automatika. (Belgrade)
- Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* Univerzitet u Beogradu. Publikacije Elektrotehničkog Fakulteta. Serija Matematika i Fizika. (Belgrade)
- Univ. Beograd. Tehn. Fiz.* Univerzitet u Beogradu. Tehnička Fizika. Journal of Engineering Physics. (Belgrade)
- Univ. Kiril Metodij—Skopje Fac. Math.* Université Kiril et Metodij—Skopje. Faculté des Mathématiques. (Skopje) See *Fak. Mat. Univ. Kiril Metodij Skopje Godišen Zb. Special Issue* (See also *Prirod.-Mat. Fak. Univ. Kiril Metodij Skopje Godišen Zb.*)
- Univ. Lisboa Rev. Fac. Ciênc. A (2)* Universidade de Lisboa. Revista da Faculdade de Ciências. 2.ª Série. A. Ciências Matemáticas. (Lisbon)
- Univ. Palermo Ann. Fac. Econom. Commercio* Università di Palermo. Annali della Facoltà di Economia e Commercio. (Palermo)
- Univ. Stud. Math. (Jaipur)* University Studies in Mathematics. (Jaipur)
- Univ. u Novom Sadu Zb. Rad. Prirod.-Mat. Fak.* Univerzitet u Novom Sadu. Zbornik Radova Prirodno-Matematičkog Fakulteta. (Novi Sad)
- Uniw. Ślaski w Katowicach Prace Nauk.-Prace Mat.* Uniwersytet Ślaski w Katowicach. Prace Naukowe. Prace Matematyczne. (Katowice)
- Upravlenie Složn. Sistemami (Riga)* Rīzskij Politehničeskij Institut. Upravlenie Složnymi Sistemami. (Riga)
- Upravljajemye Sistemy* Upravljajemye Sistemy. Institut Matematiki, Institut Kataliza Sibirskogo Otdelenija Akademii Nauk SSSR. (Novosibirsk)
- Ural. Gos. Univ. Mat. Zap.* Ural'skij Gosudarstvennyj Universitet im. A. M. Gor'kogo. Ural'skoe Matematičeskoe Obščestvo. Matematičeskije Zapiski. (Sverdlovsk)
- Ural. Politehn. Inst. Sb.* Ural'skij Politehničeskij Institut im. S. M. Kirova. Sbornik. (Sverdlovsk)
- US i M—Upravljajuščie Sistemy i Mašiny* US i M—Upravljajuščie Sistemy i Mašiny. (Kiev)
- Uspehi Fiz. Nauk* Akademija Nauk SSSR. Uspehi Fizičeskijh Nauk. (Moscow)

- (Translated as: *Soviet Phys. Uspekhi*)  
*Uspehi Mat. Nauk* Akademija Nauk SSSR i Moskovskoe Matematicheskoe Obščestvo. Uspehi Matematicheskikh Nauk. (Moscow) (Translated as: *Russian Math. Surveys*)  
*U.S.S.R. Computational Math. and Math. Phys.* U.S.S.R. Computational Mathematics and Mathematical Physics. (Oxford) (Translation of *Ž. Vyčisl. Mat. i Mat. Fiz.*)  
*Utilitas Math.* Utilitas Mathematica. A Canadian Journal of Applied Mathematics, Computer Science, and Statistics. (Winnipeg, Man.)  
*V. I. Lenin. Sakharth. Politekh. Inst. Samecn. Šrom.* V. I. Lenins Sahelebis Šromis Citheli Drošis Ordenosani Sakharthvelos Politehnikuri Institut. Samecniero Šromebi. (Tbilisi)  
*Verh. Konink. Acad. Wetensch. België* Verhandlungen van de Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van België. Klasse der Wetenschappen. (Brussels)  
*Verzekerings-Arch.* Het Verzekerings-Archief. (The Hague)  
*Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* Vesci Akademii Nauk BSSR, Seriya Fizika-Matematicheskikh Nauk. (Minsk)  
*Vestnik Akad. Nauk Kazah. SSR* Vestnik Akademii Nauk Kazahskoi SSR. (Almaty)  
*Vestnik Akad. Nauk SSSR* Vestnik Akademii Nauk SSSR. (Moscow)  
*Vestnik Beloruss. Gos. Univ. Ser. I* Vestnik Belorusskogo Gosudarstvennogo Universiteta im. V. I. Lenina. Naučnyi Žurnal. Seriya I. Matematika, Fizika, Mekhanika. (Minsk)  
*Vestnik Har'kov. Gos. Univ.* Vestnik Har'kovskogo Gosudarstvennogo Universiteta. Seriya Mekhaniko-Matematicheskaja. Zapiski Mekhaniko-Matematicheskogo Fakulteta i Har'kovskogo Matematicheskogo Obščestva. (Kharkov)  
*Vestnik Jaroslav. Univ.* Jaroslavskii Universitet. Vestnik. (Jaroslavl)  
 \* *Vestnik Kiev. Politehn. Inst. Ser. Tehn. Kibernet.* Vestnik Kievskogo Politehničeskogo Instituta Seriya Tehničeskoi Kibernetiki. (Kiev)  
*Vestnik Leningrad. Univ. Fiz. Him.* Vestnik Leningradskogo Universiteta. Fizika, Himija. (Leningrad)  
*Vestnik Leningrad. Univ. Mat. Meh. Astronom.* Vestnik Leningradskogo Universiteta. Matematika, Mekhanika, Astronomija. (Leningrad) (Mathematics section translated as: *Vestnik Leningrad Univ. Math.*)  
*Vestnik Leningrad Univ. Math.* Vestnik Leningrad University. Mathematics. (Providence, R.I.) (Translation of the mathematics section of *Vestnik Leningrad. Univ. Mat. Meh. Astronom.*)  
 \* *Vestnik L'vov. Politehn. Inst.* Vestnik L'vovskogo Politehničeskogo Instituta. (L'vov) (May also appear as: *Viznik L'vov. Politehn. Inst.*)  
*Vestnik Moskov. Univ. Ser. I Mat. Meh.* Vestnik Moskovskogo Universiteta. Seriya I. Matematika, Mekhanika. (Moscow) (Mathematics section translated as: *Moscow Univ. Math. Bull.*)  
*Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* Vestnik Moskovskogo Universiteta. Seriya III. Fizika, Astronomija. (Moscow) (Physics section translated as: *Moscow Univ. Phys. Bull.*)  
*Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* Vestnik Moskovskogo Universiteta. Seriya XV. Vyčislitel'naja Matematika i Kibernetika. (Moscow)  
*Vidya B* Vidya B. Sciences. The Journal of the Gujarat University. (Ahmedabad)  
*Vignana Bharathi* Vignana Bharathi. (Bangalore)  
*Vijnana Parishad Anusandhan Patrika* Vijnana Parishad Anusandhan Patrika (The Research Journal of the Hindu Science Academy). (Allahabad)  
*Vikram* Vikram. (Ujjain)  
*Virginia J. Sci.* Virginia Journal of Science. (Richmond, Va.)  
*Visnik Kiiv. Univ. Ser. Mat. Meh.* Visnik Kiiv'skogo Universitetu. Seriya Matematiki ta Mekhaniki. (Kiev)  
*Viznik L'vov. Derž. Univ. Ser. Meh.-Mat.* Viznik L'viv'skogo Ordena Lenina Deržavogo Universitetu im. Ivana Franka. Seriya Mekhaniko-Matematična. (Lvov)  
*Viznik L'vov. Politehn. Inst.* Viznik L'viv'skogo Politehničeskogo Institutu. (L'vov) See *Vestnik L'vov. Politehn. Inst.*  
*Vistas Astronom.* Vistas in Astronomy. (Oxford)  
*Voprosy Dinamiki i Pročnosti* Rižskii Politehničeskii Institut. Voprosy Dinamiki i Pročnosti. (Riga)  
*Voprosy Filos. Akademija Nauk SSSR. Institut Filosofii.* Voprosy Filosofii. (Moscow)  
*Voprosy Informacion. Teorii i Praktiki* Akademija Nauk SSSR. Vsesojuznyi Institut Naučnoi i Tehničeskoi Informacii. Voprosy Informacionnoi Teorii i Praktiki. (Moscow)  
*Voprosy Istor. Estestvoznani. i Tehn.* Akademija Nauk SSSR. Voprosy Istorii Estestvoznani. i Tehniki. (Moscow)  
*Voprosy Kibernet. (Moscow)* Akademija Nauk SSSR. Naučnyi Sovet po Kompleksnoi Probleme "Kibernetika". Voprosy Kibernetiki. (Moscow)  
*Voprosy Kibernet. (Tashkent)* Voprosy Kibernetiki. Akademija Nauk Uzbekskoi SSR. (Tashkent)  
*Voprosy Teor. Sistem Avtomat. Upravlenija* Leningradskii Universitet. Voprosy Teorii Sistem Avtomatičeskogo Upravlenija. (Leningrad)  
*Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* Akademija Nauk Uzbekskoi SSR. Trudy Ordena Trudovogo Krasnogo Znamenija Instituta Kibernetiki s Vyčislitel'nym Centrom. Voprosy Vyčislitel'noi i Prikladnoi Matematiki. (Tashkent)  
*Voronež. Gos. Univ. Sb. Naučn. Trudov. Fak. Prikl. Mat. Meh. VGU* Ministerstvo Vysshego i Srednego Special'nogo Obrazovanija RSFSR. Voronežskii Ordena Lenina Gosudarstvennyi Universitet im. Leninskogo Komsomola. Sbornik Naučnykh Trudov Fakulteta Prikladnoi Matematiki i Mekhaniki. (Voronezh)  
*Voronež. Gos. Univ. Trudy Mat. Fak.* Voronežskii Gosudarstvennyi Universitet im. Leninskogo Komsomola. Trudy Matematicheskogo Fakulteta. (Voronezh)  
*Voronež. Gos. Univ. Trudy Naučn.-Issled. Inst. Mat. VGU* Voronežskii Ordena Lenina Gosudarstvennyi Universitet im. Leninskogo Komsomola. Trudy Naučno-Issledovatel'skogo Instituta Matematiki. (Voronezh)
- Voronež. Gos. Univ. Trudy Sem. Funkcional. Anal.* Ministerstvo Vysshego Obrazovanija SSSR. Voronežskii Gosudarstvennyi Universitet. Trudy Seminara po Funkcional'nomu Analizu. (Voronezh)  
*Vyčisl. Mat. i Vyčisl. Tehn. (Kharkov)* Fiziko-Tehničeskii Institut Nizkikh Temperatur Akademii Nauk Ukrainkoj SSR. Vyčislitel'naja Matematika i Vyčislitel'naja Tehnika. (Kharkov)  
*Vyčisl. Metody i Programirovanie* Moskovskii Universitet. Sbornik Rabot Vyčislitel'nogo Centra Moskovskogo Universiteta. Vyčislitel'nye Metody i Programirovanie. (Moscow)  
*Vyčisl. Prikl. Mat. (Kiev)* Kievskii Gosudarstvennyi Universitet. Mežvedomstvennyi Naučnyi Sbornik. Vyčislitel'naja i Prikladnaja Matematika. (Kiev)  
*Vyčisl. Sistemy Akademija Nauk SSSR. Sibirskoe Otdelenie. Institut Matematiki.* Vyčislitel'nye Sistemy. Sbornik Trudov. (Novosibirsk)  
*Vyčisl. Tehn. i Voprosy Kibernet.* Leningradskii Gosudarstvennyi Universitet. Vyčislitel'nyi Centr. Moskovskii Gosudarstvennyi Universitet. Vyčislitel'nyi Centr. Vyčislitel'naja Tehnika i Voprosy Kibernetiki. (Leningrad)  
*Vyčisl. Tehn. v Mašinostroen.* Akademija Nauk BSSR. Institut Tehničeskoi Kibernetiki. Vyčislitel'naja Tehnika v Mašinostroenii. (Minsk)  
*Wave Motion* Wave Motion. (Amsterdam)  
*Wiadom. Mat. (2)* Roczniki Polskiego Towarzystwa Matematycznego. Seria II. Wiadomości Matematyczne. (Warsaw)  
*Wisconsin Acad. Sci. Arts Lett. Trans.* Wisconsin Academy of Sciences. Arts & Letters. Transactions. (Madison, Wis.)  
*Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M* Martin-Luther-Universität Halle-Wittenberg. Wissenschaftliche Beiträge. M. (Halle) (Continued as: *Beiträge Algebra Geom.*)  
*Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M* See *Beiträge Algebra Geom.*  
*Wiss. Z. Friedrich-Schiller-Univ. Jena Math.-Natur. Reihe* Friedrich-Schiller-Universität Jena. Wissenschaftliche Zeitschrift. Mathematisch-Naturwissenschaftliche Reihe. (Jena)  
*Wiss. Z. Greifswald. Ernst-Moritz-Arndt-Univ. Math.-Natur. Reihe* Greifswald. Ernst-Moritz-Arndt-Universität. Wissenschaftliche Zeitschrift. Mathematisch-Naturwissenschaftliche Reihe. (Greifswald)  
*Wiss. Z. Hochschule für Verkehrswesen "Friedrich List" Dresden* Wissenschaftliche Zeitschrift der Hochschule für Verkehrswesen "Friedrich List" in Dresden. Die Anwendung Mathematischer Methoden im Transport- und Nachrichtenwesen. (Dresden)  
*Wiss. Z. Humboldt-Univ. Berlin Math.-Natur. Reihe* Wissenschaftliche Zeitschrift der Humboldt-Universität Berlin. Mathematisch-Naturwissenschaftliche Reihe. (Berlin)  
 \* *Wiss. Z. Karl-Marx-Univ. Leipzig Ges. Sprachwiss. Reihe* Leipzig. Universitaet. Wissenschaftliche Zeitschrift der Karl-Marx-Universität Leipzig. Gesellschaft- und Sprachwissenschaftliche Reihe. (Leipzig)  
*Wiss. Z. Karl-Marx-Univ. Leipzig Math.-Natur. Reihe* Wissenschaftliche Zeitschrift der Karl-Marx-Universität Leipzig. Mathematisch-Naturwissenschaftliche Reihe. (Leipzig)  
*Wiss. Z. Martin-Luther-Univ. Halle-Wittenberg Math.-Natur. Reihe* Wissenschaftliche Zeitschrift der Martin-Luther-Universität Halle-Wittenberg. Mathematisch-Naturwissenschaftliche Reihe. (Halle/Wittenberg)  
*Wiss. Z. Pädagog. Hochschule "Karl Liebknecht" Potsdam* Wissenschaftliche Zeitschrift der Pädagogischen Hochschule "Karl Liebknecht" Potsdam. (Potsdam)  
*Wiss. Z. Tech. Hochschule Ilmenau* Wissenschaftliche Zeitschrift der Technischen Hochschule Ilmenau. (Ilmenau)  
*Wiss. Z. Tech. Hochschule Karl-Marx-Stadt* Wissenschaftliche Zeitschrift der Technischen Hochschule Karl-Marx-Stadt. (Karl-Marx-Stadt)  
*Wiss. Z. Tech. Hochschule Leuna-Merseburg* Technische Hochschule Wissenschaftliche Zeitschrift. (Leuna-Merseburg)  
*Wiss. Z. Tech. Univ. Dresden* Wissenschaftliche Zeitschrift der Technischen Universität Dresden. (Dresden)  
 \* *Wuhan Daxue Xuebao* Wuhan Daxue Xuebao. Ziran Kexue Ban. Wuhan University Journal. Natural Sciences. (Wuhan)  
*Wuhan Univ. J.* See *Wuhan Daxue Xuebao*  
*Wuli Xuebao* See *Acta Phys. Sinica*  
*Wyż. Szkoła Ped. Krakow. Rocznik Nauk.-Dydakt. Prace Mat.* Wyższa Szkoła Pedagogiczna w Krakowie. Rocznik Naukowo-Dydaktyczny. Prace Matematyczne. (Kraków)  
*Yingyong Shuxue Xuebao* See *Acta Math. Appl. Sinica*  
 \* *Yingyong Shuxue Yu Jisuan Shuxue* Yingyong Shuxue Yu Jisuan Shuxue. Applied Mathematics and Computational Mathematics. (Ch'ung Ch'ing)  
*Yokohama Math. J.* Yokohama Mathematical Journal. (Yokohama)  
*Z. Allgemeine Wissenschaftstheorie* Zeitschrift für Allgemeine Wissenschaftstheorie. (Wiesbaden)  
*Z. Angew. Math. Mech.* Zeitschrift für Angewandte Mathematik und Mechanik. Ingenieurwissenschaftliche Forschungsarbeiten. (Berlin)  
*Z. Angew. Math. Phys.* Zeitschrift für Angewandte Mathematik und Physik. ZAMP. Journal of Applied Mathematics and Physics. Journal de Mathématiques et de Physiques Appliquées. (Basel)  
*Ž. Eksper. Teoret. Fiz. Akademija Nauk SSSR. Žurnal Eksperimental'noi i Teoretičeskoi Fiziki.* (Moscow) (Translated as: *Soviet Phys. JETP*)  
*Z. Elektr. Inform. Energietechn.* Zeitschrift für Elektrische Informations- und Energietechnik. (Leipzig)  
*Z. Krist.* Zeitschrift für Kristallographie, Kristallgeometrie, Kristallphysik, Kristallchemie. (Wiesbaden)  
*Z. Math. Logik Grundlag. Math.* Zeitschrift für Mathematische Logik und Grundlagen der Mathematik. (Berlin)  
 \* *Z. Nationalökonom.* Zeitschrift für Nationalökonomie. Journal of Economics (Vienna)  
*Z. Naturforsch. A* Zeitschrift für Naturforschung. A. (Tübingen)



- Z. Oper. Res. Ser. A-B* Zeitschrift für Operations Research. Serie A. Serie B. (Würzburg)
- Z. Phys. A* Zeitschrift für Physik. A. Atoms and Nuclei. (Berlin)
- Z. Phys. B* Zeitschrift für Physik. B. Condensed Matter and Quanta. (Berlin)
- Z. Phys. C* Zeitschrift für Physik. C. Particles and Fields. (Berlin)
- Ž. Prikl. Meh. i Tehn. Fiz.* Žurnal Prikladnoi Mehaniki i Tehničkoj Fiziki. (Moscow) (Translated as: *J. Appl. Mech. Tech. Phys.*)
- Ž. Vyčisl. Mat. i Mat. Fiz.* Akademija Nauk SSSR. Žurnal Vychislitel'noj Matematiki i Matematičeskoj Fiziki. (Moscow) (Translated as: *U.S.S.R. Computational Math. and Math. Phys.*)
- Z. Wahrsch. Verw. Gebiete* Zeitschrift für Wahrscheinlichkeitstheorie und Verwandte Gebiete. (Berlin)
- Zap. Meh.-Mat. Fak. i Har'kov. Mat. Obšč.* See *Vestnik Har'kov. Gos. Univ.*
- Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* Zapiski Naučnyh Seminarov Leningradskogo Otdelenija Matematičeskogo Instituta im. V. A. Steklova Akademii Nauk SSSR (LOMI). (Leningrad) (Translated as: *J. Soviet Math.*)
- Zastos. Mat.* Polska Akademia Nauk. Instytut Matematyczny. Zastosowania Matematyki. (Warsaw)
- Zb. Rad. Math. Inst. Beograd. (N.S.)* Beograd. Matematički Institut. Zbornik Radova. Nouvelle Série. (Belgrade)

- † Zbl.* Zentralblatt für Mathematik und ihre Grenzgebiete. (Berlin) See *Zbl. Math.*
- † Zbl. Math.* Zentralblatt für Mathematik und ihre Grenzgebiete. (Berlin) (Usually abbreviated as *Zbl* in the text of *Math. Rev.*)
- Zeszyty Nauk. Politech. Łódź. Mat.* Zeszyty Naukowe Politechniki Łódzkiej. Matematyka. (Łódź)
- Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* Zeszyty Naukowe Politechniki Śląskiej. Matematyka-Fizyka. (Gliwice)
- Zeszyty Nauk. Uniw. Jagielloń. Prace Fiz.* Zeszyty Naukowe Uniwersytetu Jagiellońskiego. Prace Fizyczne. (Kraków)
- Zeszyty Nauk. Uniw. Jagielloń. Prace Mat.* Zeszyty Naukowe Uniwersytetu Jagiellońskiego. Prace Matematyczne. (Kraków)
- Zeszyty Nauk. Wyż. Szkoły Ped. w Opolu Fiz.* Zeszyty Naukowe Wyższej Szkoły Pedagogicznej w Opolu. Fizyka. (Opole)
- Zeszyty Nauk. Wyż. Szkoły Ped. w Opolu Mat.* Zeszyty Naukowe Wyższej Szkoły Pedagogicznej w Opolu. Matematyka. (Opole)
- Zhongguo Kexue* See *Sci. Sinica*
- Zhongguo Kexue Shuxue Zhuanji* See *J. Huazhong Inst. Tech.*
- Zi Dong Hua Xuebao* See *Acta Automat. Sinica*

## JOURNALS IN TRANSLATION

- Algebra and Logic* Algebra and Logic. (New York) (Translation of *Algebra i Logika*)
- Astrophysics* Astrophysics. A translation of *Astrofizika* of the Academy of Sciences of the Armenian SSR. (New York) (Translation of *Astrofizika*)
- Automat. Control Comput. Sci.* Automatic Control and Computer Sciences. (New York) (Translation of *Automat. i Vychisl. Tehn.* (Riga))
- Automat. Document. and Math. Linguistics* Automatic Documentation and Mathematical Linguistics. (New York) (Translation of *Naučn.-Tehn. Informacija (VINITI) Ser. 2. Informacionnye Processy i Sistemy*)
- Automat. Remote Control* Automation and Remote Control. A translation of *Avtomatika i Telemekhanika*, a publication of the Academy of Sciences of the USSR. (New York) (Translation of *Avtomat. i Telemekh.*)
- Chinese Astronom.* Chinese Astronomy. (Oxford) (Translation of *Acta Astronom. Sinica*)
- Cosmic Res.* Cosmic Research. (New York) (Translation of *Kosmiches. Issled.*)
- Cybernetics* Cybernetics. (New York) (Translation of *Kibernetika (Kiev)*)
- Differential Equations* Differential Equations. (New York) (Translation of *Differentsial'nye Uravneniya*)
- Electron. Comm. Japan* Electronics and Communications in Japan. The Transactions of the Institute of Electronics and Communication Engineers of Japan. (Washington, D.C.) (Partial translation of *Denshi Tsushin Gakkai Ronbunshi*) (See also *Systems-Comput.-Controls*)
- Engrg. Cybernetics* Engineering Cybernetics. English Edition of *Tekhnicheskaya Kibernetika*. (New York) (Translation of *Izv. Akad. Nauk SSSR Tehn. Kibernet.*)
- Fluid Dynamics* Fluid Dynamics. (New York) (Translation of *Izv. Akad. Nauk SSSR Meh. Zhidk. Gaza*)
- Fluid Mech.—Soviet Res.* Fluid Mechanics. Soviet Research. (Washington, D.C.)
- Functional Anal. Appl.* Functional Analysis and its Applications. (New York) (Translation of *Funktsional. Anal. i Prilozhen.*)
- Geodes. Mapp. Photogramm.* Geodesy Mapping and Photogrammetry. (Washington, D.C.) (Partial translation of *Izv. Vysš. Uchebn. Zaved. Geod. i Aérofor.*)
- Izv. Acad. Sci. USSR Atmospher. Ocean. Phys.* *Izvestiya* Academy of Sciences USSR. Atmospheric and Oceanic Physics. (Washington, D.C.) (Translation of *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosfer. i Okeana*)
- Izv. Acad. Sci. USSR Phys. Solid Earth* *Izvestiya* Academy of Sciences USSR. Physics of the Solid Earth. (Washington, D.C.) (Translation of *Izv. Akad. Nauk SSSR Ser. Fiz. Zemli*)
- J. Appl. Math. Mech.* Journal of Applied Mathematics and Mechanics. Translation of the Soviet journal *Prikladnaya Matematika i Mekhanika*. (New York) (Translation of *Prikl. Mat. Meh.*)
- J. Appl. Mech. Tech. Phys.* Journal of Applied Mechanics and Technical Physics. (New York) (Translation of *Ž. Prikl. Meh. i Tehn. Fiz.*)
- J. Engrg. Phys.* Journal of Engineering Physics. (New York) (Translation of *Inž.-Fiz. Zh.*)
- J. Soviet Math.* Journal of Soviet Mathematics. (New York) (Translation of *Itogi Nauki—Seriya Matematika (Progress in Science—Mathematical Series), Problemy Matematicheskogo Analiza (Problems in Mathematical Analysis), and Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)*)
- Lithuanian Math. J.* Lithuanian Mathematical Journal. (New York) (Translation of *Litovsk. Mat. Sb.*)
- Magnetohydrodynamics* Magnetohydrodynamics. (A translation of *Magnitnaya Gidrodinamika* of the Academy of Sciences of the Latvian SSR). (New York) (Translation of *Magnit. Gidrodinamika*)
- Math. Notes* Mathematical Notes of the Academy of Sciences of the USSR. (New York) (Translation of *Mat. Zametki*)
- Math. USSR-Izv.* Mathematics of the USSR-Izvestiya. (Providence, R.I.) (Translation of *Izv. Akad. Nauk SSSR Ser. Mat.*)
- Math. USSR-Sb.* Mathematics of the USSR-Sbornik. (Providence, R.I.) (Translation of *Mat. Sb. (N.S.)*)
- Mech. Solids* Mechanics of Solids. (New York) (Translation of *Izv. Akad. Nauk SSSR Meh. Tver. Tela*)
- Moscow Univ. Math. Bull.* Moscow University Mathematics Bulletin. (New York) (Translation of the mathematics section of *Vestnik Moskov. Univ. Ser. I Mat. Meh.*)
- Moscow Univ. Phys. Bull.* Moscow University Physics Bulletin. (New York) (Translation of the physics section of *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.*)
- Problems Inform. Transmission* Problems of Information Transmission. (New York) (Translation of *Problemy Pereдачи Informatsii*)
- Proc. Steklov Inst. Math.* Proceedings of the Steklov Institute of Mathematics. (Providence, R.I.) (Translation of *Trudy Mat. Inst. Steklov.*)
- Proc. (Trudy) P. N. Lebedev Phys. Inst.* Proceedings (Trudy) of the P. N. Lebedev Physics Institute. (New York) (Translation of *Trudy Fiz. Inst. Lebedev.*)
- Programming and Comput. Software* Programming and Computer Software. (New York) (Translation of *Programirovaniye*)
- Radio Engrg. Electron. Phys.* Radio Engineering and Electronic Physics. Translation of *Radiotekhnika i Elektronika*, a U.S.S.R. Academy of Sciences Publication. (New York) (Translation of *Radiotekhn. i Elektron.*)
- Radiophys. and Quantum Electronics* Radiophysics and Quantum Electronics. A translation of the *Izvestiya Vysših Uchebnih Zavedenii Radiofizika* of the Ministry of Higher Education of the USSR. (New York) (Translation of *Izv. Vysš. Uchebn. Zaved. Radiofizika*)
- \*Rech. Aéropat. (English)* La Recherche Aéropatiale. English edition. (Châtillon) (Translation of *Rech. Aéropat.*)
- Russian Math. Surveys* Russian Mathematical Surveys. A translation of the survey articles and of selected biographical articles in *Uspehi Matematicheskikh Nauk*. (London) (Selected translation of *Uspehi Mat. Nauk*)
- Siberian Math. J.* Siberian Mathematical Journal. (New York) (Translation of *Sibirsk. Mat. Zh.*)
- Soviet Aeronaut.* Soviet Aeronautics. (New York) (Translation of *Izv. Vysš. Uchebn. Zaved. Aviacion. Tehn.*)
- Soviet Appl. Mech.* Soviet Applied Mechanics. (New York) (Translation of *Prikl. Meh.*)
- Soviet Astronom.* Soviet Astronomy. A translation of *Astronomicheskii Zhurnal*, the astronomical journal of the Academy of Sciences of the USSR. (New York) (Translation of *Astronom. Zh.*)
- Soviet Automat. Control* Soviet Automatic Control. (New York) (Translation of *Avtomatika*)
- Soviet J. Nuclear Phys.* American Institute of Physics. Soviet Journal of Nuclear Physics. (New York) (Translation of *Jadernaja Fiz.*)
- Soviet J. Particles and Nuclei* Soviet Journal of Particles and Nuclei. (New York) (Translation of *Fiz. Elementar. Častici i Atom. Jadra*)
- Soviet Math. Dokl.* Soviet Mathematics. Doklady. A translation of the mathematics section of *Doklady Akademii Nauk SSSR*. (Providence, R. I.) (Translation of mathematics section of *Dokl. Akad. Nauk SSSR*)
- Soviet Math. (Iz. VUZ)* Soviet Mathematics (*Izvestiya Vysših Uchebnih Zavedenii Matematika*). (New York) (Translation of *Izv. Vysš. Uchebn. Zaved. Matematika*)
- Soviet Phys. Acoust.* Soviet Physics. Acoustics. A translation of *Akusticheskii Zhurnal* of the Academy of Sciences of the USSR. (New York) (Translation of *Akust. Zh.*)
- Soviet Phys.—Collection* Soviet Physics. Collection. (New York) (Translation of *Litovsk. Fiz. Sb.*)
- Soviet Phys. Dokl.* Soviet Physics. Doklady. A translation of the physics sections of *Doklady Akademii Nauk SSSR*. (New York) (Translation of physics sections of *Dokl. Akad. Nauk SSSR*)
- Soviet Phys. J.* Soviet Physics Journal. (New York) (Translation of *Izv. Vysš. Uchebn. Zaved. Fizika*)
- Soviet Phys. JETP* Soviet Physics. JETP. A translation of *Ž. Eksperimental'noi i Teoreticheskoi Fiziki* of the USSR. (New York) (Translation of *Ž. Eksp. Teor. Fiz.*)
- Soviet Phys. Uspekhi* Soviet Physics. Uspekhi. A translation of the *Uspehi Fizicheskikh Nauk* (Advances in the Physical Sciences) of the Academy of Sciences of the USSR. (New York) (Translation of *Uspehi Fiz. Nauk*)
- Systems-Comput.-Controls* Systems-Computers-Controls. The Transactions of the Institute of Electronics and Communication Engineers of Japan. (Washington, D.C.) (Partial translation of *Denshi Tsushin Gakkai Ronbunshi*) (See also *Electron. Comm. Japan*)
- Theoret. and Math. Phys.* Theoretical and Mathematical Physics. (New York) (Translation of *Teor. Mat. Fiz.*)
- Theory Probab. Appl.* Theory of Probability and its Applications. An English translation of the Soviet journal *Teoriya Veroyatnostei i ee Primeneniya*. (Philadelphia, Pa.) (Translation of *Teor. Veroyatnost. i Primenen.*)
- Theory Probab. Math. Statist.* Theory of Probability and Mathematical Statistics. (Providence, R.I.) (Translation of *Teor. Veroyatnost. i Mat. Statist.*)
- Trans. Moscow Math. Soc.* Transactions of the Moscow Mathematical Society. (Providence, R.I.) (Translation of *Trudy Moskov. Mat. Obšč.*)
- Ukrain. Fiz. Zh.* Akademija Nauk Ukrainkoï SSR. Otdelenie Fiziki. Ukrainskii Fizicheskii Zhurnal. (Kiev) (Translation of *Ukrain. Fiz. Zh.*)
- Ukrain. Mat. Zh.* Akademija Nauk Ukrainkoï SSR. Institut Matematiki. Ukrainskii Matematicheskii Zhurnal. (Kiev) (Translation of *Ukrain. Mat. Zh.*)
- Ukrainian Math. J.* Ukrainian Mathematical Journal. (New York) (Translation of *Ukrain. Mat. Zh.*)
- U.S.S.R. Computational Math. and Math. Phys.* U.S.S.R. Computational Mathematics and Mathematical Physics. (Oxford) (Translation of *Ž. Vychisl. Mat. i Mat. Fiz.*)
- Vestnik Leningrad Univ. Math.* Vestnik Leningrad University. Mathematics. (Providence, R.I.) (Translation of the mathematics section of *Vestnik Leningrad. Univ. Mat. Meh. Astronom.*)



# TRANSLITERATION OF CYRILLIC

Russian Letter Cap. Ital.	Mathematical Reviews; Zentralblatt für Mathematik	Bulletin Signalétique	Applied Mechanics Reviews	Science Abstracts	U.S. Library of Congress	Amer. Slavic & E. European Review	Journal of Symbolic Logic
А а	a	a	a	a	a	a	a
Б б	b	b	b	b	b	b	b
В в	v	v	v	v	v	v	v
Г г	g	g	g	g	g	g	g
Д д	d	d	d	d	d	d	d
Е е	e	e	e	e	e	e	é
Ё ё	e	ē	e	ē	ē	ē	ē
Ж ж	zh	zh	zh	zh	zh	zh	ž
З з	z	z	z	z	z	z	z
И и	i	i	i	i	i	i	i
Й й	ī	j	i	ī	ī	j	j
К к	k	k	k	k	k	k	k
Л л	l	l	l	l	l	l	l
М м	m	m	m	m	m	m	m
Н н	n	n	n	n	n	n	n
О о	o	o	o	o	o	o	o
П п	p	p	p	p	p	p	p
Р р	r	r	r	r	r	r	r
С с	s	s	s	s	s	s	s
Т т	t	t	t	t	t	t	t
У у	u	u	u	u	u	u	u
Ф ф	f	f	f	f	f	f	f
Х х	h	kh	kh	kh	kh	kh	h
Ц ц	c	c	ts	ts	ts	c	c
Ч ч	č	ch	ch	ch	ch	č	č
Ш ш	š	sh	sh	sh	sh	š	š
Щ щ	šč	shch	shch	shch	shch	šč	šč
Ъ ъ							
Ы ы	y	y	y	y	y	y	y
Ь ь	,	,	,	,	,	,	,
Э э	è	e	e	é	é	è	e
Ю ю	ju	ju	yu	yu	īu	ju	ú
Я я	ja	ja	ya	ya	īa	ja	á

Other Mathematical Reviews conventions are as follows:

The Ukrainian І, і are transliterated I, i, respectively.

The Ukrainian І, і are reproduced without change.

The Ukrainian Є, є are transliterated E, e.

The Serbian Ъ, ђ are transliterated D, d, respectively.

The Serbian Ь, ь are transliterated Č, č; the Serbian Ы, ы are transliterated Dī, dī.





# REVIEWS IN GRAPH THEORY

Compiled and Edited by William G. Brown  
McGILL UNIVERSITY  
DEPARTMENT OF MATHEMATICS

This publication is a four-volume compendium of about 9,600 reviews in graph theory published by **Mathematical Reviews** in Volumes 1 through 56, i.e. between 1940 and 1978 inclusive. Reviews were selected from the several sections of **Mathematical Reviews** which were the usual repositories of such items; from the subject lists in **Mathematical Reviews** indexes, where available; and through a systematic perusal of about half of all reviews published by **Mathematical Reviews** during the 39 years under consideration. Every review cited in a selected review was also read, and the process iterated until stable.

A classification scheme containing over 500 categories was developed for the purpose. Every review has been assigned one primary classification and, on the average, one secondary classification. Reviews are reprinted in strict chronological order of **Mathematical Review** numbers in their primary subject area, with a brief citation at each secondary location.

The final volume provides a detailed author index, which can serve as an effective bibliography of the subject.

These volumes are a research tool. They are directed to anyone who has occasion to consult the literature of graph theory: mathematicians, computer scientists, engineers, and management scientists, as well as students, teachers, and practicing researchers.

The potential reader requires no more background than would be required to read papers which are reviewed in the compendium. These vary from highly erudite papers in other areas of mathematics where graph theory is used as a tool to solve specific problems, to elementary descriptive papers which would be understandable to high school students.

A few of the reviews are themselves gems of the mathematical literature. But, for the most part, the reader will use this book as a research tool—to determine what has been done in a particular area of the subject, or to locate known papers when the values of not all parameters are available.

There has been nothing of this scope or magnitude in the subject before. This is the first major bibliography in graph theory which incorporates reviews.

The editor's previous work includes research papers in graph theory and related fields, and many reviews.

	List	Inst. Memb.	Indiv. Memb.	Student
Complete set (CODE: REVGRAPH)	\$200	\$150.00	\$50	\$25.00
Volume 1, 604 pages (REVGRA/1)	68	52.50	17	8.50
Volume 2, 564 pages (REVGRA/2)	68	52.50	17	8.50
Volume 3, 592 pages (REVGRA/3)	68	52.50	17	8.50
Volume 4, 340 pages (REVGRA/4)	40	30.00	10	5.00

Prepayment is required for all American Mathematical Society publications.

Send for the book(s) above to: AMS, P. O. Box 1571, Annex Station, Providence, RI 02901.

## Mathematical Reviews Cumulative Index 1973 - 1979

### VOLUMES 45 THROUGH 58 OF MATHEMATICAL REVIEWS

This massive index, the first cumulative index of Mathematical Reviews containing both author and subject listings, is being prepared from the working files of MR and will index all the reviews in volumes 45 through 58, producing an estimated 700,000 entries representing over 230,000 entries in MR for the period. It will total about 9,200 pages in 12 volumes.

The CUMULATIVE INDEX will have the same form as the Annual Index for 1978 as it is being generated by the same computer program.

The first part, an **Author and Key Index** will be about 5,000 pages. The entries will give full bibliographic information about all items that have been reviewed in MR between January 1973 and December 1979, inclusive. This is about 220,000 entries. In addition, there will be an entry for about 2,500 items not reviewed in MR for which the editors think bibliographic information should be made available. They will be treated exactly as reviewed items, generally with references to *Zentralblatt für Mathematik*, *Reverativnyi Zhurnal*, or other reviewing journals.

Items are listed alphabetically by author; those having several authors are listed in full under each author. Surnames of authors are cross-referenced for name changes or variations of spelling. The original entry for which an erratum or other commentary has been reviewed in a subsequent entry will be identified by an (E).

The author index section is estimated to have about 300,000 entries because of multiple authors.

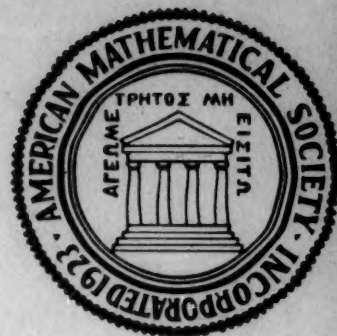
In the **Author Index** the names of persons associated with an item in a capacity other than that of author, e.g., editor, translator, subject of a biography, are also listed.

The **Key Index** section of the author index will consist of all items for which there is no clear author and will be about 70 percent cross-referenced. Included are proceedings of meetings, tables, obituaries, biographies, etc.

The entries under a given heading (i.e., the author or a title) are listed in order of publication dates. Co-authored items are treated on the same basis as those by the author alone.

The **Subject Index**, to consist of about 380,000 listings on 4,200 pages, will cover all subject areas as classified by MR. For each item there will be one full listing in each subject area in which it has been classified, with all authors, title and MR number, if any. Cross-references will be given under each author after the first to the original listing.

The arrangement of each title entry is that of the heading of the original review in MR. Titles in English, French, German, and Italian are usually given as they appeared in the original. Articles in other languages are given in English translation.



List \$1,070.00  
Institutional Member, \$802.50  
Individual Member, \$535.00  
MR Reviewer, \$267.50  
Please use order code MREVIN/73/79  
**PREPAYMENT IS REQUIRED**

American Mathematical Society  
P.O. Box 1571, Annex Station  
Providence, Rhode Island 02901  
USA



3/79

ety